

[RE] GENERATIVE IMAGINARIES

CULTIVATING CULTURES OF POSSIBILITY
FOR A HEALTHY PLANET
WITH ARTS-BASED PRACTICES

KELLI ROSE PEARSON

Propositions

1. All art is propaganda.
(this thesis)
2. Mechanistic metaphors hinder our understanding of complex systems by framing them as overly structured and predictable.
(this thesis)
3. Sustained work in the field of sustainability requires a capacity to live enthusiastically without hope for the future.
4. Being certain that uncertainty is essential to transformations is a paradox that weakens the political power of regenerative sustainability.
5. No matter how apt the metaphor, overextending its applicability to reality will result in dogma rather than insight.
6. The obsession with 'solving' complex ecological crises blinds us to the deeper, relational work of transforming how we inhabit the world.

Propositions belonging to the thesis, entitled

[Re]Generative Imaginaries: Cultivating Cultures of Possibility for a Healthy Planet with Arts-Based Practices

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[RE]GENERATIVE IMAGINARIES

*Cultivating Cultures of Possibility for a Healthy Planet
with Arts-Based Practices*

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*Cultivating Cultures of Possibility for a Healthy Planet
with Arts-Based Practices*

Kelli Rose Pearson

Thesis

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1

1 INTO THE MESH

“Let's face it, the universe is messy. It is nonlinear, turbulent, and chaotic. It is dynamic. It spends its time in transient behavior on its way to somewhere else, not in mathematically neat equilibria. It self-organizes and evolves. It creates diversity, not uniformity. That's what makes the world interesting, that's what makes it beautiful, and that's what makes it work.”

DONELLA H. MEADOWS (2008:169)¹

¹ Donella H. Meadows was a systems thinker, environmental scientist, and author best known as lead author of *The Limits to Growth* (1972), a groundbreaking report that used computer modeling to explore the consequences of exponential growth on a finite planet. This quote is from her posthumously published book *Thinking in Systems: A Primer* (2008), which has become a foundational text for those engaging with complexity in fields ranging from sustainability to organizational change. Her work continues to influence researchers and practitioners, especially through her widely cited list of leverage points—places to intervene in a system—and her idea of “dancing with systems,” which highlights the need for humility, attentiveness, and adaptability when engaging with the world’s dynamic patterns.



In 1969, Buckminster Fuller famously described our planet as “Spaceship Earth,” a shared vessel with limited resources that demanded careful stewardship (Fuller, 2008). The metaphor struck a chord, landing at the crossroads of growing environmental awareness and the electrifying buzz of the space race. It lit up imaginations, casting humanity as a unified, harmonious crew hustling to keep life-support systems running on a sealed vessel rocketing through the void.

But as poetic as it sounds, the metaphor falters. A spaceship, in this case,² is a machine: complex in its engineering but ultimately controllable, designed with a blueprint, and responsive to its operators. Earth, by contrast, is a living, breathing system—a realm of emergent complexity (Steffen et al., 2020). Here, countless interactions ripple across scales, creating outcomes no single plan can predict or control.

Imagine standing, not on a spaceship, but in a thriving wetland. Beneath the surface, unseen currents of water and nutrients flow, guided by plant roots, burrowing animals, and the relentless work of microbial life. Above, dragonflies dart, pollinators buzz, and birds sing their calls, each playing its part in a dynamic, ever-changing system (e.g., Anand et al., 2010). This wetland isn’t

² While Buckminster Fuller’s metaphor explicitly referred to spaceships as machines as typically understood in works of science fiction. There are, however, two wonderful depictions of spaceships as living entities in popular works of science fiction: Octavia Butler’s *Xenogenesis* trilogy (1997) and Nnedi Okorafor’s *Binti* series (2015) reimagine spaceships as living entities—organic vessels that evolve and interact with their inhabitants. In Butler’s work, the ships embody the alien species’ symbiotic, adaptive nature, while in *Binti* the sentient vessel forges a deep, transformative bond with its traveler, blurring the lines between technology and life.

designed or orchestrated—it's a chaotic, adaptive web of relationships, where every element interacts and shifts in surprising, fluid ways (e.g., Scheffer, 2010).

Indigenous plant ecologist Robin Wall Kimmerer (2013) describes the natural world as a 'gift economy,' where life thrives through acts of giving and receiving, rooted in reciprocity. It's a perspective that challenges a transactional, mechanistic view of ecosystems, instead highlighting relationships, mutual care, and the intricate web interconnections that holds everything together. This isn't Spaceship Earth. This is something far wilder—a living, breathing community of connections too vast and complex for quick fixes or linear logic. Zen poet Gary Snyder (1990) captures it well: "Wildness is not just the preservation of the world, it is the world." (p.6). The world, he says, is brimming with edges, entanglements, flows, chaos, stillness—an endless dance of wild beings. But humanity keeps trying to map this dance like it can be condensed into a protocol handbook for a production facility. We look for technical tweaks and policy patches to "fix" what's broken, overlooking the profound, dynamic interplay that sustains life (Huesemann, 2003).

Sustainability science is clear: our social-ecological challenges are not merely technical but deeply cultural, rooted in how we perceive and relate to the world (Folke, 2002; Ostrom, 2000; Ostrom et al., 2009).

1.1 Introduction

1.1.1 Landscape of inquiry

This research project starts from the following premise: we're living in a time of planet-wide existential crises and humanity's relationship with the Earth requires a fundamental overhaul. To avoid—or at least adapt to and lessen—the impacts of looming social and ecological collapse, we need to reimagine how we live and act on this planet. More than fifty years have passed since the grim warnings in *Limits to Growth* were published by a respected cohort of MIT researchers (Meadows et al., 1972), yet we continue to hurtle toward a future marked by environmental and societal breakdown. This may sound like hyperbole, but leading-edge research across multiple disciplines paints an undeniable reality: the natural systems sustaining modern civilization are in

perilous decline.³ Meanwhile, the threat of climate chaos is accelerating due to rising greenhouse gas emissions and the widespread destruction and degradation of ecosystems—such as forests and soils—that help stabilize the atmosphere (Bendell, 2019; Pachauri et al., 2014). Alarmingly, humanity has already breached six of nine ‘planetary boundaries,’ the critical thresholds that regulate Earth’s stability. Crossing any one of these boundaries risks triggering abrupt, irreversible, non-linear, and devastating changes to environmental systems on scales ranging from regional to planetary (Richardson et al., 2023).

It is no surprise that sustainability-focused scholars across all academic disciplines are grappling with the same fundamental question in different ways: how can we avert catastrophic social-ecological collapse? Major international scientific reports like the latest IPBES (2020) and IPCC (2022) reports make clear that tinkering with the status quo won’t be enough to pull us out of our nosedive toward planetary chaos. Instead, a profound transformation is required—a shift from industrial growth societies to life-sustaining ones, requiring a fundamental structural change in our economies and societies (Stern & Stiglitz, 2022). Ecological philosopher Joanna Macy calls this shift “the essential adventure of our time” (Macy & Brown, 2014). The details what life-sustaining societies might look like will hopefully be a subject of discussion for generations, but the aspiration is clear: to create societies where humans live in reciprocal balance with thriving ecological systems in way that permits a good quality of life for countless future generations.

To navigate such an ‘adventure’ we need to look beyond policies and technologies to the deeper forces shaping our societies—ways of perceiving, feeling, and making sense of the world. In this monograph, I depart from the psychological and cultural dimensions of societal change, referred to here as the inner dimensions (Horlings, 2015a; Ives et al., 2023; O’Brien & Sygna, 2013). As early as 1997, systems scientist Donella Meadows identified the most powerful leverage point for transforming a system: the “mindset or paradigm out of which the system—its goals, power structure, rules, [and] its culture—arises” (Meadows, 2015:17). This insight, articulated over twenty-five years ago, has since inspired sustainability researchers and activists to explore ways to catalyze paradigm shifts (Fischer & Riechers, 2019). Scholars inspired by Meadows’ work have looked at ‘deep’ leverage points (Abson et al., 2017), the influence of worldviews (de Vries, 2013), and the role of value orientations (Horlings, 2015b; Schwartz, 1992) in driving systemic change. This research

³ Numerous highly regarded international scientific studies underpin the assertion that natural systems sustaining modern civilization are in perilous decline. Some key studies include: IPBES 2020; IPCC 2022; MA 2003; Richardson et al., 2023; Steffen et al., 2015; Turner 2012; WWF 2016.

contributes to these conversations by delving into the inner dimensions of transformation and experimenting with ways to turn these abstract ideas into practice.

The reality is that many sustainability challenges are deeply complex and resist clear causal or logical analysis; in fact, our only option is to understand them and respond to them through ambiguous subjective judgements (Rittel & Webber, 1973). Our individual and collective subjective judgments are shaped by our inner dimensions. Thus, to be effective, change processes must include cultural transformations and move beyond an exclusive focus on data-driven, technical, policy-oriented, and biophysical solutions (Boyden, 2001; O'Brien, 2009). Actually actuating change is often constrained, not just by oppressive power dynamics⁴ or technological limitations, but by our habitus—the power and inertia of entrenched ways of thinking and perceiving, habituated everyday practices, and social/contextual norms and conventions (Ajzen, 1991; Bourdieu 1991; Dewey, 1922; Greene, 1995; Kagan, 2011).

Currently, widespread constellations of scholars, thought leaders, and activists are convinced that if we are to survive and thrive, we need a culture shift and that such a shift can be catalyzed by new ways of making sense of the world (e.g., Gottschall, 2012; Korten, 2015; Leonard, 2010; Marshal & Conner, 2015). Extensive bodies of work from thinkers and philosophers from the humanities such as Thomas Berry, John Grim, Joanna Macy, and Mary Evelyn Tucker exemplify this movement. In this arena, culture is considered the defining context that either accelerates or hinders our collective agency towards regenerative societies (Dessein et al., 2015)—it includes our basic choices about what will give us pleasure and satisfaction, how we fit in with groups, and all that ‘goes without saying’ in terms of how we organize the functioning of society (leadership structures, social structures, economic ‘rules of the game,’ etc.). More poetically, culture is also “the creative element of our existence—expressions of who we are, where we come from, and where we wish to go” (Jeannotte & Stanley, 2002: 136).

The idea that ways of perceiving and making sense of the world can contribute to cultural shifts—and ultimately influence behavior—draws from research on inner dimensions such as emotions, values, subjective sense-

⁴ This is not to diminish the very real effects of oppressive power structures, including the violence they can inflict. According to Global Witness, over 2,000 land and environmental defenders have been murdered worldwide since 2012. Their 2024 report documented 196 such killings in 2023 alone, bringing the total to 2,106 murders between 2012 and 2023 (Global Witness, 2024). At the same time, the focus of this research is on the inner-dimensions: patterns of thinking and behaving—while deeply shaped by power—exert a subtle but pervasive influence on what individuals and groups perceive as possible or desirable.

making processes, and cultural context (Hedlund-de Witt, 2012, 2014; Kagan, 2011; O'Brien, 2009; Schein, 2015). But despite rhetorical and non-scientific enthusiasm for the concept of paradigm shifts, empirical studies with substantive results remain surprisingly sparse (Fischer & Riechers, 2019). In my research such cultural shifts are seen as an essential component of transformations towards a more sustainable world. Such shifts and transformations are inherently complex as they unfold over long timeframes, involve multiple interacting systems, and resist straightforward measurement (Fischer & Riechers, 2019). My research focuses on understanding how the shifts and transformations implied above might emerge. I do so by examining the processes, dynamics, and theoretical underpinnings that shape them, as well as the ways of thinking, acting, and relating that support or constrain such emergence.

1.1.2 Bird's eye view

Central to this monograph is theorizing *imaginative leadership* as a capacity for shifting culture toward regenerative sustainability. In other words, it is about figuring out how people can access, activate, nurture, and influence mindsets and conceptual frames that shape what feels possible and worth pursuing in societal change. Emerging in part from literature on transformative agency, this concept integrates research on leadership in social-ecological systems with studies on agency in complex systems (Westley et al., 2013). In this arena, leadership, rather than being confined to formal authoritative roles, includes change agents and individuals who can mobilize or inspire others (Archer, 2003; Olsson et al., 2004). Transformative agency not only addresses structural constraints to change but also highlights the importance of introducing new agendas and narratives (Westley et al. 2011; Olsson et al., 2014) and in fostering new cultural and social norms that can act as a catalyst for transformative action (Naito et al., 2022). The concept of imaginative leadership was also inspired by literature on transformative imagination (Galafassi, 2018), and by a range of scholarship analyzing emotions with respect to sustainability issues (e.g., Brown et al., 2017; Lertzman, 2015; Pihkala, 2022). One premise of this research is that imagination is central to human agency because it orients people to future possibilities that require actions in the present (Appadurai, 1996; Emirbayer & Mische, 1998; Zittoun & Gillespie, 2016).

To support transformative change and disrupt the inertia of the status quo, many scholars argue for a 'humanistic' (Hulme, 2011) or 'artistic' (Kagan, 2017) turn in sustainability studies. A humanistic turn calls for drawing not only from the social sciences, but also from the humanities and from the fields of psychology, cognitive sciences, theology, philosophy, and cultural studies. At the same time, a growing body of literature highlights an artistic turn, demonstrating myriad ways that the arts are actively supporting social

transformations towards regenerative sustainability (Hawkins et al., 2015; Kagan, 2011; Kepes, 1972; McKinley et al., 2021; Rathwell, 2016). Specifically, research suggests that using arts-based and creative practices is an effective way to engage with the inner dimensions of sustainability (Horlings, 2017; Ives et al., 2020, 2023). In fact, the arts have played a vital role in social transformations throughout history (see Belfiore & Bennett, 2008).

It is in this context that the research project described in the following chapters: a) theorizes the potential of imaginative leadership to contribute to societal change towards regenerative sustainability, with emphasis on the role of arts-based practices, and b) explores specific ways to operationalize imaginative leadership, using arts-based approaches in processes of leadership development and community engagement.

The broad question animating my research is:

1. How can arts-based practices contribute to imaginative leadership in transformations towards regenerative sustainability?

This question is explored through sub-questions addressed in the theoretical, methodological, and empirical chapters of this monograph:

2. How do the inner dimensions of sustainability support transformative agency towards regenerative futures? (theory)
3. How can arts-based practices activate transformative mindsets and grow imaginative leadership? (theory)
4. How can arts-based methods be better understood in processes of activating and strengthening imaginative leadership? (methodology)
5. How can arts-based methods help sustainability practitioners grow capacity for imaginative leadership? (empirical)
6. How can arts-based methods enable sustainability leaders to engage meaningfully with the imaginative and emotional dimensions of ecological challenges? (empirical)

These sub-questions form the backbone structure that connects theory, methodology, and practice. Sub-Questions 2 and 3 provide the theoretical grounding, exploring how inner dimensions and transformative mindsets create spaces of possibility and how arts-based practices can deepen capacities for imaginative leadership. Sub-Question 4 addresses the structure of the research methodology, investigating how these methods can be studied and understood in processes of activating and strengthening leadership. Sub-Questions 5 and 6 examine empirical cases, considering how arts-based methods expand practitioners' capacities and offer sustainability leaders meaningful ways to engage with the imaginative and emotional dimensions of social-ecological challenges.

1.2 Orienting the Reader

Before moving into theory and case studies, this section explains my style choices and overall approach to this research. First, I reflect on the theoretical grounding of my writing style (1.2.1). Next, I share my research positionality (1.2.2). After this, I summarize my ontological stance (1.2.3) and the approach to knowledge creation that guided the development of my theoretical framework (1.2.4). I then situate this research within the broader field of sustainability scholarship (1.2.5) before narrowing in on regenerative sustainability (1.2.6), and the normative and axiomatic underpinning of this work (1.2.7). These clarifications help position this research within its intellectual and practical context. I end this section with an outline of what is to come in the next six chapters (1.2.8).

1.2.1 A note on writing style

I follow the school of academic writing style that argues that in addition *what* scholars write, *how* scholars write matters. Haraway (1988), in *Situated Knowledges: The Science Question in Feminism*, critiques the “god trick” of disembodied objectivity, calling instead for writing that is situated, relational, and playful. She models this approach in *Staying with the Trouble* (2016), where she embraces wordplay, speculation, and experimentation, rejecting dry academic convention. To counter the ‘god trick,’ researchers can bring their own voices into their work, presenting themselves as human beings rather than disembodied data-gatherers (Reinharz, 1992). As Hyland (2005) puts it, “Stance and engagement are important elements both of a writer’s argument and of a disciplinary context as they seek to bring writer and readers into a text as participants in an unfolding dialogue” (p. 191). In a parallel vein, Bourdieu (1997) critiques academic language as a tool for distinction and exclusion. His concept of “scholastic bias” (*Pascalian Meditations*) highlights how academia’s self-contained intellectual world produces writing that feels natural to insiders but alienating to others. Rather than recognizing writing as an act of meaning-making, scholars are often pushed toward rigid, impersonal styles that prioritize performing authority over clarity and engagement (Hyland, 2005).

Whether in the social sciences or interdisciplinary work, a more open, dynamic writing style isn’t just a matter of preference—it shapes how research moves across disciplines and into practice, or whether it remains trapped in an

insular academic conversation.⁵ With this in mind, I've aimed to keep my writing clear and professional while also making it engaging and evocative. Where it adds context and brings the reader into the conversation, I speak in my own voice—keeping the tone direct and inviting rather than distant or overly formal.

1.2.2 Research Positionality

The concept of positionality acknowledges that a researcher's identity, background, and values shape every aspect of the process—from the questions posed to the methods used and the interpretations drawn. Feminist scholars like Sandra Harding and Donna Haraway argue that all knowledge is socially situated, challenging the myth of neutral objectivity. Haraway's concept of *situated knowledges* (Haraway, 1988) emphasizes the partial and embodied nature of all perspectives, making positionality not just an exercise in transparency but an ethical commitment to critically reflect on what we notice, prioritize, and might overlook. Once considered radical, this approach is now mainstream in fields like qualitative social sciences and participatory research, with even mainstream scientists recognizing that reflexivity enhances rigor, accountability, and inclusivity while mitigating potential biases (Berger, 2015).

First, I highlight that I come to this research with a long-standing commitment to sustainability and justice, shaped by personal, academic, and professional experiences. My interest in these issues began early, in high school, where I had leadership roles in our school's environmental and human rights organizations. During my undergraduate studies, I focused on comparative religion from philosophical, sociological, anthropological, cultural, and historical perspectives, deepening my understanding of how belief systems, metaphorical thinking, ritual practices, and cultural imaginaries shape individual and collective realities. This exploration highlighted the ways in which narratives and symbolic frameworks influence societal values, priorities,

⁵ On a personal note, I've been inspired by the writing style of Rachel Carson, who is one of my academic and environmental activist heroes. In his article "Rachel Carson and the Rhetoric of Revolution", David K. Hecht examines how Carson's use of dynamic and evocative language in *Silent Spring* was instrumental in effectively communicating scientific concepts to a broad audience. Hecht analyzes how Carson's literary style, which blends scientific exposition with poetic prose, not only conveyed complex ecological issues but also inspired a revolutionary shift in public perception and environmental discourse. While I do not claim that this research project is anywhere near the revolutionary and academic quality of *Silent Spring*, I remain deeply influenced by Carson's distinctive style.

and behaviors—insights that resonate strongly with my later work in sustainability. These formative years instilled in me sense of care for environmental and social issues, and an interest in how culture shapes society.

Professionally, I have spent over 15 years as a consultant in sustainable economic development projects, a role that deepened my understanding of the complexities and challenges involved in pursuing systemic change at a practical level. Before that, I owned and operated a popular café dedicated to community engagement (frequently hosting community events and conversations) and fair-trade practices, which gave me firsthand experience in building values-driven local economies and collaborating with diverse stakeholders. I also obtained a transdisciplinary Masters of Science degree in Environmental Governance. These experiences helped nuance my perspective on the intersections of cultural narratives, economic systems, and social transformation. They also sharpened my sensitivity to the role of corporate extractivist economic models in ecological destruction, the complexities of systemic inequities and power dynamics, and the transformative potential of grassroots initiatives.

Additionally, this research project was initiated in the context of the SUSPLACE, a Marie Skłodowska-Curie Actions Innovative Training Network (ITN) funded by the European Union's Horizon 2020 research and innovation programme that was organized around the topic of *sustainable place-shaping*. Sustainable place-shaping can be defined as the process of actively co-creating and maintaining places through locally embedded, participatory, and regenerative practices that enhance ecological, social, and economic well-being over the long term (Horlings et al., 2019; Horlings et al., 2020). The ITN was premised on the normative stance that research was explicitly intended to support practitioners and researchers understand and implement different aspects of sustainable places-shaping practices.

1.2.3 Ontological grounding

This research is grounded in a relational ontology that leans toward constructivism while recognizing material and ecological constraints. Reality does not exist as a fixed structure waiting to be observed; it unfolds through interaction, shaped by the entanglement of human meaning-making and nonhuman forces (Barad, 2007; Ingold, 2011). Rather than discrete objects in a system, beings and environments form a 'meshwork' (Ingold, 2011)—an ongoing weaving of relationships where meaning and transformation emerge through movement, experience, and lived engagement. Knowing is not a detached act of reflection but an active, embodied process, where perception, action, and experience are inseparable.

Two complementary philosophical perspectives, enactivism (Varela et al., 1991) and pragmatism (Dewey, 1938), shape this understanding of reality as

processual, emergent, and enacted through engagement (Gallagher, 2017). Rooted in cognitive science and philosophy of mind, enactivism, challenges the notion that knowledge reflects a fixed external world. Meaning arises through sensorimotor engagement and embodied interaction, rather than being passively absorbed (Varela et al., 1991; Thompson, 2007). In sustainability research specifically, scholars have increasingly recognized that transformative change is not purely cognitive but unfolds through affective, sensory, and relational engagement (O'Brien, 2018; Ives et al., 2020).

While enactivism is well established in neuroscience, psychology, and education (Gallagher, 2017; Di Paolo et al., 2018), its relevance to sustainability research lies in its emphasis on how embodied action and lived experience shape meaning-making. Transformation does not happen in the abstract; it takes form through movement, interaction, and creative engagement with the world. Pragmatism, particularly as articulated by John Dewey (1938), reinforces this view, framing knowledge as action-based and evolving through experience. His perspective on aesthetic experience as an active way of knowing aligns with enactivist approaches, strengthening the case for arts-based practices as a means of engaging transformative mindsets (Leavy, 2020; Kagan, 2011).

Bringing enactivism and pragmatism together positions inner transformation as interactive and experiential rather than purely intellectual. Sustainability science has been strongly shaped by systems thinking (Meadows, 2008; Folke et al., 2010), with social constructivist approaches influencing fields such as sustainability education, governance, and social change (Wals & Lenglet, 2016; Miller et al., 2014). These fields benefit from approaches that emphasize embodied and creative engagement with change (West et al., 2020; Sterling, 2019). Arts-based methods offer a way to shift perception and relationality, supporting transformation not only through analysis but through direct, sensory, and reflective participation in meaning-making (McNiff, 2008; Knowles & Cole, 2008).

1.2.4 Knowledge creation & transdisciplinary research

From the outset, this research resisted neat categorization. Threads of thought escaped the boundaries I tried to impose, and rhizomes sprouted unpredictably. Rather than forcing the project into a fixed structure, I adopted an epistemology that embraces complexity rather than constraining it. Knowledge is not static but emerges through engagement, dialogue, and iterative sense-making. An interpretive approach acknowledges that meaning is never isolated but unfolds through relationships—between ideas, disciplines, and lived experiences (Gadamer, 1960; Ricoeur, 1981). Hermeneutics, with its focus on meaning as something continually revisited and reshaped, reinforces the nonlinear, layered, and evolving nature of this inquiry. A co-creative

epistemology recognizes that knowledge does not emerge from individual reflection alone but through interactions, collaborations, and participatory engagement with diverse perspectives (Heron & Reason, 1997).

To allow for flexibility and emergence, I wove together diverse strands of knowledge, resisting rigid hierarchies in favor of an attitude that reflects the complex interconnections between transformative mindsets, arts-based inquiry, sustainability, and cultural change. When this project began in 2015, even defining what I wanted to study was a challenge. The work demanded an open-ended, exploratory process—one that required following questions as they emerged rather than imposing a predefined framework. The resulting theoretical scaffolding took shape through iteration, not rigid adherence to existing models.

The idea of rhizomatic learning and the image of knowledge creation as weaving provide useful metaphors for how knowledge unfolds in this study. Rhizomatic learning (Deleuze & Guattari, 1987; Cormier, 2008) rejects fixed hierarchies, favoring a dynamic, adaptive approach in which knowledge spreads unpredictably rather than following a predetermined path. The weaving metaphor (Braidotti, 2013) reflects the continuous process of revisiting, reworking, and layering ideas, allowing for multiple, overlapping strands rather than a linear sequence. These perspectives encourage creativity and open-ended inquiry, though they also come with trade-offs, such as a risk of disciplinary fragmentation and unsettling conventional academic expectations.

Transdisciplinary research supports a nonlinear, relational way of working, keeping ideas fluid, evolving, and accessible beyond academia. Rather than simply integrating disciplines, it treats knowledge as co-produced across diverse domains, including artistic and practice-based fields (Nicolescu, 2002). Bammer (2013) underscores its capacity for integration and implementation, enabling more adaptive and applicable responses to complex challenges. Bernstein (2015) highlights its role in “boundary work,” facilitating the movement of knowledge between academic and applied contexts while remaining responsive to shifting societal needs. This research aligns with the principles of transdisciplinary sustainability research outlined by Lang et al. (2012), particularly in fostering collaboration between science and society, embracing methodological flexibility, and co-creating knowledge that is both conceptually and practically meaningful. While not adhering to their specific framework, it shares their recognition that addressing complex, real-world challenges demands diverse expertise, continuous reflection, and engagement across disciplines and practice settings.

A strength of transdisciplinary research is that it treats practice settings as spaces of experimentation rather than just data sources. Instead of extracting knowledge to bring back to academia, researchers collaborate with practitioners, testing and refining ideas on the ground. Gibbons et al. (1994) describe this as “Mode 2 knowledge production,” where research is problem-driven, socially engaged, and shaped by context. Nowotny et al. (2001) reinforce

this perspective, arguing that knowledge gains meaning through circulation, interaction, and application beyond academic spaces.

This research aligns with Mode 2 knowledge production by keeping knowledge in motion, iterative, and responsive to real-world complexity. The theoretical framework outlined in Chapters 2 and 3 is not a rigid system but a web of sensitizing concepts (Blumer, 1954). Unlike definitive concepts, which offer precise classifications, sensitizing concepts point toward relevant areas of inquiry, helping to navigate emergent and complex systems. This flexible yet grounded framework provides a way to understand how imaginative leadership can shape transformation within dynamic, real-world contexts (as explored in Chapter 3).

1.2.5 A short orientation to sustainability scholarship

This research takes place within the broad realm of sustainability scholarship, engaging with questions about how societies navigate complexity, change, and possibility in the face of global challenges. It hopes to contribute to ongoing conversations about the ways in which imaginative leadership, arts-based practices, and transformative mindsets can open new spaces for regenerative futures. But before diving further into the inner dimensions of these processes, it is helpful to pause and provide a brief overview of the field, situating this work within the central strands of sustainability scholarship. This summary is intended to orient the reader, not to offer an exhaustive overview of the literature or all the many and nuanced debates within the field.

Sustainability science, sustainability studies, and sustainability transformations represent distinct yet interconnected approaches to understanding and addressing sustainability challenges. Sustainability science is largely problem-driven and solutions-oriented, integrating natural and social sciences to analyze systems and develop actionable interventions (Kates et al., 2001; Clark & Dickson, 2003; Ostrom, 2009). Scholars such as William C. Clark, Robert Kates, and Elinor Ostrom have shaped this field, emphasizing the co-production of knowledge and interdisciplinary methods (van der Hel, 2016). Pivotal developments include the research agenda for sustainability science proposed in PNAS (Kates et al., 2001), the framework for resilience thinking (Folke et al., 2010), and the concept of planetary boundaries (Rockström et al., 2009). Closely aligned with governance and policy initiatives like *Future Earth*

(Cheng, 2020; Future Earth, 2013; van der Hel, 2016,)⁶ sustainability science seeks to inform decision-making and promote transitions through applied research and systems thinking (Reid et al., 2010).

In contrast, the field of sustainability studies takes a broader, more critical lens, examining sustainability not just as a technical problem but as a historical, cultural, and political phenomenon. Drawing from the humanities and social sciences, it explores how sustainability is framed, who defines it, and what values and power structures underpin dominant approaches (Orr, 1992; Luke, 1995; Beck, 1992). Scholars such as David Orr, Timothy Luke, and Lesley Head have investigated sustainability's ethical dimensions, its role in governance, and the narratives that sustain or challenge unsustainable systems. Important shifts in thinking include critiques of modernity's risk-laden structures (Beck, 1992), the rise of political ecology (Robbins, 2012), and the push for degrowth and post-growth perspectives (Kallis, 2018; Hickel, 2020). Rather than focusing on direct problem-solving, sustainability studies interrogates the deeper assumptions and cultural forces that shape sustainability discourse.

Complementing both sustainability science and sustainability studies, sustainability transformations literature builds on systems thinking, governance studies, and transition theory to examine the deep, structural, institutional, and cultural shifts required to move beyond unsustainability (Meadows et al., 1972; Loorbach, 2010; Westley et al., 2011). 'Sustainability transformations' is understandably a flexible and fuzzy term as it frequently makes its way back and forth between various academic disciplines and the world of practice and policy. At its core, however, it distinguishes transformative change (i.e., change that alters the fundamental properties of a system) from processes that emphasize incremental change.

The concept of sustainability transformations has been strongly influenced by Donella Meadows' *Limits to Growth* (1972) and later by her framework of leverage points—strategic places within a system where targeted interventions can trigger profound change (Meadows, 1999). Transition management emerged as another key framework, introduced by Rotmans et al. (2001) and later developed by Loorbach (2010), focusing on long-term, multi-level governance strategies to guide sustainability transitions. Frances Westley and colleagues (2011) expanded this perspective by integrating insights from

⁶ Future Earth a major international research initiative aimed at advancing global sustainability science. Launched in 2013, it brings together scientists, policymakers, and practitioners to generate actionable knowledge for addressing environmental and social challenges. Future Earth is transdisciplinary, emphasizing the co-production of knowledge between researchers and societal actors to foster sustainability transformations.

social innovation research, demonstrating how agency, networks, and tipping points contribute to systemic change. Meanwhile, Melissa Leach and the STEPS Centre (2010, 2018) advanced the concept of pathways to sustainability, emphasizing that transformations are inherently political, requiring attention to power, inclusion, and justice (Leach et al., 2010; Scoones et al., 2015). Sustainability transformations research also engages with just transitions (Scoones et al., 2020; Swilling & Annecke, 2012) to understand how shifts toward sustainability can avoid reinforcing existing inequalities. Further, Mang and Haggard (2016) have shaped regenerative sustainability approaches, emphasizing processes that restore and revitalize socio-ecological systems rather than merely mitigating harm (as discussed in the following section). Rather than focusing on incremental change, the field seeks to identify the conditions, leverage points, and governance strategies that enable fundamental shifts toward more just and regenerative futures (Leach et al., 2018; Westley et al., 2011)—for a systematic literature review of sustainability transformations, see Salomaa & Juhola 2020.

Together, these three fields shape the evolving landscape of sustainability research, offering distinct but complementary perspectives on the challenges of unsustainability and pathways for change.

1.2.6 Starting with the goal: A regenerative, healthy planet

"We might possess every technological resource...but if our language is inadequate, our vision remains formless, our thinking and feeling are still running in the old cycles, our process may be 'revolutionary' but not transformative."

—Adrienne Rich (1979: 35)⁷

This research project takes a clear normative stance: it focuses on identifying ways to accelerate societal change toward a regenerative and healthy planet. A healthy planet is one that actively restores ecosystems, builds resilience, and creates the conditions for life to thrive. Within sustainability science, this vision is often described as regenerative sustainability, which emphasizes systems that not only sustain but actively improve their ecological and social foundations.

Although widely used in academic, policy, and cultural conversations, the concept of sustainability is often critiqued as inadequate for addressing the scale and urgency of today's global challenges (Ehrenfeld, 2008; Gibbons, 2020; Girardet, 2017; Lafferty, 1996; Pelling, 2011; Richardson, 1997). For instance, Herbert Girardet argues that sustainability's focus on minimizing harm doesn't go far enough—regenerative development offers a more ambitious and transformative paradigm (Girardet, 2013). By improving the health, vitality, and resilience of ecosystems and societies, regenerative thinking provides a pathway toward meaningful and lasting change (Cole, 2012; Gabel, 2009; Gibbons, 2020; Mang & Reed, 2020; Ziervogel et al., 2016).

See Figure 1 below.

⁷ This quote is from Rich's essay 'When We Dead Awaken: Writing as Re-Vision'. Ahead of her times, Rich advocated for the idea of re-visioning—re-examining and reimagining old narratives, particularly through the lens of women's experiences and voices. She argued that language and thought processes shaped by patriarchal traditions limit the capacity for genuine transformation. Even with access to advanced technologies or resources, if society continues to use outdated ways of thinking, feeling, and speaking, any change will remain superficial and fail to address deeper cultural or systemic transformations. Her essay was both a critique and a call to action for writers, thinkers, and society to create new, more authentic visions of the world through transformative language and ideas. Gibson-Graham's concept of 're-reading' the economy or existing structures is a parallel application of this concept, but in prosaic realms of institutional structures.

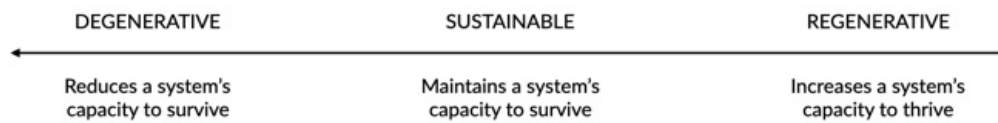


Figure 1. Regenerative Spectrum

Source: Own Conceptualization

- A **degenerative system** is unsustainable because it depletes its foundational resources. Although it may appear to be productive and even abundant in the short term, its internal dynamics are in fact degenerating its support systems, and it will eventually collapse. For instance, in ecology, a species may experience a population crash after overusing its resources during a period of exponential growth.
- A **sustainable system** maintains its basic integrity and can continue indefinitely under current conditions, but it may still include undesirable elements like pollution, inequality, or poverty. For example, sustainability might tolerate a “manageable” level of cancer due to pollution or death-rate due to child malnutrition.
- A **regenerative system**, by contrast, actively improves the conditions for life to flourish, increasing resilience, anti-fragility, and abundance. In such systems, human activity enhances both ecosystems and social systems, creating positive impacts for all interconnected relationships.

An example of these distinctions can be found in agricultural practices. Industrial monoculture farming represents a *degenerative* system. While it may yield high crop production in the short term, it relies heavily on synthetic inputs such as fertilizers and pesticides that degrade soil health over time. This system depletes natural resources, reduces biodiversity, and leaves the land vulnerable to erosion and climate shocks, ultimately leading to declining productivity and ecological collapse.

A *sustainable* farming model may seek to minimize further damage through practices like crop rotation or reduced pesticide use, helping maintain current soil fertility. However, such systems often do not actively restore ecosystems; rather, they aim to slow degradation. They may still tolerate certain levels of pollution, biodiversity loss, or inequities in resource access.

In contrast, *regenerative* agriculture actively enhances soil health and the surrounding ecosystem. Techniques such as cover cropping, composting, and agroforestry restore soil carbon, boost biodiversity, and improve water retention. These practices not only result in healthier crops and ecosystems but also build resilience to drought, flooding, and other environmental shocks.

In this model, human activity contributes positively, supporting the flourishing of both human and non-human life.

The concept of regeneration has gained traction across diverse fields, including the circular economy (e.g., McDonough & Braungart, 2010), post-sustainable development (Giradet, 2017; Lyle, 1996), and design disciplines such as architecture and green infrastructure (e.g., Hes & Du Plessis, 2014; Mang, Haggard & Regenes, 2016). It also features prominently in biomimicry (Wahl, 2016; Woolley-Barker, 2013), eco-agriculture, and permaculture (e.g., Hemenway, 2015), as well as in popular environmental movements advocating for transformative change (e.g., Fullerton, 2015; Regeneration International, 2016; Scharmer & Hub, 2010).

In the context of imaginative leadership, regenerative sustainability can be viewed as a “reflexive tool for stretching ambition” (Buckton et al., 2023: 824). This framing can help us step back, question our assumptions, and imagine bolder possibilities for restoring ecosystems and improving human well-being—moving beyond small fixes to more transformative change. While this research adheres to specific terms like sustainability or sustainable development as they are used in the literature or in direct quotes, it will use *regenerative*, *life-enhancing*, or *regenerative sustainability* when discussing broader “ambition stretched” goals of societal transformation.

At its core, regenerative sustainability is about more than design frameworks—it is a way of understanding what it means to live on, and in relationship with, a healthy planet. While regenerative sustainability offers conceptual precision in academic and professional contexts, the phrase working toward a healthy planet captures the ethos of regeneration in a way that resonates more broadly. For me, this dual framing allows for engagement with both specialized audiences and the wider public, balancing clarity with accessibility.

Moving toward a healthy planet demands more than a focus on external systems; it also requires attention to how people engage with change. When efforts emphasize only technical solutions and measurable outcomes, they risk overlooking a vital dimension: the inner landscapes—our subjective realities and emotions—that shape our ability to navigate complexity. Structural change alone is not sufficient; how we think and feel about the world also matters.

1.2.7 Axiomatic assumptions and future focus

Although this research does not focus on critiquing particular systems or institutions, it operates from the assumption that dominant economic and governance models perpetuate unsustainable patterns. For instance, it assumes that a shift toward regenerative sustainability requires moving beyond

mechanistic thinking that privileges efficiency, accumulation, and commodification over relationship and care (Kimmerer, 2013). It also calls for reimagining foundational structures, including economies (Gibson-Graham, 2006; Raworth, 2017; Ostrom, 1990), relationships, and epistemologies (Kimmerer, 2013).

Instead of treating sustainability as a technical problem, regenerative sustainability involves expanding how we think, decide, and relate—integrating ethics, emotional intelligence, and relational awareness into decision-making (Jackson, 2017).

This research proceeds from the view that key issues with the current economic system include: large-scale economies that prioritize short-term financial gain over long-term ecological and social well-being; financialization, which abstracts value from lived experience into speculative markets (McCarthy & Prudham, 2004); and commodification, which reduces nature, labor, and even daily life to transactions (Castree, 2003; Smessaert et al., 2020). The enclosure of commons further displaces cooperative, reciprocal resource management (Ostrom, 1990; Bebbington & Bury, 2013). These patterns treat human and more-than-human communities as separate, instrumentalized components, rather than as interdependent participants in a living system.

In contrast, moving toward life-supporting economies involves a shift from transactional models to reciprocal relationships, from centralized control to distributed governance, and from extractive growth to regenerative cycles of renewal (Kimmerer, 2013; Moore et al., 2015). It entails organizing life and livelihood in ways that foster responsibility, interconnection, and care (Escobar, 2018).

Some scholars note that regenerative-friendly economic and governance structures, as well as social innovations, already exist—often at the margins of dominant systems (Gibson-Graham, 2006). Leadership in this context involves noticing where possibilities are emerging and creating conditions for their expansion (Westley & Antadze, 2010). Transformation can be supported by amplifying what is already life-affirming and making space for what cannot yet be fully imagined (Kretzmann & McKnight, 1993).

1.2.8 Monograph structure

This monograph explores how arts-based practices contribute to imaginative leadership in transformations toward regenerative sustainability.

This chapter, *Into the Mesh*, introduced the core research themes and oriented the reader to the conceptual terrain, as well as my normative and axiomatic assumptions. The following chapters examine the inner dimensions of transformation, the role of imagination in leadership, and the practical

application of specific arts-based practices. I move from theory, to methodology, to case studies, linking abstract concepts with real-world contexts. Below is a roadmap of what follows.

Chapter 2: Initiating Transformations Through Webs of Meaning-Making

This Chapter clarifies *why* the inner dimensions matter in processes of societal transformation, *what*, as precisely as possible, they encompass in relation to this research, and *how* they function. It addresses the question: *How can the inner dimensions of sustainability support transformative agency towards regenerative futures?* Here I establish the ontological and epistemological orientation of the project, situating it within the broader landscape of literature and theory.

Chapter 3: The Art of Imaginative Leadership

This chapter defines imaginative leadership and explores how it can reshape perspectives and spark action. It addresses the question: *How can arts-based practices activate transformative mindsets and foster imaginative leadership?* I present a framework that integrates imagination, leadership, and transformation through the lens of inner dimensions, highlighting how arts-based practices can open new possibilities and potentially catalyze cultural shifts.

Chapter 4: As Life, Experimenting Exuberantly

This chapter outlines the methodology for the empirical investigations that follow, addressing the question: *How can arts-based methods be better understood in processes that activate and strengthen imaginative leadership?* I frame imaginative leadership as a stochastic art that informed the methodological design and case selection.

Chapter 5: Activating Transformative Mindsets

This chapter presents a case study focused on the design and facilitation of workshops and creative engagements with sustainability researchers and practitioners. It addresses the question: *How can arts-based methods help sustainability practitioners build capacity for imaginative leadership?* The case explores how such methods can be operationalized to evoke specific transformative mindsets.

Chapter 6: Imaginative Disruptions—Designing Collective Artist Residencies

This chapter presents a case study involving three events in three countries under the Imaginative Disruptions project. It addresses the question: *How can arts-based methods enable sustainability leaders to engage meaningfully with the imaginative and emotional dimensions of ecological challenges?* Each event involved collaboration with local artists to design participatory, context-specific arts-based engagements.

Chapter 7: Landscapes in the Loom, a Final Look

The final chapter synthesizes insights from the empirical cases, reconnecting them to the conceptual framework, relevant literature, and overarching research question: *How can arts-based practices contribute to imaginative leadership in transformations toward regenerative sustainability?* I reflect on the strengths and limitations of the study, critically analyze the research journey, summarize findings related to the research questions, and offer suggestions for future research.

2

2 INITIATING TRANSFORMATIONS THROUGH WEBS OF MEANING-MAKING

“It must be considered that there is nothing more difficult to carry out, nor more doubtful of success, nor more dangerous to handle, than to initiate a new order of things.”

MACHIAVELLI: THE PRINCE (1532/2003: 21)



A humanistic turn⁸ in sustainability science weaves together insights from psychology, social sciences, cognitive science, and the arts and humanities to deepen our understanding of sustainability transformations. Unlike technology-driven, positivist, or structuralist perspectives, a humanistic approach highlights the inner dimensions of transformation—how people perceive, experience, and relate to the world. This includes shifts in individual and collective mindsets and worldviews. An approach centered on human experience—embracing emotions, values, subjectivity, and cultural context—has been framed in various ways, including the ‘inner dimensions of sustainability’ (Horlings, 2015a; Ives et al., 2023), ‘change from the inside out’ (O’Brien, 2009), ‘a humanistic response’ (Hulme, 2011b), and the ‘human dimensions’ (Castree, 2016).

Across diverse fields, scholars are interested in the intersections between sustainability and these inner dimensions in terms of how people think about, perceive, and care for the world (Hedlund-de Witt 2011, 2013; Hedlund-de Witt et al., 2014; Horlings, 2015; Kagan, 2012; Lertzman, 2015; O’Brien 2009; Wolf, 2012). There is growing recognition that culture fundamentally shapes how societies engage with regenerative sustainability and how it can reinforce shifting norms and practices (Dessein et al. 2015; Galafassi, 2018; Ives et al., 2020; Kagan, 2012; Soini & Dessein, 2016). Researchers and sustainability change agents argue that securing humanity’s future well-being demands more than

⁸ Not to be confused with anthropocentric approach. While a humanistic approach emphasizes human experience, meaning-making, and ethical considerations within broader relational contexts, an anthropocentric approach positions humans as the central or superior focus, often at the expense of ecological and non-human perspectives.

technological or policy interventions; it requires a profound transformation in how societies understand and relate to the world—what some have described as a “cultural renaissance” (Boyden, 2011: 112).

While attention on the inner dimensions of sustainability is clearly growing, research in this area is still relatively new. It’s a complex field that doesn’t always fit neatly into conventional research methods, often leading to exploratory or inconclusive findings (Ives et al., 2020). Even as knowledge deepens and the field evolves, the role of the inner dimensions in shaping leadership and driving large-scale societal shifts is still not well understood. Likewise, key terms remain fluid and vague, often shifting between contexts or taking on different meanings from one paper to the next—or even within a single text.⁹

This chapter provides an orientation to the inner dimensions: it clarifies **why** they matter in processes of societal transformation, **what**, as precisely as possible, they encompass in relation to this research, and **how** they function.

Section 2.1 provides a structure for defining the ‘inner’ dimensions at a broad level and 2.2 locates culture as the framing context for transformations. Sections 2.3 and Section 2.4 present a more detailed taxonomy and clarifying structure for the key inner dimensions relevant to this study.

Next, building on this theoretical grounding, Chapter 3 will develop the conceptual framework of imaginative leadership, exploring how individuals can expand their agency by intentionally engaging with the inner dimensions.

2.1 Leveraging the ‘Inner Dimensions’ for Change

As a first step in defining the inner dimensions, the Four Quadrant (4Q) schema (Wilbur, 1995)¹⁰ offers a useful analytic tool for clarifying, communicating, and more thoroughly considering the different dimensions of regenerative

⁹ Even Meadow’s famous quote that most powerful leverage point for transforming a system is the “mindset or paradigm out of which the system—its goals, power structure, rules, [and] its culture—arises” uses the phrase “mindset or paradigm” without fully clarifying.

¹⁰ Disclaimer: The 4 Quadrant Model is a part of a complex and well-developed spiritual philosophy called “Integral Theory” which is not relevant to my research, nor a part of my belief system. I have only taken the 4Q model for its usefulness and clarity in framing the inner dimensions of sustainability transformations.

sustainability. According to the schema (see Figure 2 below), any issue or aspect of reality can be considered from the inside or the outside and from the point of view of the individual or the collective. This results in a classification of four different perspectives: the “I” (subjective), the “We” (intersubjective), the “It” (objective), and the “Its” interobjective (Esbjörn-Hargens, 2009; Wilbur, 2005). The 4Q lens enables simplicity and transparency in describing the relationship between: individual perspectives (I), cultural influences (We), individual behaviors (It), and systemic, structural phenomena (Its).

Despite its tidy classifications, the 4Q schema tries to avoid reductionism by emphasizing the inherent complexity of reality. As Esbjörn-Hargens explains, “the four quadrants are co-nascent—literally ‘they are born together’ and are mutually implicated in one another. In other words, they co-arise and tetra-mesh” (2009: 7). This also means that there is not a claim about causal relationships between the quadrants, instead the quadrants can be used to explain how we experience reality (from our own perspective) or how we look at specific aspects of reality to understand them (Esbjörn-Hargens, 2009).

Using this schema, we can describe potential leverage points for societal transformation by considering both the exterior and interior dimensions, as well as the perspectives of individuals and collectives. For example, a policy intervention aimed at reducing car dependency might focus on external, structural changes, such as redesigning urban spaces to prioritize public transit and cycling infrastructure. But to be effective in the long-term, strategies must also engage with the inner dimensions—e.g., shifting cultural narratives around mobility, challenging the ingrained belief that car ownership signifies personal freedom, or fostering an emotional connection to more sustainable ways of moving through cities.

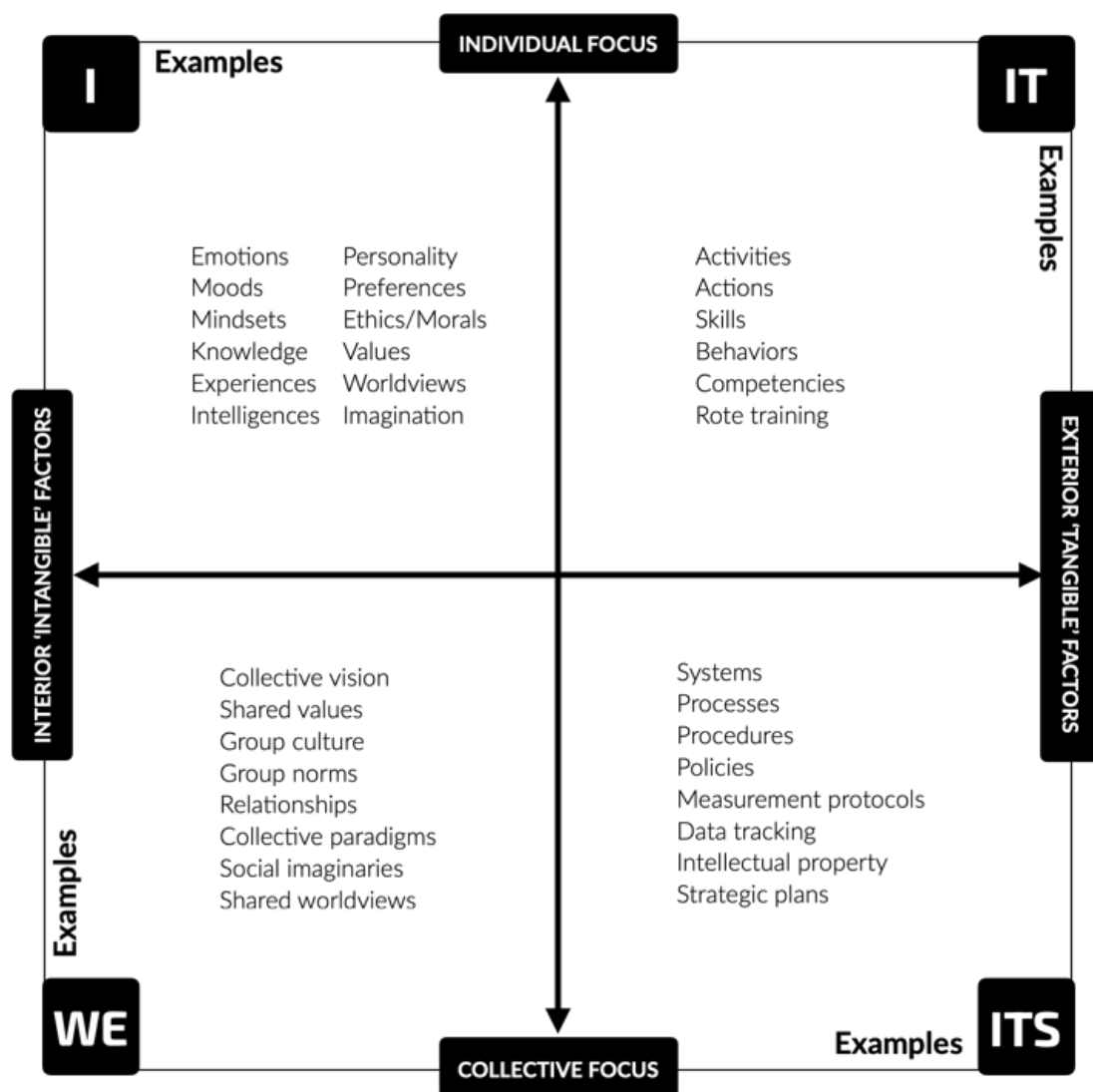


Figure 2. Ken Wilbur's Four Quadrant (4Q) Schema

Adapted and simplified from Wilbur, 1995

2.1.1 Why leverage the inner dimensions?

Over the last decades, people from all walks of life have been searching for ways to effectively respond to our scientifically predicted global nosedive into social-ecological chaos. Understandably, research in the field of sustainability studies has focused primarily on positivist epistemologies that measure and predict the severity of various ecological crises (biodiversity loss, pollution, climate change, etc.).¹¹ The problem is that when issues related to social-ecological crises are framed chiefly in terms of technical facts and data, there is a sense that they must also be solved with data-driven technocratic and structural solutions (Boyd, 2017; Saltelli & Giampietro, 2017).

On the topic of ‘climate change’,¹² for example, public and political discussions are largely dominated by natural sciences: in the 3rd IPCC assessment report only a small minority of citations referred to social science articles, and the humanities were all but absent (Hulme, 2011a). Overall, in climate science and policy arenas, relatively little attention has been given to more subjective approaches that deal with people’s values, their perceptions of how climate change will affect them, and how they think about their ability to respond. This matters because it has shaped how the problem is framed in the media, in policy debates, and in private and public sectors, which in turn has shaped the types of solutions that have been proposed and considered (Hulme, 2011b).

The danger of centering data-driven, positivist solutions is that we overlook the broader systemic changes that are needed to transform societal norms, economic structures, and our relationships with the natural world. The

¹¹ This emphasis on positivist epistemologies reflects a natural and necessary first step within the dominant paradigm—establishing the scope of the problem and gathering scientific data to measure and predict ecological crises. Understanding the severity of biodiversity loss, pollution, and climate change has been crucial for building awareness and informing policy. However, in worldviews that emphasize relationality and interdependence—such as many Indigenous knowledge systems—the response might have started not with measurement but with strengthening reciprocal relationships between humans and the land, reinforcing responsibilities to future generations, and adapting practices based on direct ecological feedback. Rather than first asking *how bad is the damage?*, these approaches might have prioritized *how do we live well within the web of life?*

¹² “Climate change” appears in quotes to acknowledge the range of terms used to describe the ongoing planetary crisis. Alternative phrases such as *climate chaos*, *global warming*, and *global weirding* highlight different aspects of the phenomenon—whether emphasizing disruption, rising temperatures, or unpredictable extremes. The choice of language shapes perception, framing the issue in ways that can either reinforce complacency or provoke urgency.

natural sciences, while essential, are not equipped to engage with the ways values, worldviews, emotions, mental models, relational practices, and experiential knowledge shape our individual and collective responses (Leiserowitz, 2006). They provide little insight into how to address the widespread ‘eco-anxiety’ that accompanies these crises (Pihkala, 2018; Usher et al., 2019), or the tendency to withdraw, become numb, or disengage when confronted with overwhelming and alarming information (Lertzman, 2015; Van Boeckel, 2013). They cannot quantify the possibility that the climate crisis is a symptom of deeper cultural and relational dysfunctions that must be confronted and transformed (Bateson, 1972; Leiserowitz & Fernandez, 2008).

In essence, the positivist approach to sustainability often neglects the more intangible and culturally embedded dimensions of social-ecological crises. Ample research coming from the social sciences has shown that simply providing people with more technical information about the causes and consequences of unsustainability is ineffective in driving behavior change, whether at a personal level or in policymaking (Saltelli & Giampietro, 2017). Statistics alone do not engage the cognitive and emotional resources needed for transformative action (Leiserowitz, 2006; Moser, 2014; Norgaard, 2011; Stoknes, 2015). In fact, it is essential to thoroughly grapple with the inner dimensions of societal change if we hope to craft effective and holistic responses to the challenges we face. But what, precisely, does that entail? How can we make sense of these less tangible but deeply influential forces?

2.1.2 Aspiring to culture as sustainability

An influential study on culture and sustainable development (Dessein et al., 2015) outlines three ways of understanding the connection between culture and sustainability: as culture in, culture for and culture as sustainability (see Figure 3 below).

The first, ‘culture *in* sustainability,’ follows the ‘fourth pillar’ model, placing culture alongside economic, social, and ecological concerns (Hawkes, 2001; Sabatini, 2019; UNESCO, 2016). This perspective draws attention to traditions, creative expression, and heritage—festivals, storytelling, music, art—things that shape identity and belonging. While not always tied directly to sustainability, these cultural threads contribute to the richness of communities. UNESCO’s

Creative Cities Network, for example, has supported cultural heritage and creativity as forces for urban renewal and social cohesion (UNESCO, 2017).¹³

The second, ‘culture for sustainability,’ focuses on the way culture mediates and infuses meaning into sustainability efforts. Stories, artworks, and shared values shift perceptions and influence economic, political, and environmental decisions. Culture creates context: it carries ideas, makes abstract challenges tangible, and affects how societies move forward. A mural in a city square, an old folktale retold in classrooms, or traditions passed between generations—these all influence the choices people make, whether about conservation, justice, or the economy.

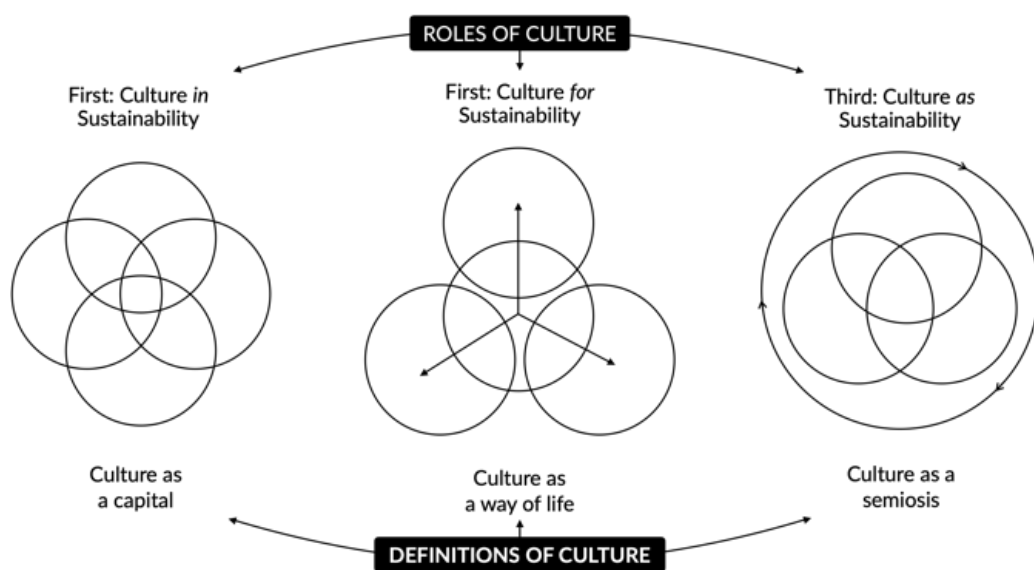


Figure 3. Culture in, for and as Sustainability

Source: Adapted from Dessein et al., 2015

The third, ‘culture as sustainability,’ digs deeper. Here, culture is not just a factor in the mix; it’s the very ground from which sustainable futures emerge—an ever-present, dynamic foundation (Soini & Dessein, 2015). This view suggests

¹³ Another example is the New Urban Agenda adopted by UN-Habitat incorporates cultural dimensions in urban sustainability planning, emphasizing the role of cultural heritage in shaping inclusive and sustainable cities.

that sustainability isn't something separate from culture, but something grown within it. How people understand their place in the world, how they relate to landscapes and communities, what they imagine possible—these are cultural questions, and they shape everything else. Without shifts in culture, they argue, shifts in policy or technology won't lead to real transformation.

Despite efforts to bring culture into sustainability conversations, many frameworks still sideline it.¹⁴ The fourth pillar model, while useful, has been criticized for treating culture as an isolated category rather than something that permeates all aspects of life (Soini & Dessein, 2016; Throsby, 2017). Some argue that it risks turning culture into an ornament—something acknowledged, but not deeply woven into decisions. There's also the practical challenge: culture is fluid, contested, impossible to measure with neat indicators. Yet, ignoring it leaves sustainability efforts hollow, disconnected from the ways people actually live and change.

Still, there are projects and movements that make culture central to sustainability. In Japan, the Satoyama Initiative weaves traditional cultural-ecological knowledge into contemporary land-use practices, strengthening biodiversity and local livelihoods (Takeuchi et al., 2016). In Paris, urban guerrilla gardening brings people together in collective experiments that blend art, ecology, and activism (Dessein et al. 2015). These examples go beyond treating culture as an add-on—they work from the understanding that sustainable futures must be imagined, created, and lived into being.

Dessein et al. (2015) suggest that without the third perspective—culture as sustainability—sustainability itself remains incomplete. It's not just about preserving heritage or shaping narratives; it's about recognizing that culture is

¹⁴ In the article "The Future Imagined: Exploring Action as a Means of Reflecting on Today's Grand Societal Challenges and Tomorrow's Options," Bina et al. (2017) examine the role of science in addressing Grand Societal Challenges (GSCs), particularly critiquing Horizon 2020, the European Union's flagship research and innovation program. They argue that despite Horizon 2020's focus on tackling GSCs, such as climate change, social inequality, and sustainable development, the program fails to adequately incorporate a cultural dimension. This omission is significant, given that addressing these challenges requires not only technological and scientific solutions but also a deep understanding of societal values, practices, and worldviews. The authors suggest that by overlooking cultural factors, Horizon 2020 risks fostering solutions that are disconnected from the realities and needs of diverse communities. This gap in the science priorities limits the program's potential for fostering truly transformative and inclusive approaches to sustainability, equity, and other global challenges. Bina et al. highlight the need for a more integrated approach that combines scientific innovation with cultural awareness and engagement, ensuring that solutions are socially accepted and can be meaningfully applied across different cultural contexts.

always at work, steering how people think, act, and dream. Sustainability efforts that fail to take this into account risk reinforcing dominant systems rather than opening space for something new. Despite recent efforts by interdisciplinary scientific endeavors and transnational organizations to incorporate culture into sustainability discussions, the dominant approaches resist change and remain rooted primarily in environmental and economic perspectives (Dessein et al. 2015). A part of this resistance may arise from the inherent complexity, contested nature, multidisciplinarity, and normative aspects associated with both culture and sustainability.

The tension between acknowledging culture's influence and fully integrating it into sustainability efforts reflects a broader challenge in sustainability studies. The field has long struggled to articulate clear frameworks for understanding how cultural dynamics intersect with systemic change. Without such frameworks, interdisciplinary collaboration and the translation of research into effective action become more difficult (Dessein et al., 2015; Hristova et al., 2015; Soini, 2016; Soini & Birkeland, 2014).

The absence of cultural considerations has real consequences. In urban planning, large-scale development projects often push forward without engaging with local traditions or community values, resulting in resistance, stalled projects, or outright failure.¹⁵ Similarly, global conservation initiatives that overlook the deep cultural ties Indigenous communities have to their land can create unnecessary conflict, ultimately weakening conservation efforts.¹⁶

Overall, the underlying logic of this research aligns with scholars who view unsustainability as a product of structural and systemic forces—physical, institutional, social, and cultural—rather than a matter of individual behavior change (e.g., Maniates, 2001). The dominant emphasis on reducing personal carbon footprints or making “better” consumer choices often obscures the larger systems that shape what's possible in the first place (Shove, 2010). That said, the chapters ahead move between collective structures and individual inner dimensions, considering how individuals both navigate and influence broader cultural conditions. Self-efficacy matters, and so does the ability to locate one's own agency within a larger web of relationships. Radical cultural change requires movement at both levels.

¹⁵ e.g., Chandigarh City in India, see Kalia, 1999; see also Sandercock, 2003 for an overview of similar cases

¹⁶ e.g., Maasai and wildlife conservation, see Goldman, 2011; see also Adams & Hutton, 2007 for a broader overview of conservation conflicts linked to cultural neglect

The next sections explore culture through perspectives drawn from symbolic and interpretive anthropology and reflexive sociology, tracing its dual character both as a stabilizing force and as a potential catalyst for transformation. Culture carries histories, norms, and embedded ways of thinking, yet it is also the ground from which new possibilities emerge. The challenge is to understand how these tensions play out within sustainability efforts—and, crucially, how they might be shifted.

2.2 Culture as Soil Biome

To summarize, the framework of ‘culture as sustainability’ positions culture at the heart of transformative change, not merely as a descriptive element but as a normative goal: the realization of a culture of regenerative sustainability. Up to now, the focus has been on *why* the inner dimensions of culture matter. The next step is to explore *what* they are in greater detail, so that we can move on to how we might influence them via imaginative leadership, as discussed in Chapter 3. Still, the lingering question is: *How does culture change?* The challenge is twofold: understanding how culture evolves and ethically guiding it towards culture as regenerative sustainability. One pathway involves individuals’ abilities to reframe and innovate within cultural systems. While this competence might emerge spontaneously, it can also be intentionally developed.

2.2.1 Theory of culture

Framing the cultural dimension of change, this section draws on classic theories from anthropology, sociology, and social theory. Here I weave together elements from Clifford Geertz’s interpretive lens, Pierre Bourdieu’s concept of symbolic power, and Margaret Archer’s work on cultural dynamics to make sense of how meaning, power, and social structures interact. Symbols and narratives don’t just reflect reality—they shape how people see, act, and respond. Power moves through cultural structures, creating the conditions for both stability and transformation.

Humankind, Geertz explains, “is an animal suspended in webs of significance he himself has spun. I take culture to be those webs, and the analysis of it to be therefore not an experimental science in search of law but an interpretive one in search of meaning” (Geertz, 1973: 6). For Geertz, human behavior itself is symbolic action—“action which, like phonation in speech, pigment in painting, line in writing, or sonance in music, signifies” (Geertz, 1973: 10). These “webs of significance” don’t passively mirror the world; they actively

organize human perception, shaping how individuals engage with and reinterpret cultural meanings (Archer, 1995). Cultural symbols, in fact, have “determinable influences inclining persons and groups to action” (Turner, 1967: 36). In other words, symbols don’t just sit there—they move people.

Geertz defines culture as a “system of inherited ideas conveyed through symbolic expressions that people use to communicate, sustain, and evolve their understanding and attitudes toward life” (Geertz, 1973:89). In other words, culture is not just a collection of customs or traditions but a dynamic system of meaning-making that is passed down and continuously reshaped. This perspective emphasizes the role of shared symbols—such as language, rituals, and stories—in shaping human experience. Geertz’s concept of behavior as symbolic action underscores how cultural narratives are embedded in everyday practices. These narratives do more than reflect existing social structures; they actively shape social norms, influence collective decision-making, and contribute to how societies imagine and work toward the future. Consider narratives about humanity’s relationship to nature: whether framed as stewardship, dominion, or interconnectedness, these cultural lenses materially shape policies and practices in environmental management. Art, religion, ideology, science, law, morality, and even ‘common sense’ all function as dimensions of symbolic action—what the 4Q schema would describe as both internal (subjective worldviews) and external (institutionalized norms and practices) dimensions of culture.

While Geertz’s notion of culture as a system of inherited ideas communicated through symbolic expressions is illuminating, it also has notable limitations. First, his framework lacks a clear explanation of how external symbols influence internal dispositions. Talal Asad (1983) critiques Geertz’s distinction between moods (fleeting emotional states) and motivations (stable drives), pointing out that he doesn’t fully explain how symbols evoke specific internal responses. Research in cognitive studies offers insight here: mechanisms like framing, priming, and situational activation demonstrate how external symbols can shape internal inclinations—an idea explored further in Chapter 3.

Second, Geertz assumes cultural coherence, treating culture as an integrated system when, in reality, it is often a site of contestation. The focus on coherence can limit the applicability of Geertz’s model to complex, pluralistic societies. He argues that cultural frameworks are rarely singular or universally accepted; they are multiple, overlapping, and sometimes directly in conflict. Different symbolic systems coexist in dialogue with each other, and also compete for dominance (Lakoff, 1990). In fact, Geertz largely sidesteps the question of power. By assuming that cultural symbols and meanings are universally shared, he downplays how dominant groups shape these symbols and meanings while marginalizing other interpretations; the role of power in shaping meaning is obscured by collapsing social conflicts into a common symbolic vocabulary (Demeritt, 1994). As a result, Geertz’s model struggles to

account for inequality, oppression, and resistance, making it less effective for analyzing how cultural systems are shaped through contestation.

This is where Bourdieu's concept of *symbolic power* adds depth. It describes how dominant groups impose categories of thought that shape how people perceive the world, making hierarchies feel natural rather than constructed (Bourdieu, 1991). Once the imposed categories become ingrained, most people begin to unconsciously observe and evaluate the world in these terms; they perceive the existing hierarchy and cultural norms of status seeking as just and "natural." One example is the cultural portrayal of wealth as a marker of success. This framing obscures systemic inequalities, reinforcing the idea that financial success signals personal merit while poverty reflects individual failure. Such representations normalize social divisions, making them harder to challenge. The media, for instance, routinely portray the wealthy as industrious and virtuous, while depicting the poor as lazy or undeserving, sustaining the myth of meritocracy and masking structural barriers to economic mobility (Bourdieu, 1984; Hall, 1982). Thus, once symbol power takes root, individuals unconsciously reproduce it, reinforcing the very structures that shaped our perceptions.

But culture is not just a tool of dominance—it is also a space of resistance. The idea of *symbolic struggle* highlights how marginalized groups challenge dominant narratives by introducing alternative symbols and meanings (Bourdieu, 1991). These struggles actively reshape cultural systems. Indigenous activism has reclaimed sovereignty by centering language, traditional ceremonies, and visual symbols that counter colonial narratives (Smith, 1999). Environmental justice movements have reframed land and resource protection as a human rights issue, linking ecological sustainability with social and racial justice (Bullard, 1993). These movements show that culture isn't just imposed from above—it's constantly being questioned, reshaped, and reclaimed. Artists, storytellers, and *cultural intermediaries* (Bourdieu, 1984) play a crucial part in this process, using creative expression to shift how people see and understand the world.

Culture and structure shape each other in a continuous loop. Bourdieu focuses on how institutions reinforce cultural norms, keeping systems in place, while Geertz emphasizes meaning-making as the force that constructs those very institutions. Archer cuts through this divide, showing that cultural structures don't just shape social realities—they also shift as people reinterpret and transform them. This push and pull is crucial for real-world change. Take the growing acknowledgment of Indigenous ecological knowledge: it hasn't just reshaped conservation narratives; it has also led to new approaches that blend traditional land management with scientific practices (Berkes, 2012). Robin Wall Kimmerer (2013) pushes this further, arguing that Indigenous knowledge is not just a resource to be integrated into existing systems but represents a fundamentally different way of relating to the natural world—one that prioritizes reciprocity and responsibility over extraction and control. This shift

in perspective challenges not just policies but the deeper cultural assumptions that shape them.

Archer challenges the idea that culture is either a rigid structure or just a collection of shared symbols. Unlike Geertz, she argues that culture has its own evolving logic, and unlike Bourdieu, she rejects the notion that people are entirely shaped by the systems they inherit. Instead, she highlights the reflexive capacity of individuals—their ability to step back, question, and reshape the cultural frameworks around them. Through what she calls *morphogenesis* and *morphostasis*, she maps out how cultural structures either evolve through cycles of reinterpretation or persist over time when they go unchallenged. This approach offers a dynamic model for understanding change, showing how structures and human actions continuously interact—sometimes reinforcing the status quo, other times opening space for transformation (Archer, 1995).

In sum, Geertz's insight underscores that sustainability transformations cannot be purely technical or mechanistic. They must engage with culture, meaning, and interpretation. Change happens when new meanings take root, old assumptions are questioned, and alternative ways of relating to the world become imaginable. This process isn't just a matter of external structures shifting—it involves individuals and communities actively reflecting, resisting, and reimagining, reinforcing the role of human agency in shaping cultural evolution.

2.2.2 The role of the individual in cultural systems

As discussed, culture isn't static. It shifts as people question, reinterpret, and introduce new ways of thinking. Some changes happen organically and unconsciously, as habits, technologies, and ecological and social dynamics evolve. Others emerge through deliberate efforts—individuals and groups actively working to reshape narratives, symbols, and practices. Some quietly adjust ideas from within, while others push against established norms more forcefully. Either way, culture moves in part because people engage with it, sometimes reinforcing traditions, sometimes breaking them apart.

Pierre Bourdieu described *cultural intermediaries*—people who move between different cultural worlds, introducing new ideas, symbols, and perspectives. Sasha Kagan (2011) referred to *convention entrepreneurs*, those who consciously manipulate symbols and frames to shift cultural meaning. Florence Nightingale can be considered as an example. Nursing was once seen as menial labor, but through her writings and advocacy, she reframed it as a skilled and respected profession. Her efforts didn't just improve hospitals; they changed how society viewed care itself (Small, 1998).

Moreover, culture isn't a singular narrative. Anthropologist Roger Keesing's work with the Kwaio people of Malaita, Solomon Islands, pointed out how people interpret the same rituals in different ways, shaped by personal experience, mood, and worldview. Some take them as strict tradition; others find room for adaptation. Keesing (2012) observed that certain individuals—often those who had spent years learning from elders—had a marked ability to reshape these symbolic structures. Their competence wasn't incidental. It took deliberate study and an awareness of how meaning can be molded.

The struggle over meaning extends beyond rituals. In the United States, conservative think tanks don't just influence policy; they work to shape public perception. Laws, courts, and institutions matter, but so do the stories people tell about them. Language is a battleground, where terms like “freedom” or “family values” are deliberately redefined to shift debates on education, healthcare, and environmental policy (Lakoff, 2014). Controlling the narrative is as powerful as controlling legislation.

Leadership, in any context, is more than decision-making; a key leadership capacity is shaping how people see problems, define priorities, and imagine solutions (Oreg & Berson, 2019). It includes the ability to shift cultural narratives influences what gets attention, what's dismissed, and what people believe is possible. Especially at moments of transition, individuals who can rethink and reframe cultural symbols open pathways for change (Westley et al., 2013). This is relevant in sustainability transformations, where new ways of relating to ecological systems require shifts in cultural meaning, not just policy or technology. These changes don't unfold automatically; they depend on people willing to challenge, reinterpret, and guide culture in new directions, as will be further discussed in Chapter 3.

At the same time, individual action in cultural change is not simply a matter of willpower or moral conviction. People's values and concerns don't always translate into action, as habits, emotions, and external constraints shape what is actually possible (Kollmuss & Agyeman, 2002). Knowledge alone rarely drives change; behavior is embedded within routines, cultural norms, and material systems. People don't just choose actions in isolation—they participate in practices shaped by workplaces, communities, and infrastructures (Hargreaves, 2011). This perspective complicates the notion of individual agency. While some people can actively reshape cultural meaning and practices, lasting change often requires shifts in shared routines, institutions, and material conditions. Individual action, then, isn't just about motivation—it's about navigating, adapting, and sometimes disrupting the social structures that define what is possible.

2.3 Towards a Lexicon of Inner Dimensions

Within the context of shifting cultures, the terminology used to describe specific elements of the inner dimensions is often fragmented, inconsistent, or contested. Terms like *mental models*, *conceptual frames*, and *worldviews*, for instance, are sometimes used interchangeably, despite having distinct meanings in cognitive science and sociology.¹⁷ This ambiguity can make communication across academic disciplines and with practitioners challenging.

To bring clarity before introducing the framework for *imaginative leadership* in Chapter 3, this section defines and situates key terms as they pertain to this research. These elements—ranging from deeply embedded cultural structures to personal cognitive processes—shape perception, decision-making, and action. This lexicon includes:

1. **Social Imaginaries** – The broadest structuring force, shaping what societies collectively see as possible, desirable, or inevitable.
2. **Worldviews** – Deeply held belief systems that shape fundamental assumptions about reality and existence.
3. **Cultural Narratives** – Shared stories that provide coherence, meaning, and identity within a cultural context.
4. **Discourses** – Systems of language and communication that establish dominant perspectives and knowledge structures.
5. **Social Norms** – Implicit rules and expectations that govern acceptable behavior within a group or society.
6. **Conceptual Frames** – The cognitive structures that filter and organize information, shaping interpretation.
7. **Mental Models** – Internalized cognitive representations of how the world works, guiding perception and behavior.
8. **Mindsets** – Habitual ways of thinking that shape attitudes and responses to challenges and opportunities.
9. **Identity** – A sense of self and belonging, shaped by cultural narratives, social norms, and personal experiences.
10. **Values** – Guiding principles that influence priorities, ethical decision-making, and social interactions.

¹⁷ Even Donella Meadows' famous dictum that one of the most powerful leverage points for change is the "mindset or paradigm" from which the system arises doesn't clearly differentiate between the two. She vaguely defines paradigms as "the sources of systems. From them, from shared social agreements about the nature of reality, come system goals and information flows, feedbacks, stocks, flows, and everything else about systems" (Meadows 1999: 17) but doesn't mention mindsets.

11. **Emotions** – Affective states that shape perception, reinforce or disrupt meaning structures, and influence motivation and action.
12. **Metaphors** – Conceptual tools that structure understanding by linking abstract ideas to familiar experiences and images.

Each of these elements operates across individual and collective dimensions, shaping the boundaries of behavior, thought, and action. The order loosely progresses from terms describing concepts that function in collective quadrant of the 4Q model, which are broader and more complex (e.g., social imaginaries, which encompass entire cultural structures), to those concentrated in the individual quadrant (e.g., a specific, definable emotion or metaphor).

The following section defines each element in greater depth, recognizing that each term represents an area with a rich and diverse body of literature. Many of these definitions remain open to debate and interpretation across disciplines and traditions. Rather than setting rigid boundaries, these working descriptions aim to be clear and nuanced enough to support the conceptualization of strategies that engage the inner dimensions in societal transformations toward regenerative sustainability.

Following these definitions, Table 1 summarizes each term alongside relevant theoretical perspectives and major contributors. Section 2.7 then examines how these elements interact and how they can be categorized, with the aim of better understanding how they might be operationalized in change processes.

2.3.1 Social imaginaries

Social imaginaries shape the contours of collective life, defining what is considered possible, desirable, or inevitable (Taylor, 2001). They encompass worldviews, narratives, mental models, and conceptual frameworks within a given cultural context, serving as both enablers of meaning and constraints on alternative possibilities. Kagan (2019) likens the imaginary to a “cognitive and cultural humus” from which cultural constructs—visions, narratives, and discourses—emerge (p. 161). These imaginaries arise from relational encounters between humans and the more-than-human world, shaped by ecological, material, and historical conditions.

Social imaginaries influence governance, economics, and identity by reinforcing dominant assumptions while making alternatives difficult to conceive (Castoriadis, 1987; Taylor, 2001). For instance, contemporary societies often equate work with productivity and measurable output, legitimizing paid employment while devaluing unpaid caregiving, community-building, or artistic pursuits. Even progressive policies like the four-day workweek typically remain bound by productivity-driven assumptions. Reimagining work beyond

economic value—centering well-being, care, or creativity—requires stepping outside this dominant imaginary (Escobar, 2018; Lugones, 2010).¹⁸

While imaginaries tend toward stability, they are not immutable. Cultural shifts, political movements, and crises can expose their limitations, creating openings for new ways of thinking. The concept of the *noosphere*—the shared mental landscape of human thought—emphasizes imagination and knowledge production as co-evolving with culture (Kagan, 2011). These shifts, catalyzed by social movements or technological advances, expand what is imaginable, allowing alternative futures to take root (Sannino, 2015).

2.3.2 Worldviews

Worldviews function as overarching systems of meaning-making, shaping how individuals and societies interpret reality, values, and ethics (Koltko-Rivera, 2004; Hedlund-deWitt, 2013). They provide coherence to decision-making and social structures, influencing everything from personal beliefs to institutional policies. While relatively stable, worldviews are also dynamic, capable of shifting in response to crises, cultural change, or transformative experiences (Uddin, 2021). Cognitive research suggests individuals often hold multiple, sometimes contradictory, worldviews that shift depending on context (Tetlock et al., 2000; Gigerenzer & Selten, 2002).

The term *paradigm* is sometimes used interchangeably with worldview, particularly in scientific and philosophical discourse. Kuhn (1970) described paradigms as dominant intellectual frameworks that define how knowledge is structured within a given era. Similarly, transition management scholars use *regime* to describe structured constellations of power, norms, and institutional practices that sustain existing socio-technical systems (Birkhout et al., 2004; Geels, 2004). While regimes emphasize external structures, worldviews operate

¹⁸ A clear example is the contemporary imaginary of work, which prioritizes productivity, efficiency, and measurable output. This imaginary legitimizes paid employment while devaluing unpaid caregiving, community-building, or artistic endeavors. Even movements advocating for workplace flexibility—such as the four-day workweek—often remain bound by these same productivity-driven assumptions (Escobar, 2018; Lugones, 2010). Expanding social imaginaries requires more than policy reform; it demands a cultural shift in how society envisions work, labor, and human flourishing.

across both individual and collective dimensions, shaping how societies define progress, sustainability, and governance (Hart, 2010; Schein, 2015).

Anthropocentric and ecological worldviews illustrate how these systems of meaning shape reality. An anthropocentric worldview prioritizes human dominance over nature, justifying extractive economies and technological expansion. In contrast, an ecological worldview emphasizes interdependence, advocating for regenerative and sustainable approaches (Raworth, 2017). As environmental crises intensify, shifting worldviews becomes essential for reimagining systemic change.

2.3.3 Cultural narratives

Cultural narratives are shared stories that shape collective meaning, structuring how societies interpret history, identity, and change (Bruner, 1991; Polletta, 2006). Within their overall structure and arc, they employ metaphor, framing, and emotion to reinforce social norms, shaping how people understand their roles and relationships within a society (Lakoff, 2014).

Cultural narratives differ from worldviews and discourses in their mode of influence. Worldviews refer to overarching systems of belief that shape how individuals and societies understand reality, values, and ethics. They are broader and more stable than cultural narratives, providing a foundational cognitive framework through which narratives gain meaning (Hedlund-de Witt, 2013; Koltko-Rivera, 2004). Discourses, on the other hand, operate at a structural level, influencing how language constructs and maintains power relations, social norms, and dominant ideologies (Foucault, 1972; Fairclough, 1992). While discourses govern what is considered legitimate knowledge and shape social reality, cultural narratives provide the stories through which people internalize and express those discourses and worldviews (Somers, 1994).

Competing narratives often coexist within the same cultural landscape, shaping public debates and influencing the possibilities for transformation. Recognizing how narratives function allows for a more critical engagement with the stories that define societal norms and structures.

2.3.4 Discourses

Discourses are systems of meaning that shape how societies think, communicate, and act. They establish the terms in which issues are understood and debated, influencing not just language but also policy, institutional structures, and cultural norms (Fairclough, 1992; Foucault, 1972). Unlike cultural narratives, which take the form of specific stories, discourses function as

broader frameworks that determine what can be said, how knowledge is legitimized, and which perspectives hold authority.

Discourses both reflect and reinforce power dynamics. Dominant discourses define what is considered common sense, while alternative or marginalized discourses challenge these established norms. For example, the discourse of economic growth frames progress in terms of increasing GDP and industrial output, shaping policy and governance. In contrast, sustainability discourses introduce alternative measures of well-being, prioritizing ecological health and long-term resilience (Escobar, 2018). Institutions, media, and education sustain discourses by embedding them into everyday language and practice.

2.3.5 Social norms

Social norms are shared expectations that govern behavior within a group or society, shaping what is considered acceptable, expected, or taboo (Cialdini & Goldstein, 2004). They do not exist in isolation; they interact with discourses and cultural narratives, reinforcing or challenging dominant social structures. They function at both formal levels, such as laws and institutional policies, and informal levels, through unspoken social conventions. Norms influence a wide range of behaviors, from environmental practices and financial decisions to interpersonal interactions and ethical standards (Berger & Luckmann, 1966).

Norms are reinforced through socialization, media, and institutions, often becoming internalized so that individuals follow them not just due to external enforcement but because they perceive them as natural or necessary for social belonging. Research from the field of behavioral economics highlights how norms are highly context-dependent—people unconsciously shift their behavior based on situational cues (Ariely, 2008). For example, the same individual might act generously in a social setting but prioritize self-interest in a business transaction, responding to different normative expectations in each context. Similarly, sustainability norms, such as reducing waste, may be followed in one setting but ignored in another if the social environment does not reinforce them.

While norms create social cohesion, they can also sustain harmful practices or resist necessary change. Deeply embedded norms around consumerism, competition, or resource use often persist even when individuals recognize their drawbacks. Shifting norms requires a combination of policy interventions, public discourse, and grassroots movements. Historical examples include changing attitudes toward smoking, recycling, and LGBTQ+ rights—once marginal behaviors that became widely accepted through advocacy and structural shifts (Bicchieri, 2016).

2.3.6 Conceptual frames

Conceptual frames shape how individuals and groups structure and interpret information by emphasizing certain aspects of reality while filtering out others (Lakoff, 2004). They function at a broader level than mental models or mindsets, linking individual cognition to collective meaning-making structures such as cultural narratives and social norms (Lakoff & Johnson, 2003). Multiple, even contradictory, conceptual frames can coexist, influencing behaviors and perceptions depending on the context (Ariely, 2008; Goffman, 1975; Lakoff, 2014).

It is important to distinguish conceptual frames from related ideas such as mindsets and mental models, which are often used interchangeably in the literature. Mental models are internal cognitive representations that individuals use to navigate and predict outcomes in specific situations (Johnson & Laird, 1983). Mindsets, in contrast, are habitual attitudes or predispositions that shape how individuals approach challenges and decision-making (Dweck, 2006). Conceptual frames, however, function at a higher level of abstraction, structuring how individuals and societies integrate these cognitive elements into broader interpretive frameworks. They act as a bridge between mental models and cultural narratives, shaping the parameters of meaning and guiding how information is contextualized.

The conflation of these terms is evident in sustainability literature, where “mindset shift” is sometimes used to describe what is more accurately a reframing process. For instance, discussions of the “technological mindset” often imply a conceptual frame of innovation-as-solution (Dryzek, 2013). Conceptual frames shape not just individual cognition but also how entire societies interpret systemic issues. For example, framing climate change as a “crisis” situates it within an urgency-based narrative that influences both individual responses (e.g., feelings of responsibility) and structural approaches (e.g., policy interventions).

By shaping how individuals and societies organize meaning, conceptual frames influence everything from governance to public discourse. The same issue, when framed differently—such as climate change being seen as an economic risk versus a moral obligation—produces divergent policy priorities and social responses.

2.3.7 Mental models

Mental models are internal cognitive frameworks that represent how the world works. They consist of structured beliefs, assumptions, and causal relationships that help individuals interpret new information and predict outcomes

(Johnson-Laird, 1983). These models develop over time through lived experience, education, and cultural exposure, shaping how people make decisions and engage with their environments (Denzau & North, 1994; Ostrom, 2005).

Mental models differ from conceptual frames in that they function as deeply held, internalized understandings of reality, whereas conceptual frames operate at a broader social level, shaping how issues are structured and interpreted within cultural and institutional contexts. A mental model is a personal cognitive blueprint—such as believing success comes from hard work—while a conceptual frame structures how society presents and reinforces certain ideas, such as framing success in terms of economic achievement. While mental models guide individual thinking, conceptual frames influence the collective meaning-making that shapes which mental models feel natural or legitimate.

Unlike mindsets, which are more flexible and situational, mental models provide deeper, underlying structures that influence perception and behavior across contexts. For example, a person with a mental model of human nature as inherently competitive may default to individualistic decision-making, while another with a cooperative model may prioritize collective action. Although mental models function at the individual level, they are reinforced and constrained by collective systems such as social norms, institutions, and dominant cultural narratives.

Because mental models filter how people engage with reality, outdated or flawed models can persist even in the face of contradictory evidence (World Bank, 2015)¹⁹. The long-standing model of Earth as an unlimited resource, for instance, has shaped extractive economies, while an emerging ecological model—framing Earth as a living system—supports regenerative practices (Capra & Luisi, 2014).

Shifting mental models requires more than logical persuasion; it often depends on direct experience that challenges ingrained assumptions (Mezirow, 1997). Education, storytelling, and immersive engagement with alternative perspectives play a key role in this transformation. Recognizing the influence of mental models is essential for navigating complex systems and enabling meaningful change.

¹⁹ Although this is a grey literature text, it is the most thorough and detailed literature on mental models that I encountered in my research.

2.3.8 Mindsets

A mindset is a stable yet adaptable cognitive framework that filters how individuals interpret information, process experiences, and determine what actions feel possible in a given situation. Mindsets influence both conscious and unconscious thought patterns, shaping assumptions, heuristics, and emotional responses while filtering out others (Nijland, 2016; Markman et al., 2009; Wilson, 2016). Though shaped by life experiences, education, and social environments, a mindset remains an internal construct—a habitual way of perceiving and engaging with the world.

Mindsets act as a bridge between mental models and emotions. While mental models provide structured beliefs about how the world works, mindsets determine how these beliefs are applied in specific situations (Dweck, 2006). They also interact with social norms—dominant societal expectations reinforce certain mindsets while discouraging others. For instance, a “productivity mindset” prioritizes efficiency and output, aligning with entrenched labor norms, while a “regenerative mindset” values cycles of rest, creativity, and interdependence, challenging conventional economic structures (Ehrenfeld, 2008; Schwartz, 2015).

Mindsets are more persistent than frames but more flexible than worldviews. Frames shape how specific situations are interpreted (e.g., framing climate change as an economic risk vs. a moral obligation), while worldviews encompass deep, meta-level assumptions about reality, ethics, and human nature (Koltko-Rivera, 2004; Lakoff, 2004). Although mindsets can shift through learning and experience, they are self-reinforcing, often making change difficult without conscious effort or external disruption.

Despite their importance, mindsets are frequently misrepresented in popular discourse as individual traits that can be changed at will, as seen in self-help and corporate rhetoric around “growth mindsets” and “success mindsets” (Dweck, 2006). This oversimplification ignores the structural, economic, and cultural factors that shape and constrain mindset shifts (Boler & Zembylas, 2016). A more nuanced perspective recognizes that mindsets emerge from lived experience, social conditioning, and exposure to alternative narratives. Meaningful mindset shifts require engagement with new ways of thinking, environments that reinforce change, and practices that cultivate adaptability and creativity (Markus & Kitayama, 1991).

Because mindsets define the boundaries of what individuals perceive as possible, they can either expand or limit imagination and agency. Recognizing and actively shaping one's mindset is a foundational skill for leadership, decision-making, and navigating complexity. Individuals can cultivate transformative mindsets by engaging in reflective practices, experimenting with alternative perspectives, and placing themselves in contexts that challenge

habitual ways of thinking (Stanovich & West, 2000). Rather than being passively shaped by external forces, individuals can develop the capacity to shift their own cognitive and emotional orientation, making mindset awareness central to long-term, systemic transformation.

2.3.9 Identity

Identity shapes self-perception and social belonging, emerging through cultural exposure and reflection (Archer, 2000; Zittoun & Gillespie, 2016). At its core, identity refers to how individuals understand themselves—their roles, values, and relationships—and how they position themselves in the world. It is not innate but develops over time through experience, culture, and social interaction. Identity is constructed through reflection and engagement with external systems, linking personal sense-making to broader structures (Archer, 2000; Zittoun & Gillespie, 2016).

Identity formation is both personal and relational. Individuals internalize cultural norms, narratives, and values from family, education, and media, while also negotiating how they are perceived and how they want to be seen. Hybrid identities, such as “global citizens,” exemplify this adaptability in an interconnected world. While earlier theories framed identity as relatively fixed, contemporary perspectives emphasize its fluidity in response to shifting social contexts (Giddens, 1991; Hall, 1996).

Context shapes how identity is expressed. Research on code-switching illustrates how individuals shift between cultural value systems based on situational cues (Hua, 2008). A bilingual person, for instance, may emphasize different aspects of their identity at work, with friends, or in family settings, adapting to the norms of each environment. Similarly, conflicting social norms further influence identity shifts. Individuals may embrace environmental values in one context but conform to unsustainable behaviors in another (Akerlof & Kranton, 2000). Creating environments that reinforce sustainability-aligned identities can foster lasting transformation (Fielding & Hornsey, 2024; Lockyer, 2021).

Collective identity plays a crucial role in social change. Research on ecovillages demonstrates how shared values and relationships reinforce sustainable practices and a sense of belonging (Lockyer, 2021). Social identity theory suggests that group affiliation can drive pro-environmental behavior (Fielding & Hornsey, 2024). Engaging with identity shifts at both individual and collective levels is essential for reimagining sustainability paradigms and supporting transformative change (West et al., 2024).

2.3.10 Values

Values are fundamental guiding principles that shape human behavior, decision-making, and social structures. They function as deeply held beliefs about what is important, desirable, or morally right, influencing both individual and collective actions. In sustainability, values such as stewardship, reciprocity, and intergenerational responsibility shape ethical frameworks and policy decisions (Sterling, 2010). Cultural values drive both local and global transformation, showing how deeply embedded principles influence sustainable place-shaping (Horlings, 2015)

Values play a key role in shaping motivation, as individuals tend to act in ways that align with their core beliefs (Rokeach, 1973; Deci & Ryan, 2000). However, a well-documented gap exists between expressed values and actual behavior. Critiques of linear behavior models, such as the Values-Beliefs-Norms (VBN) Theory (Stern et al., 1999), emphasize how practical barriers—convenience, financial constraints, or conflicting priorities—can limit the ability to act on pro-sustainability values (Kollmuss & Agyeman, 2002). For example, individuals who prioritize biospheric values are more likely to engage in conservation and activism (Dietz et al., 2005), yet these efforts can be undermined by competing values such as economic growth and consumerism (Kasser, 2002).

Social psychology and behavioral economics research demonstrate that values do not operate in isolation. Studies on social influence, conformity, and moral decision-making reveal that ethical choices are often shaped by immediate pressures, group identity, and framing effects rather than fixed personal principles (Ariely, 2008; Asch, 1955; Milgram, 1963; Ramos & Ferguson, 2021). A person may emphasize thrift in one setting and sustainability in another, depending on the dominant social expectations.

Rather than assuming values directly determine behavior, sustainable transformation efforts must account for how they interact with motivations, external constraints, and social reinforcement. Horlings' work on sustainability underscores the role of values in both place-based development and broader cultural shifts toward ecological resilience.

2.3.11 Emotions

Emotions are complex psychological and physiological responses involving feelings, bodily reactions, and expressions that emerge in response to subjective experiences. They are deeply embedded in bodily experiences, cultural contexts, and linguistic expressions (Lakoff & Johnson, 2003). Research in neurocognitive linguistics highlights the link between emotions and

metaphors—many emotions are conceptualized in terms of physical sensations (e.g., “warmth” for love, “coldness” for fear) and spatial metaphors (e.g., happiness as “up,” sadness as “down”) (Lakoff & Johnson, 1980, 2020). More broadly, all thinking, planning, and action are inherently emotional; as Lakoff and Johnson (2003: 3) argue, “you can’t even choose a goal, much less form a plan and carry it out, without a sense that it will satisfy you.”

Neuroscientific research supports this, showing that emotions play a critical role in cognitive processes such as risk assessment, decision-making, and prioritization (Damasio, 1994). Rather than operating separately from rationality, emotions influence and often precede logical reasoning. Individuals frequently make intuitive decisions and later construct justifications for them (Cushman, 2020). In sustainability and cultural transformation, emotions can act as both barriers and catalysts. Eco-anxiety—the distress caused by awareness of environmental destruction—can lead to paralysis and disengagement but also fuel activism and policy advocacy (Lertzman, 2015; Pihkala, 2020).

Despite their importance, emotions are often marginalized in professional and scientific contexts, where they are seen as secondary to rational analysis. However, unacknowledged emotions do not disappear; they manifest in resistance, unconscious bias, and dysfunctional group dynamics, sometimes undermining collective efforts (Hochschild, 1979; Fineman, 2003). In organizational and social change contexts, suppressed emotions can erode trust and create misalignment, while open acknowledgment fosters collaboration and transformation (Vince, 2002).

When emotions are openly recognized, they enhance trust, engagement, and collective intelligence. Psychological safety (Edmondson, 1999) allows individuals to participate as whole persons rather than detached rational actors, enabling richer dialogue and generative exchange. Emotional awareness strengthens relationships and decision-making, as diverse emotional perspectives contribute to more adaptive, holistic responses (Barsade & O’Neill, 2014). In sustainability and regenerative leadership, acknowledging emotions ensures that transformation efforts align with shared values, making change more deeply felt and sustained.

2.3.12 Metaphors

Metaphors are not simply linguistic flourishes or rhetorical devices; they are fundamental to human cognition, shaping how we think, reason, and interact with the world. Cognitive linguists have demonstrated that our conceptual system is largely structured by metaphor, often in ways we are not consciously aware of. Metaphors emerge from embodied experiences, meaning they are rooted in the way our brains and bodies interact with the environment. For

instance, across cultures, people commonly associate warmth with affection because, as infants, warmth is often experienced in the arms of caregivers. This embodied grounding gives rise to primary metaphors, which then scaffold more complex conceptual metaphors that structure our understanding of abstract domains such as time, relationships, and morality (Johnson 1987, 1993; Lakoff 1987; Lakoff & Johnson 1980). In other words, metaphor is not an ornamental afterthought—it is the architecture of thought itself.

Because metaphors shape perception and reasoning, they also influence emotions, decision-making, and even public policy. One striking example comes from research by Thibodeau and Boroditsky (2011), which showed that how crime is metaphorically framed can significantly alter policy preferences. When crime was described as a *beast* “lurking in neighborhoods” and “preying on victims,” people tended to favor punitive solutions such as more policing and harsher sentencing. In contrast, when crime was framed as a *disease* “spreading through the city,” participants preferred preventative solutions such as social reforms and addressing root causes. This suggests that metaphors are not just descriptive tools; they actively shape the way people understand societal problems and the types of interventions they see as appropriate. The implications stretch far beyond crime: similar dynamics can be seen in environmental discourse, where the popular “carbon footprint” metaphor encourages individuals to think about climate change as a personal responsibility, measuring their own emissions and making lifestyle adjustments. While this framing has been effective in raising awareness, it also risks shifting attention away from the structural causes of carbon emissions—such as government policies and corporate practices—thereby influencing the kinds of solutions that are prioritized in climate policy debates (Swan, 2010). In both cases, the metaphor doesn’t just describe the problem—it subtly dictates what kinds of responses feel natural, even inevitable.

However, not all metaphors actively shape thought in the same way. Some critics argue that the cognitive impact of metaphors can be overstated, suggesting many are simply linguistic conventions with no real conceptual influence (McGlone, 2007)²⁰. Some metaphors become so deeply embedded in language that they lose their capacity to evoke strong emotions or influence conceptual framing. These so-called “dead metaphors”—phrases like “foot of the bed” or “table leg”—once had metaphorical resonance but have since become conventionalized to the point where their metaphorical origins are no longer consciously recognized (Geeraerts, 2017). Instead, they function more as

²⁰ Others contend that while metaphor is important, it is not the primary mechanism of thought, and cognition is better understood through a combination of literal and abstract reasoning (e.g., Pinker, 2007).

linguistic habits rather than cognitive structuring mechanisms. Even in policy and social discourse, some metaphors may persist despite losing their cognitive impact. For instance, the phrase “melting pot” was once a powerful metaphor for cultural assimilation, evoking a strong image of diverse groups blending into a single entity. Today, it often feels outdated or ineffective, failing to capture the complexities of multicultural societies, where metaphors like “mosaic” or “tapestry” might be more meaningful (Cameron, 2003).

In imaginative leadership, metaphors shape how we think and what feels possible. When they no longer reflect current realities, they can constrain thinking rather than expand it (Thibodeau & Boroditsky, 2018).²¹ Recognizing this—and seeking metaphors that open rather than limit possibilities—is part of shifting mindsets and reshaping engagement with the world.

2.3.13 Omitting ideology

A notable omission in this monograph is a direct engagement with ideology. Ideology operates at a broad, systemic level and it plays a fundamental role in shaping worldviews, cultural narratives, social norms, and conceptual frames. Ideologies—structured sets of beliefs, values, and principles tied to political, economic, and social systems—determine which ways of thinking gain dominance and legitimacy (Althusser, 1971; Eagleton, 1991). Unlike mental models, which are internal cognitive frameworks individuals use to interpret the world, or mindsets, which influence situational responses, ideology functions as a collective force embedded in institutions, media, and power structures.

The decision not to focus on ideology stems from the particular scope of this research. Rather than examining how ideological systems shape and constrain belief formation at a macro level, this research explores meaning-making and perception among individuals and groups already aligned with regenerative sustainability. These participants do not require ideological persuasion or systemic critique to reconsider their commitments; instead, the emphasis is on how they navigate, refine, and deepen their engagement with regenerative mindsets and practices. The inquiry is thus oriented toward

²¹ I think of these metaphors as the ‘undead’. They are not properly inert, but instead they wander through our language like zombies, feasting on our brains—keeping us from clarity of thought and perception.

processes of transformation within an already receptive audience, rather than confronting ideological barriers that might exist in more resistant populations.

This does not mean that ideology is irrelevant. On the contrary, ideological forces shape what is considered possible, desirable, or inevitable within any social or political context. For example, the ideological dominance of free-market capitalism reinforces a conceptual frame in which economic growth is viewed as inherently beneficial, influencing policy debates and public discourse. Likewise, anthropocentrism, as an underlying ideological structure, has historically shaped narratives that justify environmental exploitation. These forces undoubtedly shape broader sustainability challenges, but they are not the primary focus here.

Additionally, while power is an implicit factor in many of the meaning-making processes discussed, this work does not center power dynamics as a primary analytical lens. It assumes that participants are already engaged in sustainability work and are not operating within ideologically hostile environments that would require them to challenge dominant power structures before considering new ways of thinking. As such, while shifting a mindset or reframing an issue may contribute to broader social transformation, this research does not address the structural mechanisms that sustain or resist ideological change at scale.

By focusing on meaning-making within an already aligned community, this work seeks to deepen understanding of how individuals and groups cultivate transformative perspectives, rather than examining the ideological battlegrounds where such shifts might face systemic resistance. While there certainly is a need for this, this research is not set up to explicitly address the interplay between ideology and regenerative sustainability in contexts where ideological opposition presents a significant barrier to change.

2.3.14 Literature and theoretical perspectives

Table 1 below presents the elements of the inner dimensions of regenerative sustainability discussed in this chapter, along with the theoretical perspectives that inform each one and a selection of illustrative references. These references offer a glimpse into the relevant scholarship but aren't meant to be comprehensive.

Table 1. Elements of the 'Inner Dimensions'

Element	Description	Theoretical Perspectives	Key References
(1) Social Imaginaries	Social imaginaries refer to the collective and shared understandings, symbols, myths, and narratives that a society or culture holds about its identity, values, and aspirations. They influence collective identity and societal norms. Social imaginaries are about collective beliefs and shared cultural narratives that shape a society's identity and values. They are broad and sociocultural in nature and they accommodate multiple, often conflictual worldviews.	Social and Political Theory, Sociology of Knowledge, Cultural Anthropology	Taylor (2001), Castoriadis (1975), Appadurai (1996)
(2) Worldviews	Worldviews are comprehensive belief systems or philosophies that individuals or groups hold about the fundamental nature of reality, values, ethics, and the purpose of life. They provide a holistic perspective on how the world works. They encompass a person's or a group's fundamental beliefs about the world and existence. They are all-encompassing and shape an individual's perspective on various aspects of life. Often used interchangeably with paradigm.	Epistemology, Philosophy of Science, Indigenous Knowledge Systems, Systems Thinking	Bateson (1972), Kuhn (1962), Berkes (2008)
(3) Cultural Narratives	A cultural narrative or story is a shared narrative within a particular culture or society, encompassing collective beliefs, myths, traditions, and values that shape the identity and worldview of that group. These narratives are passed down through generations and influence how individuals perceive themselves and their surroundings. Rooted in discourse—the systems of meaning and power that define what is considered true or valid—cultural narratives both reflect and shape the societal norms and values of their time. They are also a subset of social imaginaries.	Narrative Theory, Literary Studies, Sociology of Culture	Bruner (1991), Polkinghorne (1988), Ricoeur (1984)

Element	Description	Theoretical Perspectives	Key References
(4) Discourses	Discourse is a system of language, practices, and shared meanings that shapes and constrains how individuals and societies think, communicate, and act within a particular context. It reflects and reinforces power dynamics, norms, and values by governing what is considered true, acceptable, or possible. Discourse influences and interconnects other inner dimensions, such as cultural narratives, social imaginaries, and worldviews, by providing the overarching frameworks through which meaning is constructed and maintained.	Discourse Analysis, Linguistics, Critical Theory	Foucault (1972), Fairclough (1995), Laclau & Mouffe (1985)
(5) Social Norms	Norms are shared rules, expectations, or standards of behavior within a particular group, community, or society. They guide how individuals interact with one another and what is considered acceptable or unacceptable behavior. Norms often emerge from cultural values, traditions, and collective beliefs, and they can be explicit (formal rules) or implicit (informal understandings). While they operate at a smaller scale than cultural narratives or social imaginaries, norms significantly shape day-to-day actions and societal functioning, reinforcing or challenging larger collective beliefs.	Social Psychology, Behavioral Science, Institutional Theory	Cialdini & Trost (1998), Bicchieri (2006), Ostrom (1990)
(6) Conceptual Frames	Conceptual frames are cognitive structures that organize and categorize information, concepts, or experiences into meaningful frameworks. They help individuals make sense of information by providing a mental structure for understanding. They are similar to mental models but are more focused on organizing and classifying knowledge.	Framing Theory, Cognitive Science, Political Communication	Goffman (1974), Lakoff (2004), Snow & Benford (1988)
(7) Mental Models	A mental model is a cognitive framework or mental representation that people use to understand and make sense of the world around them. It is a simplified, internal version of reality that helps individuals interpret information, make decisions, and predict outcomes. Mental models are formed through a combination of personal experiences, education, cultural influences, and information processing.	Cognitive Science, Organizational Learning, Ecological Psychology	Johnson-Laird (1983), Hutchins (1995) Also see World Bank (2015) (note: Although this is a grey literature text, it is the most thorough and detailed literature on mental models that I encountered in my research.)

Element	Description	Theoretical Perspectives	Key References
(8) Mindsets	Established beliefs, attitudes, and assumptions that shape a person's perception, understanding, and decision-making processes. Mindsets influence how individuals interpret and respond to information, situations, and challenges.	Developmental Psychology, Growth Mindset Theory, Behavioral Economics	Dweck (2006), Bandura (1977), Kahneman & Tversky (1979)
(9) Identity	The sense of self or the characteristics, beliefs, and values that define an individual or group. It is shaped by personal experiences, relationships, and sociocultural context.	Social Identity Theory, Post-Structuralism, Developmental Psychology	Tajfel & Turner (1986), Butler (1990), Erikson (1959)
(10) Values	Values are deeply held beliefs and principles that guide an individual's behavior and decision-making, reflecting what they consider important, meaningful, and morally significant in life.	Moral Psychology, Ethics, Cultural Studies	Schwartz (1992), Haidt (2012), Rokeach (1973)
(11) Emotions	Emotions are complex, subjective psychological responses that involve feelings, thoughts, and physiological reactions and are typically triggered by various external or internal stimuli, influencing one's state of mind and behavior.	Affective Science, Neuropsychology, Social Constructivism	Damasio (1994), Barrett (2017), Hochschild (1979) Also see: Pihkala (2020), Lertzman (2015)
(12) Metaphors	A metaphor is a cognitive process through which people understand abstract or complex concepts in terms of more concrete and familiar concepts. It involves mapping one domain of experience (the source domain) onto another domain (the target domain) to facilitate understanding.	Cognitive Linguistics, Conceptual Metaphor Theory	Lakoff & Johnson (1980), Kövecses (2000), Gibbs (1994)

2.4 Contextualizing the Inner Dimensions

Clarifying what the inner dimensions are and how they are defined is an important step. This raises the next question: how do the different elements of the inner dimensions interact with each other and with the external dimensions of reality—and how might we engage them with more intention and clarity? From broad societal forces such as social imaginaries to more immediate influences such as emotions and metaphors, these dimensions shape meaning-making, perception, and action in dynamic ways. They are not isolated elements, but part of an interconnected web (or mesh—Ingold, 2011) that both reflects and reinforces cultural patterns. Recognizing these relationships, we can begin to see how different layers of the inner dimensions contribute to shaping possibilities for change and transformation.

2.4.1 Interaction between elements of the inner dimensions

Starting with the most complex element, *social imaginaries* provide the broadest structuring force, shaping what societies collectively believe is possible, desirable, or inevitable. They encompass and inform *worldviews*²², which are more explicitly held belief systems about how the world works, including fundamental assumptions about human nature, the environment, and society. Within these broad frameworks, *cultural narratives* and *discourses* articulate specific stories and patterns of language that reinforce and transmit shared understandings. Narratives provide meaning through storytelling and story structures, shaping *identity* and collective memory, while *discourses* establish the dominant ways of speaking and thinking that define what is legitimate or acceptable in a specific cultural context.

These overarching structures are internalized through *social norms*, which dictate expected behaviors and values within a society. Social norms influence *conceptual frames*, the cognitive structures that determine how information is categorized and interpreted. These frames, in turn, shape *mental models*—internal representations of how the world works that guide decision-making and problem-solving at both individual and collective levels.

²² Just to note, the term *worldview* is often used interchangeably with *paradigm* in both academic literature and in informal communication.

At a more personal level, *mindsets* function as habitual ways of thinking that emerge from these mental models, shaping how individuals approach challenges, opportunities, and interactions. These mindsets influence *identity*, which involves a person's sense of self and their perceived role within social and cultural structures. Identity, in turn, is deeply tied to *values*, which serve as guiding principles for decision-making and behavior. Depending on which type of *mindset* is activated in a given situation, a person might experience a different identity, which is linked to a different set of *values*, *mental models*, *conceptual frames*, etc.

Throughout this entire structure, *emotions* and *metaphors* function to shape perception and meaning. Emotions are deeply intertwined with meaning-making, reinforcing or challenging existing *narratives*, *discourses*, and *values*. *Metaphors*, meanwhile, provide a bridge between abstract concepts and lived experience, influencing how we conceptualize complex ideas. They can also trigger or activate different *mindsets* and *conceptual frames* (which will be discussed further in Chapter 3).

2.4.2 An illustrative example

For example, in the context of regenerative sustainability, consider the shift from viewing land as private property to seeing it as a living system we are in relationship with. This shift can be understood at multiple levels. A dominant cultural frame in many societies treats land as a commodity—something to be owned, controlled, and developed. This frame is reinforced through legal structures, economic policies, and everyday language that refers to land in transactional terms, such as “real estate value” or “underutilized land.” Over time, these structures shape worldviews, making the idea of ownership and extraction feel natural, even inevitable.

At the same time, alternative ways of understanding land persist within the broader social imaginary, even if they are not the loudest or most reinforced. Many people, whether through cultural traditions, direct experience, or personal intuition, already hold a latent mindset of care, reciprocity, or stewardship toward the land. A *mindset*, in this context, is a habitual way of perceiving and responding to the world—a cognitive and emotional orientation that shapes how someone interprets situations and makes decisions. While dominant systems reinforce an extractive mindset, other ways of thinking and acting remain just beneath the surface, waiting for the right conditions to emerge.

The arts can help bring these alternative mindsets to the foreground by introducing metaphors and narratives that shift perception. A performance piece that invites participants to attune to the rhythms of the land, a mural that visually maps the interconnections between soil, water, and human

communities, or a novel that tells a story from the perspective of a landscape—all of these can challenge dominant frames and evoke a different mindset. Metaphors are especially powerful here: when land is framed as kin rather than property, or as a web of relationships rather than a resource bank, it can trigger a shift in how people orient themselves toward it. Someone who previously viewed land primarily through the lens of ownership and utility might start to feel a deeper sense of responsibility, seeing care and reciprocity as natural rather than optional.

These mindset shifts don't happen in isolation. As people take in new narratives, their conceptual frames and mental models shift, altering how they interpret information and make decisions. In some cases, this doesn't introduce entirely new ideas but instead activates perspectives that were already present, just underutilized. A farmer might start seeing soil as a living system rather than just an input to be managed. A city planner might rethink zoning policies to prioritize ecological restoration. A community might begin organizing around the idea of collective land stewardship rather than private ownership.

Over time, these shifts in mindset can ripple outward, influencing social norms and shaping expectations around land use, ownership, and responsibility. The arts don't create change by providing abstract knowledge—they do it by embedding meaning in metaphors, stories, and sensory experience, activating different ways of thinking and being. The theory argues that by making alternative mindsets tangible, the arts support the conditions for shifts in perception that, in turn, make new forms of action possible.

2.4.3 Categorizing elements of the inner dimensions

The following categories organize the elements of the inner dimensions based on their role in shaping meaning, perception, and action. Together, they form a structured progression from broad societal forces to individual cognitive and emotional processes. Each category represents a distinct layer of meaning-making, illustrating how deep structures shape collective possibilities, which are then transmitted through cultural mechanisms, internalized through cognition, and ultimately experienced on a personal level. At the same time, individual sense-making feeds back into collective structures, allowing for transformation and adaptation over time. This interplay highlights the dynamic and iterative nature of meaning-making, where societal narratives shape individuals, and individuals, in turn, contribute to reshaping those narratives.

(1) Deep Structures (Shaping Possibilities) – Macro Level

Social imaginaries, Worldviews, Cultural Narratives

These foundational elements define the broadest constraints on what societies perceive as possible, desirable, or inevitable. Social imaginaries provide the overarching structuring force, shaping worldviews and cultural narratives, which articulate fundamental beliefs, shared stories, and collective aspirations. These structures operate at a macro level, shaping societal norms and institutions over long timescales.

(2) Cultural Transmission (Making Meaning Collective) – Meso Level

Discourses, Social Norms, Conceptual Frames

This category includes the mechanisms that reinforce and circulate meaning within societies. Discourses shape dominant ways of speaking and thinking, while social norms regulate behavior and reinforce shared cultural narratives. Conceptual frames structure how individuals and groups categorize and interpret information, ensuring continuity within a given cultural system. These elements operate at the meso level, shaping institutions, communities, and public discourse.

(3) Cognitive & Personal Structures (Internalized Understanding) – Individual Cognition

Mental Models, Mindsets, Identity

These elements represent the ways individuals internalize broader cultural structures, shaping their perception and decision-making. Mental models provide assumptions about how the world functions, while mindsets shape habitual ways of thinking and responding to challenges. Identity emerges, in part, from these frameworks, influencing self-perception, social roles, and personal agency.

(4) Personal & Emotional Dimensions (Lived Experience & Change Potential) – Embodied Meaning

Values, Emotions, Metaphors

At the most immediate and experiential level, these elements shape personal decision-making and the potential for transformation. Values guide ethical priorities and judgments, metaphors structure how abstract concepts are understood and communicated, and emotions reinforce or challenge existing meaning structures. Because these dimensions operate at the intersection of cognition, affect, and lived experience, they are important levers for both stability and change—where shifts in meaning become actionable.

All Together: Sparking Change

Thinking about how to initiate change at macro levels—such as shifting an entire social imaginary—can feel overwhelming. These deep structures are vast, embedded, and often invisible in everyday life. Because they shape what societies collectively perceive as possible, desirable, or inevitable, direct interventions at this level are difficult to design and implement. Change does not have to begin at the highest level. Metaphors, emotions, and mindsets shape how individuals and groups interpret their realities, making them more accessible levers for transformation (see Figure 4 below). As will be explored more in Chapter 3 on imaginative leadership, engaging these elements can open new possibilities for thought and action, creating the conditions for broader societal shifts.

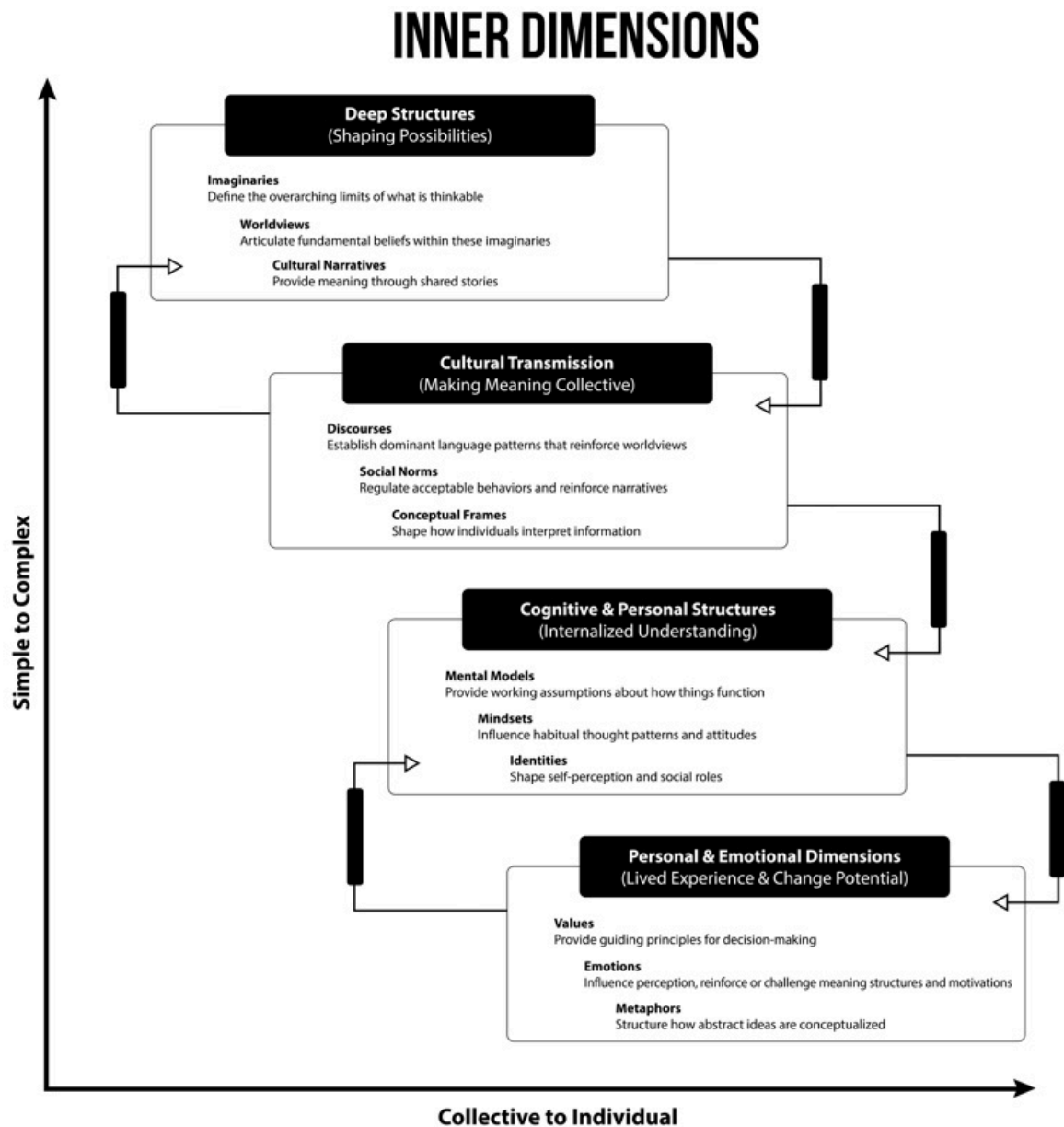


Figure 4. Categories of the Inner Dimensions

Source: Own Conceptualization

2.4.4 Change as mycelium

As discussed above, in this research, culture is understood through a semiotic lens, where external and individual expressions—such as behaviors, activities, objects, and structures—both emerge from and convey meaning within a shared imaginative universe. Individual actions both reflect and shape the collective via the inner dimensions. Change doesn't march in a straight, predictable line. It spreads like mycelium, weaving through unseen networks, surfacing in unexpected places, and connecting what might have once seemed separate. Rather than a single, directed path, transformation emerges through intricate relationships, adapting and responding as it grows.

In fact, cultural change is often assumed to be slow and incremental, but history shows it can also happen rapidly when deeper leverage points are engaged, for better or worse (e.g., *Panarchy*: Gunderson & Holling, 2002). Systemic shifts often accelerate when societies reach tipping points, whether through crisis, leadership, or collective awakening (Abson et al. 2017, Otto et al., 2020). The Protestant Reformation, for example, reshaped religious and political structures across Europe with astonishing speed, as new theological and social ideas spread through the printing press, fueling upheavals that redrew the boundaries of power and belief (see Lindberg, 2010). Similarly, the abolition of serfdom in Russia in 1861, while long debated, brought immediate and sweeping changes to millions, disrupting centuries-old social hierarchies almost overnight (see Moon, 2001). Thus, while cultural transformations often emerge from deep, systemic shifts, they are not always gradual. When deeper leverage points align or are disrupted, rapid change becomes possible, which is both an opportunity and a warning for those working toward regenerative and equitable futures.

Transformation follows its own rhythm, especially when rooted in the terrain of the inner dimensions, such as imaginaries, narratives, and mindsets, as discussed in Chapter 2. These elements—ways of perceiving, feeling, and making sense of the world—set the stage to think more coherently about strategic levers for change. But how do we bring those abstract ideas to life? How can leaders (formal or informal) use creativity not just to tinker with structures and systems, but to shift how people feel, see, and connect to the world around them? What happens when we change the lenses through which we make sense of things, and in doing so, widen the field of what's possible?

Chapter 2 outlined how the inner dimensions can both enable and constrain what feels possible. Chapter 3 picks up the thread, exploring imaginative leadership as a way of inviting people into new spaces of possibility. Here, the arts come into play, not to prescribe solutions, but to provoke new ways of perceiving and being. Leadership, in this sense, isn't focused on control or authority. Instead, it's oriented towards experimenting exuberantly and creating conditions where something unexpected can emerge.

3

3 THE ART OF IMAGINATIVE LEADERSHIP

“Poets are the hierophants of an unapprehended inspiration; the mirrors of the gigantic shadows which futurity casts upon the present; the words which express what they understand not; the trumpets which sing to battle, and feel not what they inspire; the influence which is moved not, but moves. Poets are the unacknowledged legislators of the world.”

PERCY SHELLEY (1821/2003: 35)²³

²³ Percy Bysshe Shelley was a radical Romantic poet known for his political idealism, philosophical intensity, and unconventional life. This quote comes from his 1821 essay *A Defence of Poetry* (2003 edition), written in response to Thomas Love Peacock’s satirical claim that poetry had become irrelevant in the modern age. Shelley argues that poetry is a generative force behind social and moral transformation, casting poets as visionaries who intuitively channel future possibilities—often without fully grasping their own impact. I speculate that the line about poets as “unacknowledged legislators” is frequently quoted because it resonates with ongoing debates about the cultural and political power of imagination and art.



Leadership is often framed as the ability to guide, manage, or inspire, but *imaginative leadership* engages the inner dimensions—it expands spaces of possibility, shifting mindsets, reframing narratives, and challenging limiting cultural frames. This chapter develops a theoretical framework for understanding how imaginative leadership functions and how it can be put into practice.

Departing from Chapter 2's elaboration of culture and the inner dimensions of change, I consider imaginative leadership as an active force in meaning-making—one that shapes how people perceive and respond to complex challenges. The heart of this approach is recognizing that transformation is not primarily about solving problems but about reshaping how problems, solutions, and futures are imagined in the first place (Ketonen-Oksi & Vigren, 2024). Artistic and creative practices can be essential tools for engaging these deeper dimensions—not merely as communication strategies but as catalysts for shifting perception, unsettling entrenched assumptions, and making new futures tangible (Gablik, 1991; Kagan, 2011; Galafassi, 2018). By weaving together theory and application, this chapter examines how imaginative leadership can be intentionally cultivated to activate transformative mindsets, open new ways of seeing, and create pathways for change that conventional approaches often overlook.

The chapter is organized into four sections. Section 3.1 situates leadership within the landscape of complex problem domains, exploring why these entangled challenges demand unconventional approaches. Section 3.2 defines imaginative leadership, highlighting its potential open 'spaces of possibility'. Section 3.3 outlines a conceptual pathway for understanding how imaginative leadership can be operationalized, focusing on arenas of action activating transformative mindsets in service of regenerative sustainability.

Finally, Section 3.4 turns to the role of creative and artistic methods,²⁴ showing how they can disrupt limiting frames and inspire new forms of meaning-making, amplifying the transformative potentials of imaginative leadership.

3.1 Context: Leadership in Complex Problem Domains

Imaginative leadership works from the inside out, shifting how people perceive and respond to complex challenges by working with the inner dimensions of transformation as outlined in Chapter 2. My conceptual framework for imaginative leadership emerged from literature on leadership in *complex problem domains*, which are resistant to straightforward solutions. It was inspired by concepts of *transformative leadership*, *transformative agency*, and *transformative capacity*.

To start, the term problem domain refers to the specific landscape where challenges emerge and take hold. A problem domain consists of the network of actors, organizations, and institutions that are involved in or impacted by a specific complex issue. It spans multiple levels, from local to global, cutting across organizational, jurisdictional, and geographic boundaries. Because these challenges are deeply interconnected, a problem domain is always ecologically and culturally embedded, meaning it is shaped by and influences broader environmental and social-cultural systems (Ostrom, 2009; Westley et al., 2013).

Some problems are technical, some are systemic, but the hardest ones—*wicked problems*—refuse straightforward analysis (Rittel & Webber, 1973). One problem domain could be around preparing a coastal community for rising sea levels and another could be centered on attempting to redesign a city to eliminate waste. These are not just policy puzzles because they are not the result of a single failure or easily identifiable cause. Wicked problems are interwoven with the way we think, behave, and organize society. They arise

²⁴ A note on terminology: Although the terms 'arts-based methods' and 'creative methods' are often used interchangeably in the literature—and even throughout this research—this work predominantly uses 'arts-based methods' as it emphasizes that these approaches are rooted in the arts and humanities. However, 'creative methods' is occasionally employed to capture participatory activities that may not strictly fall under 'arts-based.' For instance, cooking together in a workshop or residency setting might not traditionally be considered 'arts-based,' but it can still be understood as a 'creative method' of engagement.

from a web of tangled forces—economic structures, cultural assumptions, governance systems, power dynamics, and environmental realities (Berkes et al., 2008; Espinosa & Porter, 2011; Ostrom, 2009). In problem domains where unsustainability a looming threat, pinpointing effective leverage points for change—let alone shifting deeply ingrained worldviews and habitual ways of being—can seem impossible.

So, how does the wickedness of a problem domain relate to our understanding of leadership? Traditionally, leadership literature focused on individuals and their ability to achieve goals or effect change within specific hierarchical organizations—e.g., governments, businesses, or institutions (Day, 2015; Northouse, 2018). Here, leadership was often conflated with the actions of a singular leader, but the two are not the same. A leader is seen as an individual who may hold formal authority or influence within a given structure, while leadership is a more dynamic, distributed phenomenon that emerges through relationships and collective action.

Leadership in complex problem domains doesn't rely on top-down control, but emerges through dynamic, often non-hierarchical interactions among actors working across levels to shift entrenched systems (Dinh et al., 2013; Hernandez et al., 2011; Sotarauta, 2012; Vogel & Masal, 2015; Westley et al., 2013). Often referred to as *transformative leadership*,²⁵ this approach emphasizes navigating uncertainty, aligning diverse actors, and creating conditions for new ways of thinking and acting to take hold (Horlings & Padt, 2013; Sotarauta et al., 2012). It involves working across disciplines and jurisdictions, forging connections, and amplifying shifts that, over time, can lead to systemic change (Folke et al., 2005; Olsson et al., 2006). Individuals act as strategic change agents, not by imposing solutions, but by leveraging opportunities at different scales to nudge systems in new directions (Dorado, 2005; Folke et al., 2005; Maguire et al., 2004; Olsson et al., 2006; Westley, 2002; Westley et al., 2006, 2013). Some scholars use the term *institutional*

²⁵ For the sake of clarity, it is useful to note that the terms 'transformative' and 'transformational leadership' are often mistakenly used interchangeably. In fact, they represent quite distinct philosophical and practical approaches to understanding leadership. A transformational leader can be considered charismatic and visionary, but they are primarily focused on improving or reforming existing systems and institutions, not on revolution or radical change. A transformative leader, on the other hand, is more likely to interrogate existing assumptions and structures and they seek to disrupt and change systems and fundamental ideas that have been taken for granted (Hewitt, Davis & Lashley 2014). Moreover, transformational leadership is usually studied in the context of straightforward and traditional hierarchical structures, whereas transformative leadership is characterized as complex, diffused, multi-level with an emphasis on the dynamic interaction between individuals and the collective context. It involves ongoing negotiation in terms of establishing norms, aspirations, framing priorities, and setting agendas (Hewitt, Davis & Lashley 2014).

entrepreneur rather than *leader* to emphasize that transformation is not driven by a single individual but by networks of actors working across scales and sectors (Westley et al., 2013; Sotarauta, 2012).

Within literature on leadership in complex problem domains, *transformative agency* is understood as the ability to shift a system's trajectory by recognizing and acting on opportunities for deep change, even in the face of resistance or uncertainty (Westley et al., 2013). More generally, *agency* refers to the capacity of individuals or groups to make choices and take action within a given structure, often working within existing institutional and social constraints (Emirbayer & Mische, 1998). Unlike agency that operates within established systems—working to optimize, adapt, or maintain the status quo—transformative agency challenges and reshapes those structures themselves (Sotarauta, 2012; Westley et al., 2013). It enables individuals and groups to go beyond small adjustments and instead catalyze shifts in how problems are understood, how decisions are made, and what kinds of futures seem possible.

Transformative agency depends on both reflexivity and future-oriented agency. Reflexivity is the ability to critically assess and revise one's assumptions (Archer, 1995, 2000) and future-oriented agency is the capacity to envision and pursue alternative possibilities (Emirbayer & Mische, 1998). As discussed in Chapter 2, Archer's work highlights that deep change requires more than structural shifts; it involves questioning ingrained worldviews, redefining roles, and making sense of uncertainty in new ways. Future-oriented agency enables individuals and groups to break from entrenched habits and move toward regenerative alternatives rather than making only minor adjustments. Without reflexivity to reassess existing frames and future-oriented agency to push beyond them, meaningful transformation is unlikely to take hold.

But transformative agency doesn't work in isolation. Transformation happens through networks of actors working at different levels to build momentum for change, for example, within institutions, across disciplines, and in communities (Folke et al., 2005; Olsson et al., 2006). That's why transformative agency is often linked to *transformative capacity*, which refers to the broader conditions that enable or constrain these efforts (Wolfram, 2016). Without supportive structures such as policies, relationships, or cultural narratives, transformative agency can be easily stalled. While individuals may initiate change, their impact depends on the broader system's ability to absorb and amplify new ideas. This aligns with research framing transformation—particularly in regenerative sustainability—as a spiral process: it may begin with key figures, but real change unfolds through the interaction of multiple forces and perspectives (Loorbach, 2010; Roep et al., 2015).

This research uses the term *leadership* rather than *agency*; while agency refers to the ability to act, leadership highlights the ability to shape the conditions that make action possible on a larger scale. Leadership in complex problem domains does not mean directing change but rather creating the space for it—by shifting narratives, activating networks, and strengthening people's

ability to imagine and enact alternatives. In the context of regenerative sustainability, this means moving beyond technical solutions and engaging with the cultural, emotional, and cognitive dimensions that shape how people relate to the future.

3.2 Defining Imaginative Leadership

This section examines how imaginative leadership operates in practice, focusing on how it engages with the inner dimensions to expand spaces of possibility and influence transformation.

3.2.1 Addressing gaps in transformative leadership

While concepts like transformative leadership and agency are becoming popular in both science and society, gaps remain in the theory. Most important, while research has explored the role of leadership in complex systems, there is still a lack of clear, practical insights into how to *actively* influence the inner dimensions within leadership and transformative agency toward regenerative sustainability. For example, Westley et al. (2013) point out that system shocks can create “meaning vacuums” (p. 8), leaving people scrambling for new narratives. They argue that deep transformation requires shifts in values, behaviors, and governance structures, but they offer little on how leadership actually facilitates these shifts. Similarly, Horlings (2015a, 2015b) touches on the role of values in place-based leadership, but the mechanisms of meaning-making—and their deeper integration into transformative leadership—remain largely unexplored. A similar gap exists in discussions of worldviews and paradigms. O’Brien and Sygna (2013) introduce the idea of intentional transformation, stressing the need to challenge ingrained mental models, yet like much of the literature, their work remains conceptual, offering limited guidance on practical strategies. Wamsler et al. (2020) argue that inner capacities such as self-awareness, emotional resilience, and cognitive flexibility are essential for sustainability leadership, yet they acknowledge that few studies operationalize these capacities in ways that can be actively applied. My conceptual framework for understanding how imaginative leadership might function in practice is, in part, a response to this gap.

3.2.2 Expanding spaces of possibility: Imaginative leadership in practice

Before elaborating the concept of spaces of possibility, I summarize where we are and where we are going: Conventional leadership works within existing constraints in straightforward problem domains. Transformative leadership and agency push further, engaging with systemic change in complex and wicked problems. Imaginative leadership operates within this space but takes a specific approach—it shifts the mental, emotional, and cultural boundaries of what people see as possible, influencing how challenges and opportunities are even perceived. Spaces of possibility provide a lens for exploring how transformative agency expands, making room for new ways of thinking, acting, and relating.

The idea of a possibility space shows up across diverse fields, but in its simplest form it marks the boundaries for sets of potential action, behavior, and communication for a specific problem domain. In philosophy, the concept is used to examine how possibility is shaped by what people consider knowable, setting the boundaries of thought itself (Williamson, 2018). In education, it has been applied to radical pedagogy, showing how classrooms can be designed to shake up assumptions and create room for transformation instead of just reinforcing existing knowledge (Rideau, 2020). In design research, it highlights how creative speculation pushes past familiar constraints, turning abstract ideas into tangible alternatives (Folkmann, 2013). Complexity theorists and systems thinkers use the term possibility space to make sense of how people and organizations navigate uncertainty, shifting patterns in ways that weren't obvious before. The literature on transformative agency in complex social ecological systems emphasizes the importance of considering social-ecological relationships to expand the range of potential solutions in particular possibility spaces (Westley et al., 2013). Transformative agency can take advantage of and expand 'opportunity windows' at all phases in processes of transformation (Westley et al., 2013), for example in the form of experimentation, 'innovation labs,' and scenario planning—all of which can be considered as spaces of possibility. Across these fields, spaces of possibility aren't just waiting to be discovered—they are actively shaped by the way people engage with structures, stories, and the possibilities they allow themselves to see.

Doreen Massey's (2005) work on relational space is useful in understanding how spaces of possibility are shaped and reshaped. Rather than seeing space as a static container, Massey emphasizes that space is relational, dynamic, and full of potential encounters. This means that a space of possibility is not something people simply "discover" or "map out"; it is produced through engagement, interaction, and meaning-making. Imaginative leadership might expand spaces of possibility not by offering static visions of the future but by cultivating conditions where multiple perspectives and emergent possibilities can unfold. J.K. Gibson-Graham's (2006) work on re-seeing complements this,

emphasizing that the way we perceive the world directly affects what we believe is possible. Their work in feminist political economy challenges deterministic narratives about capitalism's inevitability, arguing instead that alternative economies and social systems already exist—they just require new ways of seeing and engaging with them. This insight is helpful for imaginative leadership: expanding spaces of possibility often means helping people perceive and engage with existing but overlooked pathways, relationships, and potentialities, rather than inventing something entirely new.

Sacha Kagan has been actively using the idea of *spaces of possibility* in the realm of sustainability and cultural change, but with a distinctive twist. Rather than simply describing the possibilities available in a given moment—as the term is often used in other fields—Kagan treats spaces of possibility as inherently generative, expanding as people engage with them. These are not passive sites where new ideas circulate; they are arenas where boundaries are pushed, alternatives are tested, and something fundamentally different can take root. His framing assumes that spaces of possibility are always sites of imaginative leadership in some form—places where people actively cultivate new ways of thinking and acting.

He describes them as sites of imagination and experimentation, where transdisciplinary collaboration and creative risk-taking loosen the grip of outdated systems. His work in urban sustainability (*Culture and Sustainable Development in the City: Urban Spaces of Possibilities*, 2022) explores how cities can become living laboratories, where art and culture fuel ecological and social shifts. In another thread of his research, he highlights how spaces of possibility give communities the flexibility to rethink relationships—between people, institutions, and their environments—rather than staying locked into old patterns. For Kagan, these spaces aren't just theoretical constructs; they are necessary if we want to move beyond incremental change and into deep transformation.

In sum, this research frames imaginative leadership as a set of capacities and approaches that actively expand spaces of possibility (see Figure 5 below).

Applying the 4Q schema lens helps clarify how spaces of possibility can operate as arenas for experimentation and transformation in both the external and internal dimensions of reality (see Figure 6). External spaces of possibility are concrete, flexibly bounded contexts where people convene to test new ways of thinking and acting. They are places for exploring transformative practices, shifting social and institutional arrangements, and experimenting with new behaviors, rituals, and relationships. Internal (or metaphorical) spaces of possibility exist within the social imaginary. They shape what people see as possible, desirable, and actionable. By shifting mental models, worldviews, and socio-cultural norms, they expand the range of choices and directions available for transformation.

As illustrated in Figure 6, spaces of possibility emerge and evolve through the interplay of constellations of actors, the bridging of diverse perspectives, and deep embeddedness within specific contexts. They are shaped by social, ecological, and institutional conditions, yet they also shape those conditions in return. Imaginative leadership actively engages with these dynamics to expand and activate spaces of possibility.²⁶

²⁶ Nisbet et al. (2010) identify four distinct cultural approaches to engaging society on climate change: scientific, political, market, and civic. The scientific culture focuses on empirical research and evidence-based understanding, while the political culture centers on governance, policymaking, and advocacy. The market culture approaches climate change through economic incentives, innovation, and business solutions, whereas the civic culture emphasizes ethics, social movements, and public engagement. The authors argue that these cultures often operate in isolation, limiting their effectiveness. To address climate change more holistically, Nisbet et al. advocate for greater integration and synergy across these cultural domains. They suggest that fostering communication between scientists, policymakers, businesses, and civic leaders can enhance collective action, creating a more effective response. However, each culture is shaped by deeper meaning structures—narratives, mental models, and social imaginaries—that influence how climate issues are framed and understood. Imaginative leadership can surface these inner dimensions, helping individuals and groups recognize the assumptions shaping their perspectives and how these assumptions structure engagement. By making these framing patterns visible and open to reflection, imaginative leadership enables deeper integration across cultural approaches, not just at the level of strategy but at the level of meaning itself, fostering more generative and regenerative responses.

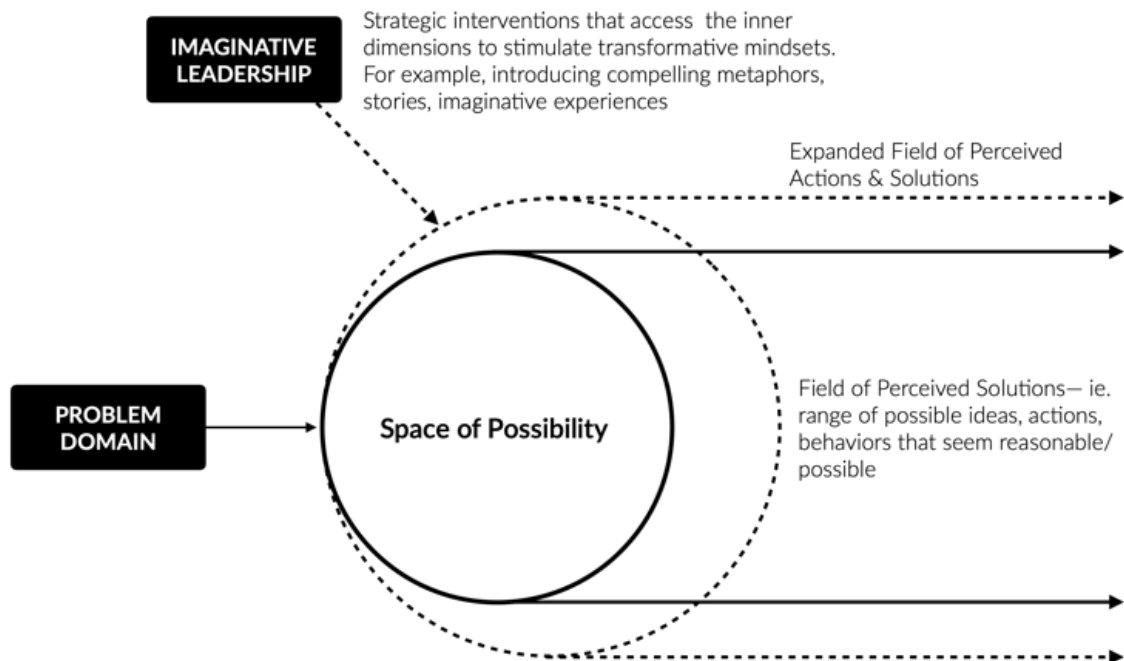


Figure 5. Expanding Space of Possibility

Source: Own Conceptualization

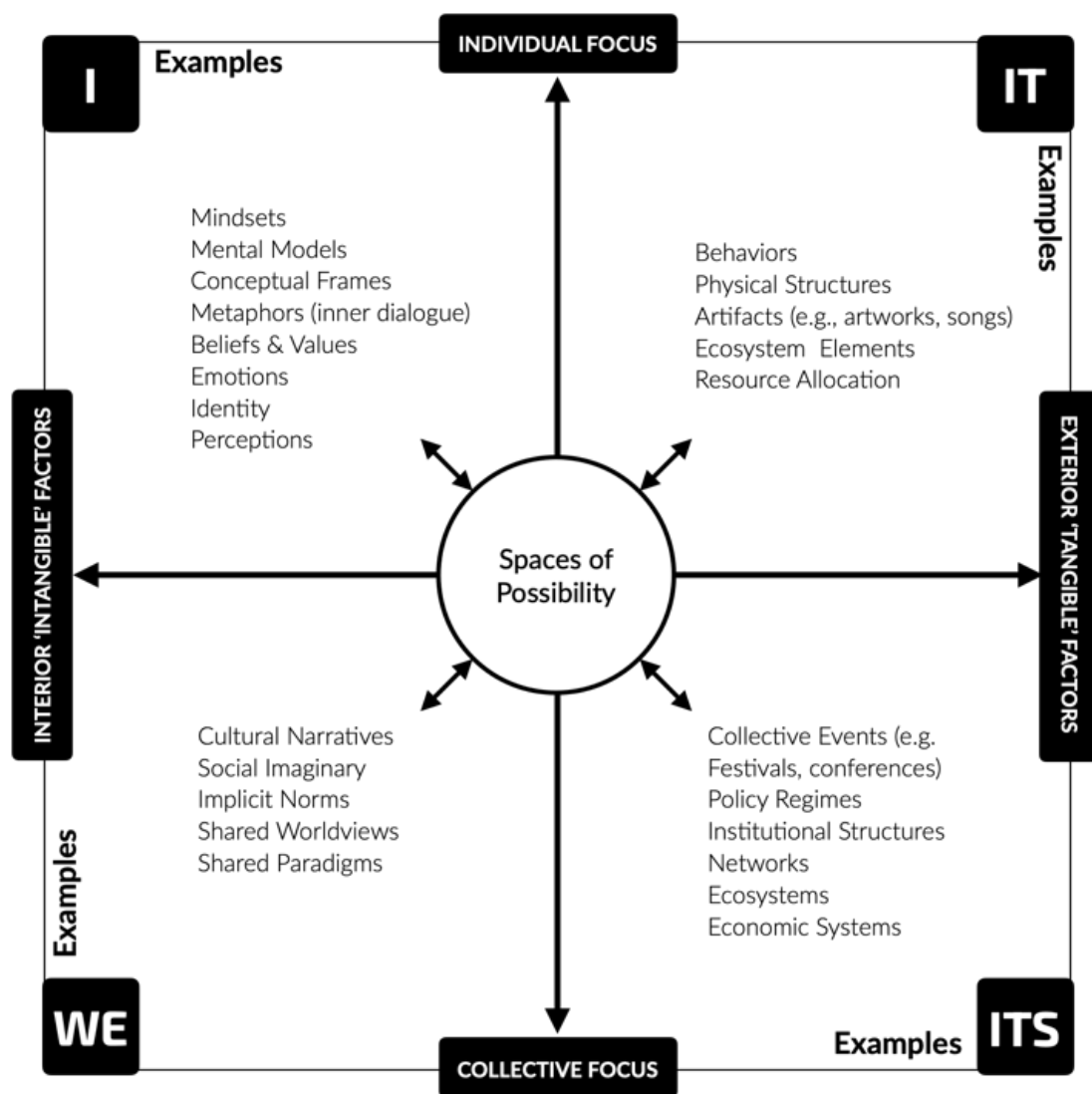


Figure 6. The Four Quadrants (4Q) of Spaces of Possibility

Source: Own Conceptualization

3.3 Operationalizing Imaginative Leadership

Chapter 2 mapped out four categories of the inner dimensions—deep structures, cultural transmission, cognitive and personal frameworks, and emotional and embodied experience. Together, these influence how people make sense of the world, what they believe is possible, and how they move forward. This section looks at how imaginative leadership can work with some of these dimensions in practice.

First, I introduce four modes of engagement for working with the inner dimensions of meaning-making: (1) framing, (2) priming, (3) reflecting, and (4) imagining. Then, I lay out a conceptual model that sketches how these actions might play out within a specific problem domain. This model isn't meant to be universally comprehensive, but rather to offer one way of thinking about how imaginative leadership can stir up new perspectives, disrupt default assumptions, and expand what's possible—bridging shifts in meaning to real-world (external dimensions) action.

3.3.1 Four modes of engagement

Meaning is shaped, nudged, and stretched through the ways people (1) frame issues, (2) prime perceptions, (3) reflect on assumptions, and (4) imagine beyond constraints.

(1) Framing: Constructing and Reshaping Meaning

Framing describes the ability to shape the meaning of a subject and to choose (or persuade others to choose) meaning over another (Fairhurst & Sarr, 1996), which can occur as an external stimulus or as an internal (conscious or nonconscious) decision (Nijland, 2016). Importantly, multiple different and even conflicting mental models co-exist within the social imaginary, as well as within an individual.

Framing is central to how people interpret the world, determining not just what is visible but how it is understood. Leaders influence framing through the metaphors, narratives, and discourse they employ, shaping whether an issue is perceived as urgent, inevitable, solvable, or even worth engaging with (Lakoff & Johnson, 1980). These frames guide how people categorize problems and define possible responses, making them a crucial mechanism in both reinforcing and challenging dominant assumptions.

Unlike static frames, leadership involves an active and ongoing process of framing and reframing. This is particularly important in moments of transition, when established frames no longer adequately explain emerging

realities. Leadership that recognizes this fluidity can introduce alternative frames that shift perceptions—transforming problems into opportunities, inevitabilities into contingencies, and barriers into openings. The ability to surface dominant frames, interrogate their limitations, and strategically introduce new ways of understanding complex challenges is one of the most powerful aspects of imaginative leadership.

(2) Priming: Conditioning Perception and Decision-Making

Priming shapes how people interpret and respond to the world, often without them realizing it. Unlike framing, which defines *what* something means, priming works beneath the surface, activating mental associations that shape *how* that meaning is processed. Exposure to a particular word, image, or idea can set the stage for the next thing a person encounters—whether that means nudging them toward a certain decision or reinforcing an existing belief (Bargh, 2006; Meldon, 2013). It's the reason why someone who sees the word “doctor” might recognize “nurse” more quickly than “butterfly” (Gardiner, Gabriel, & Lee, 1999). Or why a political speech peppered with words like *crisis*, *threat*, and *collapse* primes listeners to feel anxious before they've even processed the details. Repeated exposure to certain frames makes them feel like common sense—the more an idea is reinforced, the more natural it seems, and the more likely people are to act accordingly.

For imaginative leadership, priming is a subtle but powerful tool. It doesn't just introduce concepts; it shapes the cognitive terrain in which those concepts take root. Research shows that the way an issue is primed influences whether it's seen as politically viable, economically feasible, or morally acceptable (Moyer & Song, 2021). Even when a frame conflicts with dominant worldviews, strategic priming—through repetition, context, and emotion—can open new ways of seeing (Krause & Bucy, 2018).

While priming and framing often work together, they play different roles. Framing tells the story—it decides which parts of reality to emphasize and how to structure them. Priming, on the other hand, lays the groundwork for how that story is received. Take climate change. If it's framed as an economic problem, people expect policy debates about taxes and jobs. If it's framed as a moral issue, the conversation shifts to responsibility and justice. But how people *respond* to those frames could depend on the way they have been primed beforehand. A person exposed to constant news about economic downturns might resist climate policies that sound expensive, while someone primed with stories of extreme weather might be more open to urgent action. It's the difference between setting the stage and setting the mood. Framing structures the scene, while priming controls the lighting, color, and background music.

Not all primes hit with the same intensity. Some are emotionally charged and immediate—*hot primes*, as these are called, grip attention, stir fear, hope, outrage, or inspiration (Nijland, 2016). A photo of a starving polar bear, an

activist's powerful speech, a striking work of art—these all pull people into a narrative through feeling. *Cold primes*, in contrast, work more quietly, engaging logic and analysis. A well-reasoned argument, a policy comparison, or a data-driven report primes cognition rather than emotion. Both have their place, but hot primes tend to have a stronger impact on decision-making. Emotion can override logic, making people more receptive to new ideas—or more defensive, depending on what's being activated (Lertzman, 2015). The challenge is using priming in ways that open up thought rather than shutting it down. Fear, for instance, can push people into action or into paralysis, depending on how it's handled.

In the context of imaginative leadership, priming is more than a cognitive trick—it's a way of expanding possibility. Repeated language, evocative imagery, and affective storytelling can gently shift mental landscapes, making room for new narratives and unexpected insights. Metaphors help root abstract concepts in something people can intuitively grasp—framing *carbon tax* as *paying rent to the planet* (Lakoff, 2010), or *biodiversity loss* as *shredding the web of life*. Strengthening regenerative mental models, normalizing long-term thinking, and embedding interconnected ways of seeing into everyday language can make sustainable mindsets feel more natural (Westley et al., 2013). Art, story, and participatory experiences create emotional openings that facts alone often cannot. Framing builds the architecture of meaning, but priming can make that meaning stick.

(3) Reflecting: Adjusting Frames and Perception in Action

Reflexivity is the ability to critically examine one's own mental models, assumptions, and biases while engaging with others. It is an essential dimension of imaginative leadership, ensuring that framing, priming, reflecting, and imagining do not simply reinforce existing patterns but open space for new ways of seeing and acting. Margaret Archer (2007) describes reflexivity as the process through which individuals monitor, evaluate, and revise their internal conversations in response to new experiences and shifting contexts. Rather than passively absorbing dominant narratives, reflexivity enables a more dynamic engagement with meaning-making, allowing for the questioning of assumptions and the expansion of spaces of possibility.

Within the four arenas of action, reflexivity is the connective tissue that keeps them fluid and responsive rather than rigid or repetitive. Framing provides the structures through which meaning is shaped, but reflexivity makes it possible to question inherited frames and recognize how they influence perception. Priming and framing shape which mental models and mindsets become active in a given moment, but without reflexivity, these activations remain habitual rather than intentional. Reflexivity allows for recognizing when frames and primes are shaping thought automatically and choosing when to disrupt or reinforce them. Reflecting is the process that engages most directly with deeper structures of thought, bringing assumptions, beliefs, and

interpretations into conscious awareness. However, without an active practice of reflexivity, reflection can reinforce rather than challenge underlying assumptions. Imagining pushes beyond existing constraints, but its effectiveness depends on the ability to step back and recognize how dominant worldviews shape what appears viable or realistic. Reflexivity allows each of these processes—framing, priming, reflecting, and imagining—to remain dynamic, preventing them from simply reproducing existing patterns.

Pierre Bourdieu's (1990) concept of *habitus* highlights the challenge of reflexivity—much of what shapes action is internalized and often goes unexamined. Without reflexivity, framing and priming risk reinforcing institutionalized norms rather than opening them up to transformation (Bourdieu & Wacquant, 1992). Similarly, Antonio Gramsci's (1971) notion of hegemonic common sense suggests that dominant ideologies often feel so natural that they go unquestioned, limiting the scope of reflection and imagination. While *habitus* operates at the level of individual dispositions, *hegemonic common-sense* functions at the societal level, reinforcing the need for reflexivity both personally and structurally. Even when working toward change, there is a risk of reproducing rather than disrupting inherited structures of thought.

By cultivating reflexivity, imaginative leadership remains adaptive, capable of engaging with competing perspectives without rigidly defending assumptions. This aligns with Donald Schön's (1983) concept of the reflective practitioner, where learning happens through iterative cycles of action, reflection, and adaptation. Explicitly integrating reflexivity into leadership practices prevents them from becoming static or locked into predetermined frames, instead allowing for a more generative and emergent process.

In practice, reflexivity ensures that imaginative leadership does not become a closed system of meaning. It is not about persuasion or strategic framing but an ongoing process of self-examination and recalibration. Recognizing how thought is shaped by dominant paradigms allows new perspectives to be introduced in ways that resonate rather than alienate. As Haraway (1988) argues, all knowledge is partial and positioned; reflexivity does not simply embrace uncertainty but demands accountability in meaning-making, ensuring that leadership remains dynamic rather than reinforcing inherited patterns.

(4) Imagining: Expanding the Boundaries of the Possible

Imagination as a faculty—the ability to form mental images and ideas—exists in everyone. Imagining is an act, a process of engaging with possibility, sometimes intentionally, sometimes unexpectedly. Imagination allows individuals and societies to move beyond inherited constraints. It shapes how people recognize opportunities, weigh alternatives, and respond to change. The frames people rely on, the primes they are exposed to, and the extent to which they engage in reflexive thought all influence how imagination unfolds. A truly thorough

review of imagination as a concept is beyond the scope of this research; instead, this section is meant to orient the discussion by clarifying how imagining functions within the broader framework of inner dimensions and transformation.

Different disciplines define the relationship between imagination and imagining in ways that intersect but emphasize different dimensions. In philosophy and social theory, imagination is often understood as the fundamental human capacity to generate mental images, create meaning, and perceive realities beyond immediate experience (Castoriadis, 1997). While philosophy defines imagination as a broad capacity, psychology and cognitive science emphasize the distinction between imagination as a latent faculty and imagining as an active, often embodied process (Gallagher & Lindgren, 2015). Sociological approaches emphasize how imagining functions as a reflexive act, helping individuals assess potential futures and alternative pathways within their social realities (Archer, 2007). Cultural studies and education research highlight imagining as a relational and political act, one that both reinforces and disrupts dominant narratives, making it an essential force in shaping discourse and collective meaning (Vadeboncoeur & Vellos, 2016). Ethics and moral philosophy similarly frame imagining as central to decision-making, arguing that it allows people to weigh social consequences, test moral boundaries, and construct alternative ways of being (Johnson, 1993).

Imagining also operates in more speculative and playful ways. Imagining is not limited to problem-solving and future scenarios; it also includes absurdity, transgression, and exploration of the unknown. Playful imagining invites exaggeration, irony, and surreal possibilities, creating space for what Hans-Georg Gadamer (1960/2004) describes as the “as if” of experience—a way of stepping outside fixed realities to test other modes of existence without immediate consequence. Transgressive imagining, by contrast, confronts social norms, not by reinforcing alternatives but by unsettling dominant structures, exposing contradictions, or pushing boundaries beyond what is considered acceptable. Science fiction, surrealism, and dark satire all tap into this mode, using imagination to critique, destabilize, or radically reframe assumptions. Across these perspectives, imagination remains the underlying capacity, but imagining is the active, unpredictable process of engaging with possibilities—whether playful, unsettling, or transformative.

Often, imagination is held in check by social conditioning (Bourdieu, 1991). Dominant narratives define what is “realistic,” making alternatives invisible or too easily dismissed. When only familiar solutions seem viable, decision-making narrows. Without new ways of seeing, people tend to replicate existing structures rather than question them. Imagination does not have to work within existing structures; it can generate entirely new ways of thinking about the future. Galafassi (2018) describes *transformative imagination* as an *embodied and relational* process—something shaped by sensory experience, emotion, and social engagement rather than detached reasoning. This is what

allows people to experience alternative futures as tangible and actionable rather than as distant hypotheticals. When imagination is activated through artistic, narrative, or participatory means, ideas that once seemed abstract gain a sense of immediacy and urgency.

This connects to *future-oriented reflexivity* (Archer, 2007), where individuals actively envision and assess potential transformations rather than simply reflecting on present conditions. Reflexivity creates the cognitive and social scaffolding that makes alternative courses of action recognizable and concrete. It shifts thinking from established realities to emerging possibilities, challenging taken-for-granted assumptions and revealing new paths forward.

Although social imaginaries define dominant meanings, imagination is what determines whether people reinforce, reject, or reshape them. It enables both speculative visioning and practical rethinking of the present (Böttcher, 2020; Vadeboncoeur & Vellos, 2016). The way a society envisions its future influences the knowledge it values, the policies it pursues, and the range of solutions it considers viable (Milkoreit et al., 2020). When imagination remains constrained, decisions tend to reinforce existing structures, no matter how unsustainable they may be. When it is engaged deliberately, it can reshape narratives, shift priorities, and bring overlooked alternatives into focus.

I chose imaginative leadership as the focus of this research because it highlights the active role of engaging imagination in ways that shape perception, meaning, and action. Imagining is not just an individual act—it interacts with all levels of the inner dimensions, from mental models and emotions to shared narratives and social imaginaries. Through imagining, people challenge assumptions, navigate uncertainty, and make new possibilities visible, influencing both personal and collective transformation.

Modes of Engagement in Action and Interaction

Framing and priming shape how people engage with the world, whether in conversation, decision-making, or collaborative efforts. Framing sets the stage, defining what stands out and what fades into the background. Priming works in the moment, nudging perception and emotional response before conscious thought kicks in. Reflexivity adds the capacity to step back and question assumptions, while imagination disrupts habitual patterns and introduces new possibilities. None of these processes operate in isolation. They unfold in real time, shaped by history, power structures, cultural narratives, social-ecological conditions, and the immediate dynamics of a given situation.

Framing and priming work in distinct but interconnected ways to guide understanding and interaction. Framing structures interpretation at a broader level, using discourse, metaphors, and narratives to emphasize particular aspects of reality while downplaying others (Lakoff, 2014). For example, if climate change is framed as a moral responsibility, it activates ethical considerations; framed as an economic risk, it shifts focus to financial

calculations. Priming, by contrast, is more immediate and subconscious, shaping response patterns through language, imagery, and sensory cues (Ariely, 2008). A single word choice, a well-placed image, or even the tone of a discussion can steer perception—such as an image of a devastated landscape before a climate debate, increasing the likelihood of urgency and grief-driven responses. Over time, the repeated interaction between framing and priming reinforces particular mindsets, making certain ways of thinking and acting feel automatic.

Both framing and priming activate specific cognitive networks, drawing on mental models that are already embedded but can be triggered by context (World Bank, 2015; Sonnet, 2019; Moy and Rinke, 2016). Lakoff's research suggests that root metaphors and cultural narratives guide these activations. Neural circuits strengthen through repeated exposure, meaning that frames with the strongest synaptic links become the default response in relevant situations (Lakoff, 2014: 12). Each frame is tied to different values, priorities, and behaviors. If a discussion operates within 'Market Norms,' participants may focus on efficiency and cost-benefit analyses. If framed within 'Social Norms,' they may emphasize fairness and collective well-being (Ariely, 2008). Cultural narratives reinforce these frames, increasing their influence over time (Lakoff, 2014).

To illustrate the difference between framing and priming in interaction: If sustainability is framed as a matter of sacrifice and constraint, people will likely respond with reluctance or resistance. If it is framed as renewal, creativity, and collective thriving, it invites a different emotional and cognitive response, shaping both individual engagement and group dynamics.

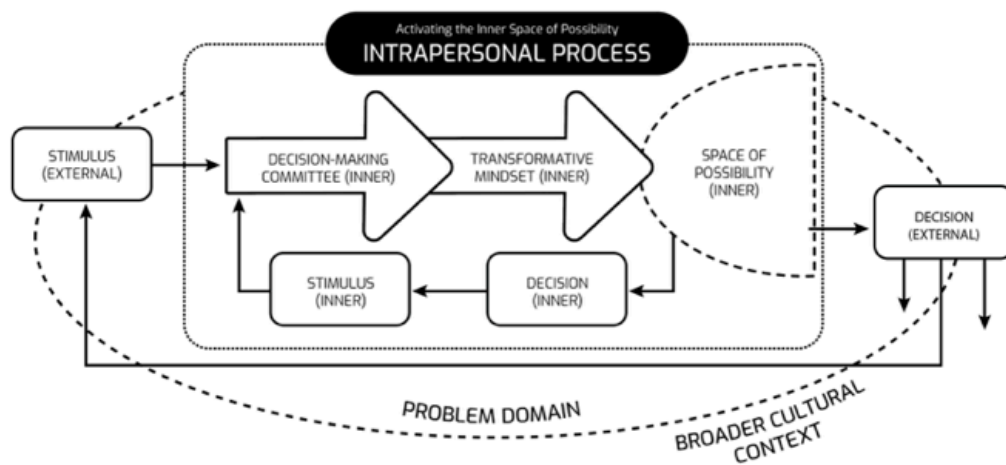
Reflexivity plays a crucial role in keeping these processes from becoming rigid or unexamined. Margaret Archer (2007) describes reflexivity as the ability to monitor and revise internal conversations in response to new experiences. Without it, people tend to default to habitual mental models, even when those models no longer align with reality. Reflexivity creates space for adjustment, making it possible to shift perspectives and adapt to emerging challenges. Imagination is where engagement moves beyond pattern recognition and adjustment. It disrupts the expected, generating new ways of thinking and acting. While framing and priming shape what seems relevant, and reflexivity allows for critical questioning, imagination expands what is possible. In action, these elements work together to shape how individuals and groups engage with complexity, uncertainty, and transformation.

3.3.2 Intervening in the inner dimensions: A schema

This section introduces a conceptual model for understanding how imaginative leadership works in the application of specific strategic interventions that unfold in a specific problem domain. The schema *Intrapersonal Process: Activating the Inner-Possibility Space* (Figure 7) presents an overview of how external stimuli can be intentionally applied to prime cognitive and emotional responses, evoking transformative mindsets that expand the inner dimension of possibility.

In addition to deliberate interventions, cognition and motivation are shaped by the broader landscape of meaning—metaphorical thinking, the accessibility and strength of mental models and conceptual frames, as well as cultural narratives, worldviews, and the social imaginary. These forces are not isolated but embedded within specific social, ecological, and cultural contexts.

The model illustrates how external stimuli—such as metaphors, narratives, symbols, and experiences—interact with mental models, emotions, and cognitive frames, influencing mindsets and the decision-making processes. Reflexivity functions as a feedback mechanism, allowing shifts in framing and priming to be critically examined and adjusted in response to new insights. Imagination stretches the boundaries of what can be envisioned and acted upon. The embeddedness of context ensures that these dynamics unfold within real-world conditions, where structural, cultural, and ecological factors influence both constraints and openings for transformation.

**Intrapersonal Process**

An individual's inner process when focused on a specific problem domain (that exists in relationship with the broader cultural context)

Stimulus (External)

Situations and/or artifact(s) that activate cognitive, emotional, or behavioral responses, shaping perception and influencing decision-making

Space of Possibility (Inner)

What is considered possible and reasonable as determined by cognitive and emotional processing at conscious & unconscious levels

Decision (Inner)

An individual's conscious decision to activate specific inner-frames (acting as an inner stimulus)

Decision-Making Committee (Inner)

The interaction of primed cognitions, emotions & drives that determine a person's mindset in a given situation

Transformative Mindset

A mindset that re-defines the boundaries of the inner possibility space (in contrast to default mindsets)

Stimulus (Inner)

Includes metaphors, narratives, mental models, conceptual frames applied via framing, reflecting, and imagining as internal processes

Decision (External)

An individual's decision to take an action that
 a) impacts the problem domain, and/or
 b) impacts the broader cultural context, and/or
 c) involves deliberately choosing an external stimulus that will continue to impact the inner-decision making committee (in a conscious feedback loop)

Figure 7. Schema: Intrapersonal Process: Activating the Inner-Possibility Space

Source: Own Conceptualization

Elaboration of Schema Elements

I start below with a short summary of each element to orient the reader to the schema, then move on to an explanation of the dynamics and process.

Problem Domain: As discussed in Section 3.2 the problem domain consists of the actors, organizations, and institutions affected by a particular complex problem, spanning multiple organizational, jurisdictional, and geographic scales (Westley et al., 2013). It defines the specific area where a challenge exists and must be addressed—whether improving preparedness for rising sea levels, fostering zero-waste cities, or designing public spaces aligned with regenerative sustainability. Crucially, problem domains are embedded within broader relational and environmental contexts. They do not exist in isolation but are shaped by external conditions such as trust, conviviality, and social networks, as well as structural and systemic constraints. Problems—and their possible solutions—are entangled in multispecies, technological, and ecological relationships (Haraway 2016). The degree of openness, collaboration, and shared purpose within a problem domain influences what solutions are possible and how they take shape. Just as ecological systems are interwoven with social and institutional dynamics, problem domains are entangled with external and internal dimensions—what is technically feasible, politically viable, and culturally resonant.

Intrapersonal Process: An intrapersonal process is a broad psychological term referring to the internal workings of thought, emotion, and perception. Here it encompasses the dynamic interplay of emotions, cognitive structures, conceptual frames, and narratives that shape perception and response within a particular person. It is the internal flow through which multiple, often competing, influences—such as prior experiences, cultural conditioning, and subconscious associations—interact to inform decision-making, orientation, and meaning-making. Rather than a fixed or linear sequence, this process is fluid and context-dependent, continuously shaped by both external stimuli and internal dispositions (Deaux & Snyder, 2012).

External Stimulus: External stimuli are factors or inputs from the external dimensions that activate cognitive, emotional, or behavioral responses, shaping perception and influencing decision-making. In this context, external stimuli engage processes of framing and priming—two mechanisms that shape how people interpret and respond to their surroundings. Framing structures how information is presented, guiding interpretation and shaping attitudes. Priming activates pre-existing mental associations, making certain ideas, emotions, or thought patterns more immediately accessible. These processes unfold within broader cultural and contextual landscapes, reinforcing or shifting habitual ways of thinking. As the World Bank describes, a stimulus prompts individuals

to “draw on one or another mental model when the context triggers a particular way of looking at the world” (World Bank, 2015: 62)²⁷.

Decision Making Committee (Primed Cognitions & Inner Drives): The decision-making committee is a metaphor for the internal cognitive and emotional processes that shape how a person interprets a situation and responds. Clearly, decision-making is not purely rational but emerges from a dynamic interplay of mental models, conceptual frames, emotions, and motivations. These elements are not all equally accessible at any given moment; instead, a selective filtering process determines which thoughts and drives come to the foreground, influenced by external stimuli and broader meaning-making systems such as social imaginaries, dominant worldviews, and narratives (Nijland, 2016).

The idea of priming describes how external stimuli—such as language, images, objects, artifacts, or environmental structures—trigger the temporary activation of specific cognitions and drives, either consciously or non-consciously (Bargh, 2006; Meldon, 2013). Nijland refers to this as a process of cognitive accessibility, where only a subset of an individual’s total cognitive and emotional repertoire is engaged at any given time. External stimuli do not simply add new information; they direct attention, shaping what appears relevant, actionable, or even possible in a given moment. Some mental models and emotional responses, reinforced through repetition, become habitual filters through which new information is interpreted, while others remain inactive unless deliberately engaged.

Transformative Mindset: A mindset functions as a filter, shaping how individuals perceive and engage with a specific problem domain—like a pair of glasses that brings certain dimensions into focus while obscuring others. It determines what aspects of a challenge feel most relevant, what solutions appear viable, and what possibilities seem out of reach. Mindsets operate between mental models and emotions, structuring how knowledge, values, and experience translate into action (Nijland, 2016; Markman et al., 2009). Though shaped by personal history and social conditioning, they are also reinforced by broader cultural and institutional forces (Boler & Zembylas, 2016). Some mindsets align with dominant norms—such as a productivity mindset, which prioritizes efficiency and output—while others, like a regenerative mindset, expand the field of possibility by emphasizing interdependence, resilience, and long-term flourishing (Schwartz, 2015; Ehrenfeld, 2008). Because mindsets

²⁷ Although this is technically a grey literature text, it is the most thorough and detailed literature on mental models that I encountered in my research.

frame how problems and solutions are understood, they can either constrain or open up transformative potential.

Specific *transformative mindsets*—those that support regenerative sustainability—can enable new ways of seeing, making space for creativity, collaboration, and systemic change. This idea will be explored further in Chapter 5, where I discuss a series of experiments using arts-based practices to activate transformative mindsets.

Space of Possibility: A space of possibility refers to the range of potential outcomes, choices, or scenarios that are perceived as feasible in a given context (as discussed in more depth earlier). It can refer to an individual's sense of what is possible or a group's tacit or explicit agreement about viable options. The inner space of possibility²⁸ shown in the schema is shaped by perception and mindset—what feels plausible, actionable, or worth pursuing based on cognitive framing, emotions, and imagination.

Decision: A decision is a resolution or course of action chosen after weighing multiple possibilities, shaped by both conscious reasoning and unconscious influences. It emerges from an individual's perception of what is possible, worthwhile, and actionable, filtered through personal biases, aspirations, societal norms, past experiences, and emotional or intuitive responses. Within a problem domain, a decision directly impacts the issue at hand, but its effects can extend beyond it—especially when it reinforces a transformative mindset that shifts how future challenges are framed and engaged.

In the context of strengthening imaginative leadership, a decision is not just about selecting a course of action but about shaping the conditions that sustain change over time. Choosing to engage with different narratives, frames, and external stimuli can help cultivate and reinforce transformative mindsets, creating a self-reinforcing loop in which imagination, framing, and priming become consciously directed processes. This form of decision-making expands self-efficacy, strengthening an individual's capacity to actively shape their own engagement with transformation. By making choices that align with and reinforce transformative agency, individuals contribute to their own ability to access and sustain transformative imagination, influencing both immediate outcomes and the broader landscape of possibility.

²⁸ An “external space of possibility” consists of the wider system of constraints and affordances—the constellation of actors, structural conditions, and tangible opportunities within the limits of policy, law, technology, and biophysical realities.

3.3.3 Schema as process

The schema describes a dynamic process in which external and internal stimuli shape an individual's cognition, perception, and decision-making, reinforcing or shifting mindsets and, ultimately, influencing the broader problem domain. Rather than a linear sequence, this process unfolds through interactions between framing, priming, reflexivity, emotions, and inner cognition, shaping both immediate decisions and longer-term orientations toward change.

External stimuli—such as narratives, metaphors, symbolic objects, or environmental cues—act as triggers that influence perception and meaning-making.

These stimuli interact with an individual's inner decision-making process, which involves the interplay of metaphors, mental models, conceptual frames, and emotions, all shaped by the broader social imaginary and cultural narratives (Nijland, 2016). Only a subset of these influences is active at any given moment, meaning that what is primed and made accessible determines what feels possible and actionable. Lakoff (2004) explains that neural circuits are activated in context depending on which frames have the strongest connections, reinforcing particular interpretations of reality. New metaphors and concepts introduced into an individual's cognitive system can alter decision-making patterns and even reshape the underlying conceptual system (Lakoff & Johnson, 2003). Over time, targeted interventions can strengthen or shift mental models, reinforcing transformative mindsets that open new ways of thinking and acting (Schein, 2015; World Bank, 2015).

Emotions further influence decision-making by shaping how stimuli are received and processed. Nijland (2016) distinguishes between hot primes, which evoke strong emotions and direct attention, and cold primes, which engage more rational, detached processing.

Research on environmental engagement suggests that emotions like fear, anxiety, or apathy can block action, even when cognitive frameworks support sustainability (Kollmuss & Agyeman, 2002; Lertzman, 2015). Overwhelming emotions, if not processed through reflexivity, can lead to paralysis rather than engagement (Weintrobe, 2012; Van Boeckel, 2009). On the other hand, emotions that foster connection, inspiration, and meaning can make new frames and mental models more powerful and enduring; when groups feel 'psychological safety' and positive affects, they are more open to creative practices and new ways of thinking (Newman et al., 2017).

As these processes unfold, they shape an individual's inner-possibility space, the field of potential actions and choices based on what is perceived as viable and desirable. This internal space is structured by the interaction of framing, priming, reflexivity, and emotions, determining what solutions or approaches are even considered. Decisions emerge from this cognitive and

affective landscape, influencing both internal and external dimensions of action. Internally, a decision might involve reinforcing or shifting a conceptual frame, consciously adopting a new perspective, or choosing to engage with different narratives. Externally, decisions manifest in tangible actions—shaping behaviors, strategies, alliances, and institutional shifts that, in turn, become new stimuli reinforcing or disrupting existing mindsets.

This self-reinforcing process highlights how decisions are not isolated choices but part of a dynamic feedback loop that continually reshapes both individual and collective meaning-making. When a decision strengthens a transformative mindset, it expands future possibilities, creating conditions for new ways of thinking, acting, and relating to take hold. Through this process, imaginative leadership emerges as an ongoing, evolving engagement with meaning, perception, and action, rather than a fixed or predetermined path.

3.4 The Role of Art in Imaginative Leadership

“The function of art has always been to break through the crust of conventionalized and routine consciousness. Artists have always been the real purveyors of the news, for it is not the outward happening in itself which is new, but the kindling by it of emotion, perception and appreciation.”

—Dewey (1927: 183)²⁹

As discussed in this chapter, the leadership capacities needed in transformations toward regenerative sustainability include making decisions or managing systems, but also the ability to understand and shift how people see, feel, and engage with the world. In complex problem domains, where culture, habit, and emotion shape the landscape as much as policy or infrastructure, traditional leadership approaches often fall short (Westley et al., 2013). If we want deep, lasting change, we have to work at the level where meaning is

²⁹ John Dewey (1859–1952) was an American philosopher, psychologist, and educational reformer, widely regarded as a foundational figure in modern American pragmatism. He is best known for his work on education, democratic life, and aesthetics. Dewey viewed art as a vital form of human experience that is integral to how people make meaning, connect emotionally, and perceive the world. In his view, art disrupts habitual patterns of thought and opens up deeper engagement with both one’s surroundings and with others, reflecting his broader belief that democracy and creativity are everyday practices rooted in lived experience.

made—the inner dimensions of transformation. This capacity is what I conceptualize as imaginative leadership.

The previous section explored how imaginative leadership can be operationalized through the Schema of Imaginative Leadership (Section 3.3.2). The question now is: How do we bring these dimensions to life? How do we make them felt, experienced, and real?

This is where the arts come in.

So far, we've seen that inner dimensions don't shift through logic alone. Facts don't change paradigms. Spreadsheets don't stir the imagination. What does? Stories, symbols, music, movement, metaphor—the very tools that shape meaning. Imaginative leadership is a way to expand spaces of possibility and the arts are uniquely suited to do that. Artists often provide a new, creative, and fresh perspective and support a 'joint spirit' among people, as they are highly capable of visualizing new futures in the context of transdisciplinary collaboration (Horlings, 2015). They also create productive conflict, disrupt habits of thinking (Hyde, 1998, 2009; Lapworth, 2015), and can contribute to changing mindsets and constructing new narratives (Demos, 2013; Horlings, 2015; Kagan, 2012).

In this section, I explore why the arts are not just useful but integral to imaginative leadership—not an afterthought, but a core strategy for shifting how people engage with the world. Using the categories for the inner dimensions developed in Chapter 2, this section looks at:

- Challenging deep structures—how art reshapes worldviews and dominant metaphors.
- Reconfiguring cultural transmission—shifting norms, discourses, and narratives.
- Expanding cognitive and personal structures—activating new mental models and mindsets.
- Engaging emotional and embodied dimensions—using sensory and affective experiences to deepen transformation.

The arts can provide the emotional, experiential, and imaginative ground where new ways of thinking and acting can take root. If imaginative leadership is about opening new ways of seeing and relating, then creative practices offer one of the most direct ways to make those shifts tangible.

3.4.1 What is art?

Philosophical debates about “what is art” aside, this research approaches art as a way of knowing, sensing, and making meaning—one that is deeply entangled with culture, perception, and transformation. Art is not simply an object or a discipline; it is an active process that shapes how people interpret the world, relate to one another, and imagine alternative futures (Dewey, 1934; Kagan, 2011; Freeland, 2002). From this perspective, art is not defined by a particular medium—such as painting, music, or performance—but by its capacity to challenge, disrupt, and open new spaces of possibility (Goodman in Freeland, 2002).

Pragmatist scholars such as John Dewey, Nelson Goodman, and Cynthia Freeland describe art as a means of expanding perception and engaging with the world in ways that science and rational analysis alone cannot (Freeland, 2002; Dewey, 1934). According to Goodman, both scientific theories and artistic works create interpretive structures—frames through which people come to understand their environment (Freeland, 2002). Art, he argues, is successful not because it replicates reality, but because it renders alternative worlds that feel “right” in relation to human experience. Similarly, environmental artist Robert Irwin characterizes art as an ongoing expansion of our awareness of the world around us (Freeland, 2002). In this way, art is not only a form of representation, but it is also a process of transformation. Echoing Geertz's conceptualization of the role of religious rituals (1973), art does not simply reflect reality, it creates reality, shaping what people believe is possible and meaningful (Lima, 1995).

Historically, the arts have been central to cultural change and social movements, acting as a catalyst for shifting norms, reinforcing or challenging dominant narratives, and making abstract ideas tangible (Bradley & Esche, 2007; Gablik, 1991; Reed, 2005; Matarasso, 2019). As Suzi Gablik (1991) argues, art's power is not just in the creation of ideas, but in activating the experiences that make those ideas take root in collective consciousness. In sustainability contexts, the arts have been used to evoke ecological interconnection, climate grief, and systemic transformation, offering ways to engage with these issues at the level of meaning and emotion rather than just policy and data (Hawkins et al., 2015; Kagan, 2011).

In the context of this research, art is understood as a force that expands the inner dimensions of transformation—it shapes worldviews, disrupts habitual thinking, engages emotions, and makes complex ideas tangible (Carruthers, 2006; Demos, 2013; Kagan, 2011). It does not inherently produce positive change—it can reinforce existing assumptions just as much as it can challenge them (Adams, 2013; Kagan, 2011; Nochlin, 1988). However, its potential lies in its ability to create productive tensions, open new cognitive and emotional landscapes, and prime people for new ways of seeing and engaging with the world (Hyde, 1998; Lapworth, 2015).

Put into practice, arts-based environmental, for example, invites learners into direct, sensory, and affective relationships with the world around them. Rather than treating knowledge as something that can be absorbed passively, enrolling the arts encourages exploration through image, movement, metaphor, and story—modes of learning that resonate with Gardner’s (2011) theory of multiple intelligences. By recognizing that people understand and express ideas in diverse ways, these approaches create more inclusive and transformative educational experiences, especially when grappling with complex, emotionally charged issues like sustainability (van Boeckel, 2013; Mantere, 1998).

This research builds on scholarship that sees art as an essential part of societal transformation, not just a form of communication or aesthetic expression (Horlings, 2017; Kagan, 2012; Neal, 2015). Art can act as a cultural disruptor, a generator of alternative narratives, and a space where new possibilities can be explored and embodied. Whether through participatory storytelling, speculative fiction, or immersive experiences, artistic practices work directly on the cognitive, emotional, and sensory dimensions of meaning-making, engaging people in ways that conventional leadership and policy interventions often cannot (Matarasso, 2019).

This is why the arts are central to imaginative leadership—not as a decorative or supplementary element, but as a key force in shifting perception, unlocking agency, and expanding the boundaries of possibility.

3.4.2 A note on art as propaganda

The idea that “all art is propaganda” underscores the reality that creative expression is never neutral—it always shapes perception, reinforces or challenges worldviews, and influences cultural narratives. George Orwell famously stated, “All art is propaganda. On the other hand, not all propaganda is art” (Orwell, 1949), highlighting that while art can be used to persuade, it also has the capacity to expand how people see and engage with the world. Similarly, W. E. B. Du Bois argued in *Criteria of Negro Art* (1926) that art must serve a purpose, particularly in advancing racial and social justice. Diego Rivera and Bertolt Brecht likewise saw artistic practice as a means to challenge dominant power structures (Brecht, 1964; Rivera, 1934), making clear that art can reinforce existing paradigms or disrupt them, depending on how it is framed and applied. In contrast, Lenin and Soviet theorists openly embraced art as a tool for ideological control, using it to shape collective consciousness and cement the status quo (Lenin, 1905). The crucial distinction lies in whether art is used to manipulate and constrain agency or to open new spaces of possibility.

Historically, art has played both roles—reinforcing dominant ideologies or serving as a catalyst for transformation. Political regimes have long used

visual culture, music, and theater to solidify power, reinforce myths of nationalism, and control narratives. From Soviet Socialist Realism to corporate branding, artistic forms have been strategically deployed to direct public perception in ways that discourage dissent and alternative perspectives (Kwon, 2002; Nissley, 2010). At the same time, art has also been instrumental in resistance movements, civil rights struggles, and ecological activism, offering alternative narratives, reclaiming marginalized voices, and exposing hidden systems of power (Adams, 2013; Bradley & Esche, 2007).

This dual nature of art connects to the work of Edward Bernays, Sigmund Freud's nephew and the so-called "father of public relations," who applied psychoanalytic theory to mass persuasion. Bernays understood that deep structures of meaning—the inner dimensions that shape worldviews, emotions, and unconscious desires—could be influenced through carefully designed symbols, narratives, and artistic techniques (Bernays, 1928). His methods were designed to steer public perception, often without awareness or consent, illustrating how art and media can function as a form of priming which conditions certain responses and reinforces dominant ideologies (Freeland, 2002). For example, Bernays orchestrated a 1929 campaign in which he arranged for women to smoke "Torches of Freedom" during a public Easter parade—framing cigarettes as symbols of female empowerment. The visual spectacle, staged like performance art, successfully linked smoking with women's liberation in the public imagination, boosting sales amongst women while embedding a new cultural narrative.

While this research acknowledges that artistic practices operate on the deep structures of meaning, it departs from Bernays' instrumental approach. Rather than using the arts to manufacture consent or reinforce predetermined conclusions, this research focuses on how they can support those who actively seek to expand their spaces of possibility. The goal is not to impose meaning but to create conditions where new forms of agency and imagination can emerge—a process that is participatory, reflexive, and rooted in self-awareness rather than external control (Horlings, 2017; Kagan, 2012).

In this sense, art is positioned not as propaganda, but as a vehicle for meaning-making and transformation. It can challenge dominant worldviews, invite people to see beyond habitual assumptions, and create new cultural narratives that support regenerative futures (Gablik, 1991). The difference lies in intention, process, and participation—whether art is used to confine people to a single narrative or to expand their capacity to question, reflect, and reimagine.

3.4.3 Art and categories of the inner dimensions

Moving to practical strategies for operationalizing the arts for imaginative leadership, this section builds on the framework introduced in Section 2.6.2. It explores how the arts engage and transform the four layers of the inner dimensions: (1) reshaping deep structures, (2) reconfiguring cultural transmission, (3) expanding cognitive and personal structures, and (4) engaging emotional and embodied experience.

(1) Challenging Deep Structures: Reshaping Worldviews and Dominant Metaphors

At the deepest level, art has the capacity to challenge entrenched worldviews and social imaginaries—the often-unexamined assumptions that define what people believe is real, possible, and desirable (Taylor, 2001; Castoriadis, 1987). Many dominant metaphors and conceptual frames in contemporary society reinforce extractivist, mechanistic, and anthropocentric perspectives. Art intervenes in this deep structure by introducing alternative metaphors and symbolic systems, opening new cognitive and emotional landscapes.

Metaphors shape perception at an unconscious level (Lakoff & Johnson, 1980). The framing of Earth as a “machine” to be optimized, for example, supports a technocratic worldview that sees sustainability as a matter of engineering solutions. In contrast, metaphors like “Earth as a living system” or “a web of relations” evoke a paradigm of interdependence and reciprocity (Capra & Luisi, 2014). Artworks, performances, and storytelling traditions destabilize dominant metaphors and introduce new ones, subtly rewiring cultural understandings.

Beyond shifting metaphors, art also plays a role in making hidden structures visible. Socially engaged and eco-artists often expose underlying power dynamics, ecological dependencies, and historical erasures through their work. For example, visual artist Mel Chin’s *Revival Field* used plants to extract heavy metals from contaminated soil, making visible the often-ignored environmental consequences of industrial activity. Similarly, the works of Alfredo Jaar reveal systems of media control and human rights abuses that remain unseen in dominant discourse. These practices engage audiences at the level of deep structure, disrupting habitual ways of thinking and revealing the hidden forces shaping society and the environment.

Speculative fiction and Indigenous futurism further expand social imaginaries by making alternative ways of being and knowing experiential and immersive, rather than just theoretical (Whyte, 2018). Installations and performances can disrupt habitual ways of perceiving time, space, and agency, nudging people toward ecological and relational perspectives. By altering how

people experience reality—through metaphor, narrative, and symbolism—the arts create preconditions for shifts in worldviews and systemic thinking.

(2) Reconfiguring Cultural Transmission: Shifting Norms, Discourses, and Narratives

Beyond deep structures, cultural transformation requires shifting the norms, discourses, and social expectations that regulate daily life. Many cultural narratives reinforce inertia, portraying sustainability as sacrifice, constraint, or inevitable decline (Moser & Dilling, 2007). The arts, however, introduce counter-narratives that reframe sustainability as restoration, creativity, and renewal.

Framing and priming play a key role in how cultural expectations are shaped and internalized (Moyer & Song, 2021). Repetitive exposure to particular images, language, and experiences subtly primes individuals toward certain ways of thinking and acting (Nijland, 2016). Art can function as a cultural primer, reinforcing new norms of care, responsibility, and regeneration.

One of the ways artistic practices reinforce these shifts is through ritual and participatory storytelling. Rituals have long been used to stabilize social values and reinforce collective identity (see Whitehouse & Lanman, 2014). Artistic rituals—such as public performances, collective mural-making, or ceremonial installations—can serve as transitional experiences that help solidify emerging cultural norms (Horlings, 2015). Participatory storytelling, where communities actively co-create narratives, further embeds new social imaginaries. For example, Indigenous-led storytelling projects that reclaim land-based narratives help shift cultural attitudes toward environmental stewardship. These practices do not merely introduce ideas; they embed them in lived experience, making them part of a shared cultural fabric.

Public art interventions, such as eco-murals or land-based performances, also reshape urban and rural spaces, signaling that sustainability is not just an abstract policy goal but an embodied cultural shift (Gabrys et al., 2013; Miles, 2014; Rogers, 2012). By working at the level of narrative, ritual, and shared symbolism, the arts accelerate the process by which new social norms take hold within a society (Sidford, 2011).

(3) Expanding Cognitive and Personal Structures: Activating New Mental Models and Mindsets

At an individual level, change often requires breaking out of habitual thinking patterns—the mental models and conceptual structures that shape perception and decision-making (Johnson-Laird, 1983). Transformative mindsets play a critical role in this process, as they enable individuals to embrace uncertainty, rethink assumptions, and open themselves to new possibilities. The arts work at this level by introducing ambiguity, surprise, and dissonance, forcing engagement with alternative perspectives and unexamined assumptions.

A key mechanism through which art activates new mental models is play and experimentation. Artistic practices create low-risk environments where people can engage with new ideas, test different ways of thinking, and explore alternative futures without immediate consequences (Matarasso, 2019). Research suggests that play enhances cognitive flexibility, making individuals more adaptable and open to change (Rieber, 1996). In participatory arts, audiences or participants engage with unfamiliar perspectives, challenging their habitual ways of thinking while being immersed in a creative, low-stakes setting that fosters exploration. These forms of engagement are particularly valuable for developing transformative mindsets, which allow individuals to navigate complexity, hold multiple perspectives, and remain open to emergent possibilities.

Experimental theater, abstract visual art, and improvisational practices all encourage participants to suspend judgment, tolerate uncertainty, and explore multiple interpretations (Kagan, 2011; Gablik, 1991; Hyde, 1998; Lapworth, 2015; Matarasso, 2019). Such experiences help strengthen cognitive flexibility, a key trait in imaginative leadership (Westley et al., 2013). The ability to hold uncertainty, engage with paradox, and approach challenges with curiosity rather than rigid expectations is central to how leaders cultivate and sustain transformative mindsets.

For example, interactive and participatory arts encourage embodied exploration of complex systems, fostering a deep sense of interconnection and complexity (Pearson et al., 2018). Workshops that use artistic inquiry—such as drawing, movement, or storytelling—help participants access non-linear, intuitive modes of thinking, breaking free from rigid problem-solving approaches. Art's ability to expand mindsets and mental models makes it particularly effective for cultivating leadership capacity in uncertain and evolving conditions. This connection between art, transformative mindsets, and leadership development is further explored in Chapter 5, where the focus shifts to how these approaches can be operationalized in leadership practice.

(4) Engaging Emotional and Embodied Dimensions: Deepening Transformation Through Sensory and Affective Experience

Transformation is not purely cognitive—it is deeply emotional and embodied (Damasio, 1994). Climate change, for instance, is often framed through data and rational discourse, yet much of the resistance to action stems from psychological overwhelm, grief, and inertia (Lertzman, 2015). The arts engage at this level by providing avenues for emotional processing, collective mourning, and re-connection to a sense of agency.

One of the most powerful aspects of artistic engagement is its ability to bypass conditioned cognitive responses and engage directly with the senses (Carruthers, 2006). Research in neuroscience and psychology suggests that sensory experience allows for deeper learning and transformation, particularly when rational defenses might otherwise resist change. Practices such as land-

based art, eco-theater, and participatory movement workshops help people experience sustainability not as an abstract concept but as something physically felt.

As already discussed, metaphors are not just linguistic devices; they structure thought, shape emotions, and influence how people physically experience and respond to the world (Lakoff & Johnson, 1980). In the framework of the inner dimensions, metaphors function within deep structures by reinforcing or challenging worldviews and social imaginaries, but they are also transmitted through cultural norms and discourses (cultural transmission), shaping emotional orientations toward ecological and social transformation.

Metaphors such as “fighting climate change” or “combating extinction” frame sustainability as a war, triggering urgency but also reinforcing adversarial thinking and burnout (Lakoff, 2014). In contrast, metaphors like “weaving regenerative futures”, “healing landscapes”, or “cultivating resilience” evoke relational and process-based understandings, inviting deeper emotional engagement rather than exhaustion. The arts play a crucial role in bringing these metaphors to life not just intellectually but through direct, sensory, and affective experience.

- *Embodied Metaphors in Artistic Engagement* – Artistic practices do not simply use metaphors in speech or text; they physically enact them, making them deeply felt. Performance art, for example, can embody concepts of “rootedness” (through site-based movement), “flow” (through dance or interactive installations), or “interdependence” (through participatory collaboration).
- *Shifting Emotional Orientations* – Art can replace mechanistic, detached metaphors with those that reinforce interconnectedness. A participatory storytelling event that frames sustainability as “learning to listen to the land”, for example, would support an emotional relationship with place that differs significantly from a framing of “managing natural resources.”

- *Ritual and Sensory Experience* – Artistic rituals and immersive installations provide experiential access to metaphors, engaging emotions at a visceral level. For example, eco-rituals in land art might enact metaphors of renewal, grief, or regeneration in ways that deeply resonate with participants (Macy & Brown, 2014³⁰; Carruthers, 2006; Matarasso, 2019).

Artworks that evoke awe, grief, or wonder can fundamentally shift how people relate to ecological and social challenges. Performance art and immersive installations create situations where emotions are directly felt, not just understood intellectually (Hawkins et al., 2015). Climate grief performances, for example, offer a space for collective mourning that can transform paralysis into action (Roosen et al., 2019).

By engaging the full range of human experience—e.g., intellect, emotion, and the senses—the arts deepen transformation in ways that traditional leadership and policy approaches often struggle to achieve. Through embodied metaphor, sensory experience, and emotional resonance, artistic engagement allows people to move beyond abstract knowledge into a lived, felt understanding of sustainability and transformation.

In Sum: The Arts as a Pathway for Expanding Possibility

Through these four layers of engagement, the arts can be a powerful force for engaging the inner dimensions of transformation. At the level of deep structures, they challenge dominant worldviews and metaphors. Through cultural transmission, they reshape norms, narratives, and expectations. At the cognitive and personal level, they can expand mental models and mindsets, strengthening the capacity for creative leadership. Finally, they engage the emotional and embodied dimensions that make transformation real, tangible, and deeply felt.

For imaginative leadership to flourish, these inner dimensions must be actively cultivated—not just intellectually understood, but lived, experienced, and internalized. The arts can provide a space for exploration, disruption, and renewal, making new possibilities not only thinkable, but actionable.

³⁰ Joanna Macy's *The Work That Reconnects*, for example, incorporates ritual, deep listening, and embodied exercises to help individuals process ecological grief, cultivate a sense of interdependence, and shift from mechanistic to relational ways of thinking (Macy & Brown, 2014).

4

4 AS LIFE, EXPERIMENTING EXUBERANTLY

“There’s the story, then there’s the real story, then there’s the story of how the story came to be told. Then there’s what you leave out of the story, which is part of the story too.”

MARGARET ATWOOD, MADDADDAM (2013: 56)³¹

³¹ Margaret Atwood is a Canadian author, poet, and literary critic known for her speculative fiction and reflections on power, narrative, and perception. This quote, from *MaddAddam* (2013)—the final novel in her *MaddAddam* Trilogy—underscores the layered nature of storytelling. In the context of social science research, it resonates with the understanding that knowledge is constructed not only through the ‘story’ (the findings or account) but also through the process of telling it: how the research was shaped, what choices were made, and what was left out. It highlights the importance of reflexivity, positionality, and transparency in methodology—reminding us that every account is partial, situated, and shaped by its telling.



This chapter lays out the methodology that shaped the practice-based part of this research project. Here, methodology is understood as the overall research paradigm—the perspective taken on ‘doing science’ in terms of what constitutes ‘knowledge’ and ‘knowing’. In their foundational text on qualitative research, Guba and Lincoln (1994) argue that a methodology does not comprise the specific technical methods for gathering and analyzing data. Instead, it is the deeper stance on how knowledge is understood and created. Specific research methods are tied to a framework of beliefs about the nature of reality (ontology), what counts as knowledge (epistemology), and how knowledge can be generated (methodology). These beliefs influence the choice of methods, as well as the underlying assumptions about what makes research meaningful and valid.

Section 1.2, *Orienting the Reader*, explained the ontology, the epistemology, and the transdisciplinary approach to knowledge creation that underpins this research. These fundamentals apply to this research project as a whole, including the process of building the theoretical framework shared in the last two chapters (Chapters 2 & 3).

Rooted in these perspectives, the methodology described in this chapter specifically informed the development and analysis of two practice-based arenas of experimental inquiry, referred to here as cases. Section 4.1 begins by defining the overarching methodology and drawing connections between the ontology, epistemology, methodology, and research methods. Next, Section 4.2 gives an overview of the two cases, along with why they were selected, ethical and practical decisions, and the process through which reflections and learnings emerged. Section 4.3 then explains the use of Theory U as a heuristic in the process of designing the cases, and finally, Section 4.4 points to the following chapters.

Research sub-question number four asks: *How can arts-based methods be better understood in processes of activating and strengthening imaginative*

leadership? This chapter offers a response, outlining the methodological foundations of the practice-based part of this research project, in which I designed, observed, and participated in arts-based practices within situated, experimental settings.

4.1 Research Methodology

This section begins by revisiting the wider context: a world marked by radical uncertainty and the urgent need for transformations toward regenerative forms of living. It then introduces the central focus of the inquiry—imaginative leadership and arts-based practice—as a dynamic, unpredictable process shaped by emergence and feedback. From there, the methodology is linked to its underlying ontological and epistemological assumptions, drawing on enactivism and interpretive traditions that emphasize experiential and practice-based knowledge. The inquiry itself unfolded through bricolage, combining elements from Participatory Action Research (PAR), Research through Design (RtD), and situated Reflective Sensemaking. The section concludes with a discussion of how 'findings' are understood as insights that continue to evolve through engagement and interpretation.

4.1.1 Methodology context: Radical uncertainty and current trajectory towards social-ecological collapse

Ecologist and resilience pioneer C.S. Holling, known for his work on ecosystem dynamics, resilience theory, adaptive management, and ecological economics, concluded that “the only way to approach such a period in which uncertainty is high and one cannot predict what the future holds, is not to predict, but to experiment and act inventively and exuberantly via diverse adventures in living” (Holling, 2004: 8). I started this monograph with the context of uncertainty and extreme social and ecological danger (see Section 1.1). We do not yet know what might successfully precipitate a culture shift or what constellation of factors might trigger a tipping point toward strong regenerative sustainability—or even whether such a shift can occur without catastrophic collapses of civilizations

and systems (Beddoe et al., 2009).³² Holling (2004) also observed that in ecological and social systems, diversity strengthens resilience and enables renewal. The same holds for social transformation: a diversity of thought, practice, and experimentation may help new systems to take shape (Pereira et al., 2020). Responding to this uncertainty and need for diversity, the methodology outlined here is grounded in a spirit of generative, playful, and ‘exuberant’ experimentation. If we take both the depth of uncertainty and the need for transformation seriously, then the methods we use should invite creative exploration and leave room for insights to emerge along the way.

4.1.2 Methodology subject: Imaginative leadership as stochastic transformation

The subject of my inquiry includes imaginative leadership, arts-based practices, and the inner dimensions of transformation toward regenerative sustainability, all of which unfold within the context of complex (‘wicked’) problem domains. The intrinsic subjectivity, ambiguity, and complexity of this topic make it particularly challenging to study in a coherent way, and this shaped my methodological decisions.

To start with, I consider imaginative leadership as a stochastic process. The idea of stochastic processes—used in fields from physics to ecology—describes systems where patterns exist but outcomes unfold unpredictably, shaped by an interplay of structure, randomness, and feedback loops. Imaginative leadership operates within the unpredictable and non-linear dynamics of creativity and innovation. The term *stochastic* highlights that while certain interventions or experiences may spark the potential for future change, they cannot be directly and causally tied to specific outcomes (Dunkley & Franklin, 2017). The term *stochastic* is commonly encountered in the phrase

³² Holling also emphasized that societies must continuously test and refine practices, policies, and technologies, allowing for failures that lead to broader insights and resilience (Walters & Holling, 1990). Scholars of sustainability transformations argue that attempts to control or precisely predict the future are ineffective in the face of complexity and uncertainty. Instead, as Bentz et al. (2022) suggest, it is more effective to cultivate cultures that prioritize creativity, collaboration, and the willingness to explore multiple pathways. In the face of uncertainty, transformative change demands willingness to explore multiple pathways, experiment with new ways of thinking, and work with ambiguity rather than against it; it requires the “courage to experiment and move beyond reliance on familiar blueprints or roadmaps, particularly when pathways are not clear” (Bentz et al., 2022: 503). As biodiversity strengthens the resilience and exuberance of ecological systems (Holling, 2004), so diversity of thought and action is crucial for growing new systems capable of sustaining both people and the planet in the long term (Pereira et al., 2020).

stochastic terrorism, which refers to indirect incitement—when certain messages or actions are broadcast widely, leading to unpredictable but statistically probable acts of violence (Amman & Meloy, 2021). I am interested in the possibility of reclaiming and reversing that logic: what would *stochastic sustainability* look like? Rather than triggering harm, small symbolic actions, narratives, or aesthetic experiences might ripple outward unpredictably, influencing culture, identity, and imagination in subtle but powerful ways. Thus, the concept of transformations through stochastic sustainability describes change processes that resist control and prediction yet generate conditions for emergence through creative, distributed, and relational means. I frame imaginative leadership toward regenerative sustainability as one such process of stochastic sustainability.

So how can a stochastic process as a research subject be understood? It involves randomness and numerous variables, making outcomes difficult to map. Breakthroughs often emerge from unexpected sources, influenced by diverse perspectives, experiences, and moments of inspiration (Olsson et al., 2014). The intrinsically stochastic nature of imaginative leadership means it cannot follow a predictable or repeatable formula; instead, it must rely on adaptability, intuition, and the capacity to embrace serendipity. Conventional social science methodologies often emphasize control, prediction, and replication (Lincoln & Guba, 1985; Denzin & Lincoln, 2011), yet a stochastic research subject—and process—calls for methodological flexibility, iteration, and responsiveness to emerging phenomena (Kincheloe, 2001). A stochastic framing of imaginative leadership resonates with Kincheloe's (2001, 2005) notion of the *bricoleur*: a researcher working responsively with complexity, navigating uncertainty through intuition, iteration, and situated knowing. This concept will be discussed in more depth below in Section 4.1.4.³³

Thus, this research project is not intended to establish direct causal links between specific events or actions and transformative outcomes in regenerative sustainability. Instead, it explores these possibilities through the lens of arts-based engagements as a form of stochastic art.

³³ Galafassi et al. (2017: 21), in their work on art-based approaches to scenario building for climate change in the Iberian Peninsula, employ a similar concept they call *infused action*. Infused action describes how creative practices can be used to bring the future into the present, creating the emotional and intentional predisposition necessary to drive new directions of action.

4.1.3 Linking methodology to ontology and epistemology

My decision to use case studies as arenas of inquiry—along with how they were designed, how I engaged with them, and how I made sense of them—was shaped by how I understand the nature of imaginative leadership as a research topic, and how knowledge about it can be generated. As discussed in Section 1.2.3, this research is grounded in an enactivist ontology, which understands reality as emergent and enacted through embodied interaction. From this perspective, imaginative leadership toward regenerative sustainability is not a fixed phenomenon waiting to be observed; it takes shape through our engagement with the world, influenced by both relational dynamics and material conditions. Knowledge about this topic does not reside in individual minds, nor is it fully socially constructed. Instead, it arises through embodied interaction with the phenomenon itself (Varela, Thompson, & Rosch, 1991). What we know and how we come to know emerges through active participation.

Because perception and action are intertwined, and because the subject of study is shaped by the dynamics of stochastic emergence, I have prioritized a methodology that engages with arts-based practices in real-world settings and that doesn't attempt to define or measure fixed outcomes. In alignment with this stance, the methodology draws on an interpretive, hermeneutic epistemology that sees meaning as co-created through experience, interaction, and dialogue rather than extracted or imposed. In sustainability research, scholars exploring the inner dimensions of transformation emphasize embodied, affective, and participatory processes that foreground sensory and relational ways of engaging with the world (O'Brien, 2018; Ives et al., 2020). This orientation aligns with arts-based practices aimed at shifting ways of seeing, knowing, and relating and with Dewey's claim (1934) that aesthetic experience is an active way of knowing that depends on embodied engagement.

As mentioned in Section 1.2.4, Gilles Deleuze and Félix Guattari's rhizomatic understanding of knowledge creation (1987) has also influenced my epistemology and my approach to exploratory research.³⁴ The rhizome—a type of root system found in plants like grasses, ginger, or bamboo—spreads horizontally underground, growing in multiple, unpredictable directions. Unlike a tree, which has a single trunk and hierarchical structure, a rhizome has no

³⁴ While Gilles Deleuze and Félix Guattari's philosophical work is linked to specific critiques of capitalism, here I draw on their concept of the rhizome as a way to describe nonlinear, interconnected approaches to research, not as a political stance.

clear beginning or end, and any point can connect to any other. It is decentralized, adaptable, and constantly shifting, forming a web-like network. In research, the rhizome becomes a metaphor for nonlinear, interconnected, and fluid systems of knowledge, culture, and meaning-making. Rhizomatic processes resist hierarchical order, instead emphasizing relationships, diversity, and the emergence of new connections.

With this in mind, a methodology exploring arts-based practices and imaginative leadership needed to prioritize open-ended exploration, encourage interdisciplinary collaboration, and remain open to unexpected discoveries (Crawford, 2010; Clifton, 2012; Dunkley & Franklin, 2017). Rather than focusing on hypothesis testing, I followed iterative cycles of exploration, prototyping, and reflection—allowing for spontaneous creativity and embracing uncertainty as a necessary part of the process.

The combination of the research subject as a stochastic process and the fundamentals of my ontological and epistemological stance laid the groundwork for choosing a methodological approach rooted in bricolage, Participatory Action-Research (PAR), Research Through Design (RtD), and reflective sensemaking, which I explore in the next sections.

4.1.4 A bricolage approach

The structure and design of this inquiry, as well as the process of making sense of results, were shaped by a process of pragmatic bricolage (Denzin & Lincoln, 2005; Berry, 2006; Kincheloe, 2004, 2008). The term bricolage comes from the French term for a craftsperson, a *bricoleur*, who uses a hodgepodge of tools and materials at hand to create an artistic project or a practical object. It speaks to a way of working that is both responsive and resourceful. Methodologically, it points to the creative use of diverse tools, theories, and perspectives to navigate complexity and trace meaning across shifting terrain.

Kincheloe (2004) describes bricolage as grounded in an epistemology of complexity, where no single method or framework can account for the layered, historically situated, and relational nature of knowledge. Relying on a single method or theory often produces a narrow or partial answer and detaches knowledge from the web of relationships and histories that shape it (Rogers, 2012; Berry, 2006; Kincheloe, 2004, 2008). In this view, over-reliance on a singular methodology not only limits insight but leaches knowledge of the very context and entanglements that give it meaning (Rogers, 2012; Berry, 2006; Kincheloe, 2004, 2008). Bricolage can be understood as a form of methodological triangulation, where diverse sources and approaches are used to counterbalance assumptions, check interpretations, and trace patterns that hold up across different vantage points (Bogdan et al., 2006).

Bricolage fits well with research that engages complex social and ecological transformation. It allows for flexibility and responsiveness in working with emergent, messy realities. Rather than imposing fixed frameworks, bricolage enables inquiry to stay close to lived experience and adapt along the way. It also helps avoid the “monological fallacy” in science—the tendency to simplify what is complex and relational into singular narratives or outcomes.

Moreover, as a methodological orientation, bricolage also calls attention to the socio-political embeddedness of both research and the researcher. As Denzin and Lincoln (2005: 316) argue: “Appreciating research as a power-driven act, the critical researcher-as-bricoleur abandons the quest for some naïve concept of realism, focusing instead on the clarification of his or her position in the web of reality and the social locations of other researchers and the ways they shape the production and interpretation of knowledge.” This resonates strongly with my research stance: situated, embedded, and motivated by normative values and goals.

Bricolage also echoes the weaving metaphor developed in feminist research, particularly by Tamboukou (2003) and Braidotti (2013). It is a method of working with fragments, tensions, and disparate elements to create a textured, provisional, and patterned coherence—one that holds together through ongoing engagement rather than rigid structure. Like a weave, it can stretch, hold, and shift in response to movement and pressure, offering a form of rigor that does not rely on linearity or control but on attentiveness, responsiveness, and integrity across threads.

4.1.5 Structuring and designing the inquiry

The theory and practice of both Participatory Action Research (PAR) and Research through Design (RtD) informed the structure and design of the case studies. These methodological threads were not applied wholesale but drawn upon selectively, taken up as partial, situated elements within the larger bricolage rather than as complete methodological frameworks. Overall, they supported an approach rooted in engagement, iterative learning, and the emergence of knowledge through action and reflection.

PAR recognizes that social research is a “practice-changing practice” (Kemmis, 2009: 463) which both represents and shapes reality (Gibson-Graham, 1994). In this tradition, research is inherently political and collaborative. One of the key strengths of PAR is its emphasis on participant empowerment, enabling individuals to engage actively in the research process to improve practices and settings in ways that are meaningful and relevant to them (Kemmis et al., 2014). It also promotes non-hierarchical social learning, as articulated by Bandura (1977), encouraging collaborative learning environments. Participants are viewed as co-inquirers, and the process aims to support improvements in

practices and settings that matter to those involved (Kemmis et al., 2014). Drawing on this ethos, the project used co-design approaches (following Churchman, 1968), where the research team and a sampling of participants collaboratively initiated, developed, and implemented the participatory process. As discussed in more detail in section 4.2.3, while PAR served as a core inspiration for the case design, it was only partially applied in practice.

RtD contributed a complementary mode of inquiry, drawing from traditions of practice-based and practice-led research in the creative arts and performance studies, wherein knowledge is generated through cycles of making and reflecting. Practice-led research, widely used in these fields, employs iterative cycles of action and reflection (Candy, 2006), contributing either to theoretical insights, practical applications (Smith, 2009), or new knowledge gained through creative engagement (Mäkelä, 2007). Here, the act of designing—making things—is itself a form of investigation. As Nelson (2013) explains, practice-based research engages the world through objects, performances, or creative processes and assesses their significance through critical reflection. RtD shares this orientation but is grounded in design disciplines, using the act of designing—*making things*—as a way to investigate questions and surface insights. Rather than testing predefined hypotheses, it involves creating artifacts or systems to provoke reflection and make ideas visible and tangible. RtD draws on Frayling's (1993) distinction between research *into*, *through*, and *for* design, and aligns with Gaver's (2012) framing of it as “a way of knowing,” which emphasizes openness to ambiguity, material engagement, and the researcher's own judgment—what to make, how to make it, and how to interpret what emerges.

Both PAR and RtD align with the transdisciplinary epistemological stance of this research, which recognizes that knowledge is produced not only through academic disciplines, but through practice, reflection, and collaboration across multiple domains. Participatory Action Research (PAR) supports this stance by grounding inquiry in real-world contexts and emphasizing learning through collective action. Research Through Design (RtD) extends these commitments by using the act of designing—making things—as a way to generate and investigate questions and to surface insights. These approaches are especially relevant when working with the inner dimensions of transformation and the role of imaginative leadership—areas often inaccessible to conventional research methods.

The methods selected reflect this relational, enactive, and experiential orientation. They included arts-based facilitation, structured and emergent reflective practices, and iterative design processes—all chosen to support conditions for engagement, exploration, and sense-making, rather than extract predefined points of data. Analysis was conducted in a processual, reflective manner, looking at how patterns of engagement and insight emerged over time rather than imposing categories or predetermined metrics. This methodological alignment ensures that the research remains coherent with its

enactivist foundation, valuing knowledge as something that is not statically observed but dynamically enacted through interaction, experience, and reflection.

4.1.6 Learning from inquiry: Processes of interpretation and sense-making

In many forms of research, ‘findings’ are understood as stable insights that emerge from systematic investigation, offering clear conclusions based on empirical analysis. This practice has been essential in building reliable knowledge across disciplines. However, in process-based and co-creative inquiry, meaning does not always emerge as a fixed outcome but instead unfolds dynamically through engagement, reflection, and interaction (Kemmis, 2008; Reason & Bradbury, 2008). Fine (2006) cautions against research frameworks that overly simplify the complexity of human experience, reducing evolving, relational knowledge to static conclusions. St. Pierre (2011) expands this critique, arguing that in qualitative and participatory research, insights often emerge in ways that resist simple categorization or closure. Rather than rejecting traditional models of knowledge production, these perspectives emphasize the need to make space for different ways of knowing—particularly when research engages with lived experience, transformation, and practice-based inquiry.

Similarly, Reason & Bradbury (2008) describe action research as not just an effort to document reality, but a participatory process that actively shapes it. They argue that a cornerstone of action research is that it engages with change as it happens rather than extracting findings as discrete results. Thus, the knowledge generated is valuable for its practical application.

The topic of imaginative leadership demands a high degree of interpretation, thus Reflexive Sensemaking (Weick, 1995) provides a useful lens for understanding how knowledge emerges over time. Rather than treating insights as discoveries waiting to be found, Weick emphasizes that meaning takes shape through cycles of interpretation, dialogue, and adaptation. In this view, knowledge can be understood as situated enactments (Haraway, 1988; Barad, 2007)—fluid, contextual, and relational rather than fixed or universal.

This research does not reject the idea of findings but instead reframes them as: patterns of resonance—moments when new possibilities take shape; generative tensions—productive frictions that challenge assumptions; and, emergent navigational cues—insights that help orient movement through complexity. For ease of reference, they are referred to as “insights” or “learnings” throughout the text. These are not definitive conclusions but waypoints where sensemaking and both theoretical and practice-focused insights continue to unfold beyond the scope of this research.

Table 2 below summarizes how the research methodology is situated in relation to the subject of this research, my research positionality, my ontological and epistemological approaches, and to the specific methods of types of findings afforded during the empirical inquiries.

Table 2. Situating Methodology

Area	Approach/Qualities
Research Subject	Complex, intangible, no clear cause and effect, stochastic
Research Positionality	Normative, Activist, Practice-Focused
Ontology	Enactivist, Relational, Embodied, Pragmatic
Epistemology	Rhizomatic, Relational, Feminist 'weaving', Aesthetic, Transdisciplinary
Methodology	Bricolage, Participatory Action Research (PAR), Research through Design (RtD), Practice-led inquiry, Reflective Sensemaking
Methods	Case studies, open ended probing questions, conversational interviews, participant observation, semi-structured co-reflection sessions (on artifacts, surveys, conversations, observations), triangulation
Findings (learnings and insights)	Patterns of resonance—moments when new possibilities take shape; generative tensions—productive frictions that challenge assumptions; and emergent navigational cues—insights that help orient movement through complexity Practice-focused (practicable) insights: how can this be put into action?

4.2 Overview of Case Studies

Rather than being predetermined at the outset of my research journey, the two arenas of inquiry presented here emerged organically through my work with the SUSPLACE ITN. As I developed my theoretical approach, I was also scanning for opportunities to experiment with and explore arts-based practices and imaginative leadership. Avenues for the selection of the final cases unfolded through a process of guided trial and error (which aligns with a probing and testing approach needed in complex problem domains—e.g., Rittel & Webber, 1973) combined with pragmatic opportunism (e.g., Dewey's pragmatism), rather than being deliberately 'chosen'.

My goal was to identify clearly bounded arenas of inquiry that could loosely be considered case studies (e.g., Flyvbjerg, 2006; Yin, 1994) as discussed in the subsequent paragraphs. The concept of a "case" can be understood

within the broad framework of comparative case studies. Essentially, a case study examines a phenomenon within defined boundaries of space and time, grounded in a specific ‘real-world’ setting, and draws on multiple sources of evidence to develop a nuanced understanding of complex realities (Yin, 1994). Although it can be critiqued as lacking in methodological rigor, case studies are widely used and are understood to be “important for the development of a nuanced view of reality, including the view that human behavior cannot be meaningfully understood as simply the rule-governed acts found at the lowest levels of the learning process and in much theory” (Flyvbjerg, 2006: 223). In research focused on understanding emergent processes and subjective interpretations of abstract concepts (such as ‘regenerative mindsets’), emotions, and cultural narratives, case studies provide a way to create a bounded, but open research subject, as well as a coherent structure for addressing contextual nuance.

4.2.1 Two arenas of inquiry

The first arena of inquiry—named **Activating Transformative Mindsets**—encompasses the design and implementation of two different workshops in which participants engaged with specific arts-based methods to experiment with transformative mindsets and perspectives as applied to specific design challenges. A design challenge (Cross, 2006) is defined here as a structured task that invites innovative and creative approaches to respond to a complex problem domain (defined in Section 3.1). As mentioned in Section 1.2.2, the work was undertaken within the context of SUSPLACE, a Marie Skłodowska-Curie Actions Innovative Training Network (ITN) funded by the European Union’s Horizon 2020 research and innovation programme that was organized around the topic of *sustainable place-shaping* (see Horlings et. al, 2019; Horlings et al., 2020).

The first workshop, *Action Hub: Arts-based Methods for Transformative Design* (referred to henceforth as ‘Action Hub’), was held in Dundee, Scotland at the Transformations 2017 Conference. The second, *Imaginative Leadership: Co-producing with nature and communities* (referred to henceforth as ‘Imaginative Leadership’) was executed twice in collaboration with the Welsh Government—once in Northern Wales and once in Southern Wales in 2018. Both the methods and the workshops were co-designed by a team of transdisciplinary

collaborators of which I was also a part (elaborated in Section 5.1.2; see Table 3 below).³⁵

The second arena of inquiry was a year-long transdisciplinary arts and research project entitled ***Imaginative Disruptions***. Funded by a Swedish NGO, the project was designed to employ creative and arts-based practices to explore complex sustainability issues across three distinct locations in Northern Europe. Its sub-events included *Retreat* in the UK (pre-Brexit), *Vonk* in the Netherlands, and *Compose* in Sweden. Each sub-project had the autonomy to design a participatory art engagement or create an artwork in collaboration with local artists, ensuring that their initiatives were relevant to the local context, while the core international team offered collective brainstorming and peer-to-peer support. Although these three events differed significantly in topic, emphasis, process, and structure, they shared a common focus on exploring the emotional dimensions of climate change rather than on future action-oriented planning or scenario building. While I was not a member of the primary project team, I remained consistently engaged as a participant-observer and contributed in a limited capacity as an advisor and co-designer for certain aspects, as well as serving on the core team of co-reflectors alongside the primary project team.

In each arena, I was able to take different overlapping roles—acting as designer, facilitator, advisor, participant, and observer at different moments and to different degrees in each case (summarized in Table 3 below). In the *Activating Transformative Mindsets* case I played the role of co-designer, co-facilitator, co-reflector. My primary role could be characterized as the project's central entrepreneur and manager. As we co-designed the methods, I collaborated closely with the other researchers and the non-academic stakeholders/participants to define terminology, concepts, parameters, and even the goals of the process as we progressed. In *Imaginative Disruptions*, I took a slightly more detached stance, functioning as both an insider and outsider—as participant and observer. Although I contributed to the co-design of some project elements, I maintained a certain level of distance and was less personally and professionally invested in the outcomes of the events. For each specific case, more details about my role as a researcher are included in sections 4.2 and 4.3. Reflections on my positionality as a researcher are further discussed in Section 4.2.6.

Both arenas of inquiry comprise a complex constellation of actors and events. To orient the reader, Table 3 below outlines the cases, the subevents

³⁵ The locations and schedule of the Imaginative Leadership workshops were organized by a collaborator within the Welsh Government.

within each case, my role as the researcher, the composition of the core collaboration team, and the characteristics of the people who attended and participated in the events.

Table 3. Case Studies Overview

Case	Sub-event	Researcher Role	Collaborator-Participants	'Attendee'-Participants
Activating Transformative Mindsets – Designing and Implementing Arts-based Methods in workshops for imaginative leadership development	Action Hub Workshop: 90-minute workshop session at the Transformations Conference with sustainability-oriented professionals and academics. Location: Dundee, Scotland	Co-designer, co-facilitator, co-reflector	Six members of the Marie Curie SUSPLACE Innovation Training Network (including myself). Five early-stage researchers and one project coordinator.	50+ Transformation 2017 Conference attendees with strong interest in sustainability transformations. Participants were self-selected based on those who were motivated to sign up in advance for the workshop (there were limited spaces available)
	Imaginative Leadership Workshop x 2: Two full-day workshops with frontline staff in the Welsh Government. Location: Northern and Southern Wales	Co-designer, co-facilitator, co-reflector	Four core collaborators: Myself, one professional artist focused on collaborative, immersive ecological art, one professional in leadership development with the Welsh Government, and one board member from a national conservation organization who was professionally engaged in sustainable community development strategy and commoning practices throughout Wales.	70+ Frontline staff working on sustainability initiatives with the Welsh Government in communities throughout Wales. Participants were self-selected based on interest and availability after the event was shared via a collaborator working in an official capacity in leadership development for the Welsh Government. Participants signed up in advance.

Case	Sub-event	Researcher Role	Collaborator-Participants	'Attendee'-Participants
Imaginative Disruptions – Artist led participatory engagements around locally relevant dimensions of Climate Change	Retreat: a three-day immersive arts-based engagement with climate change. Location: Cornwall, UK	Participant-observer, project advisor (strongly engaged), co-reflector	Local transdisciplinary group (artist, outdoor instructor, academic) organized and designed the event with ongoing consultation from members of the Imaginative Disruptions Core Team.	20 people (7 families) including people from aged 2-50. Participants self-selected in response to a 'snowball' call for interested people across Cornwall. Participants reserved places in advance.
	Vonk: A one-day local art-safari/ community theater event engaging local residents with energy transition. Location: Wageningen, Netherlands	Participant-observer, co-reflector	A local artist collective was commissioned and had nearly complete autonomy to design the project with input from the core research team and people involved with the energy transition initiative. Members of the artist collective live in the affected neighborhood.	Around 100 people: neighborhood residents including children and elderly residents. Participants self-selected and were informed of the event through community networks already in place to discuss the proposed energy transition. There was no official sign-up and participants could come and go as they pleased throughout the event.
	Compose: A one-day transdisciplinary Masterclass about being a researcher in turbulent times of climate change Location: Gothenburg, Sweden	Participant-observer, project advisor (limited), co-reflector	Core team of academic partners (three of whom are also artists) worked during a long weekend to design the masterclass. The process was emergent and consisted of informal conversations and brainstorming sessions.	15 people: including university students and middle-aged adults. Participants were self-selected after promotion of the event through academic networks at the University where the event took place. Participants signed up in advance.

4.2.2 Case selection

The criteria that guided the selection of cases included: (a) opportunities for extended collaboration with inter/trans disciplinary colleagues with deep domain experience. By deep domain experience, I mean individuals who have both extensive practical experience and/or a strong foundation in academic knowledge within the field; (b) ethical soundness of the inquiry context (as further elaborated below in Section 4.2.5); (c) a participant-centered focus (Kemmis, 2009); (d) working with people already aligned with sustainability goals (i.e., there was no need to convince participants of the reality of climate change or the necessity to transform our social-ecological structures; for more detail about this decision see Section 4.2.4)³⁶; (e) potential for openness, fluidity, and emergence of the unexpected and elements of surprise (Kagan, 2011)³⁷; and, (f) featuring experiential processes of learning through doing (Moon, 2013)—the hands-on process of creating ‘practical-aesthetic’ subjects, for example, enables a process of “thinking with our hands” (Sennet, 2008; Sheridan et al., 2014).

Additionally, while it wasn’t precisely a criterion, the co-designers of each case deliberately chose and shaped the cases to steer clear of engaging participants in overtly contentious topics. The design of the events and specific methods was already quite complex; collectively grappling with our global existential crises of unsustainability is also inherently complex. Introducing conflict-driven elements would have required a fundamentally different set of tools and methodologies. Rather than navigating through heated debates or polarizing issues, our approach was to maintain a clear focus on the role of art in opening spaces of possibility, which was already sufficiently challenging. In essence, by sidestepping additional controversy, it was our intention to preserve the opportunity to explore the inherent complexity of these cases in a

³⁶ On a personal note, professionally I have spent a significant amount of time as a “sustainability expert” (my title) working with people for whom sustainability is often an afterthought. For this project I had no interest in being a “convincer” (global warming—‘climate chaos’—is important!) or a “nagger” (please include sustainability!) in any manner. Even though arts-based methods were outside of the comfort zone of some of the sustainability-aligned participants, I was willing to play the role of “inviter” and “encourager” for people to try something new. Moreover, since participation in the events was self-selected, the people there could reasonably have been expected to already be prepared to engage in some type of arts-based activity.

³⁷ As Sacha Kagan explains in his substantial work *Art and Sustainability*, using art practices increases conditions for serendipity by “learning across different, apparently unrelated contexts, in a transversal, often metaphorical, way. This is also called lateral thinking, learning from unique incidents by a process of abduction” (Kagan, 2011: 36).

more controlled and methodologically consistent manner. The subcase of Vonk could be considered a partial exception, which I address in Chapter 6.

4.2.3 Role of ‘participants’

This research was influenced by Participatory Action Research (PAR) but did not strictly adhere to its framework. As discussed above in Section 4.1.5, PAR recognizes that social research is not just about representing reality but actively shaping it (Gibson-Graham, 1994). Action research, in particular, is understood as a “practice-changing practice” (Kemmis, 2009: 463).

While PAR emphasizes participant empowerment and non-hierarchical learning processes (Bandura, 1977), this study was only partially participatory. Not all participants were involved in shaping the research goals or process. However, where possible, key PAR principles—such as co-developing objectives, evolving structures, peer learning, and shared reflection—were incorporated.

In considering the role of participants, it is useful to distinguish between three overlapping groups: those who contributed to the design and facilitation of the cases, those who acted as participant-observers, and those who attended the events. These roles were fluid, with some individuals moving between them over time.

Participants as Collaborators

Throughout this text, participant-collaborators are referred to as ‘collaborators,’ ‘co-designers,’ or ‘co-reflectors,’ depending on context. This follows Churchman’s (1968) original framing of co-design as a collective endeavor in which a team jointly initiates, develops, and implements a participatory process. In this project, these collaborators were essential partners, engaging in all aspects of the case studies—from defining objectives to shaping methodologies and reflecting on outcomes.

Participants as Participant-Observers

At various points, some individuals (including myself) took on the role of participant-observer. From the perspective of a relational epistemology, this acknowledges that knowledge emerges through lived experience and intersubjective engagement rather than detached observation (Reinharz, 1992). Those in this role fully participated in activities while maintaining an awareness of broader group dynamics. Observations were guided by open-ended prompts and guiding questions, with reflections documented through writing, conversations, and photographs and video clips (documenting what visually captured attention). These reflections were then integrated into project notes, contributing to a textured, multi-perspectival account of the experience.

Participants as Attendees

In contrast, attendees were individuals who voluntarily chose to participate in the events. While they actively engaged in interactive, participatory, and sometimes emergent activities, they were largely not involved in the co-design of the events. Observing how participant attendees engaged with the material, the creative artifacts they created, the conversations had, and formal and informal feedback all contributed to insights and learnings that emerged.

In Sections 5.1 and 6.1, I describe how each of these roles unfolded in each case.

4.2.4 Choosing to work with participants aligned with sustainability

This research specifically examines meaning-making among individuals already aligned with regenerative sustainability (noted in Section 2.3.13, *Omitting Ideology*). Of course, within this ‘group’ there is a wide range of opinions, experiences, values, and perspectives.

Focusing on sustainability-aligned participants was a deliberate choice influenced by the following:

1. **Case Design:** The cases were deliberately designed to allow for organic development and experimentation in addressing complex issues with a receptive and open audience.
2. **Impact:** Transdisciplinary work and PAR both emphasize the importance of impact in real-life settings (Bernstein, 2015; Kemmis et al., 2014; Lang et al., 2012). Working with individuals who are already dedicated to sustainability had the potential to expand the research’s impact because these people are well positioned to integrate and disseminate new perspectives, insights, narratives, and methods within their networks (Heras et al., 2021).
3. **Supporting sustainability leaders:** Those deeply engaged with sustainability often confront significant emotional challenges—including feelings of loss, despair, and anxiety—as they grapple with the magnitude and urgency of global issues (Lertzman, 2015; Pihkala, 2020, 2022; Stoknes, 2015). Therefore, supporting their capacity to sustain engagement and navigate these emotional burdens is as crucial as efforts aimed at expanding outreach to new audiences.

In the *Activating Transformative Mindsets* case participants already had a focused professional interest in sustainability transformations. In the *Imaginative Disruption* case, the attendees can be described as primarily sustainability “civilians.” These participants did not necessarily have a formal, professional background or specialized expertise in sustainability (although

some did); rather, they were members of the broader community affected by or interested in sustainability issues. Their participation was driven by personal commitment and everyday experiences rather than professional identity.

4.2.5 Ethical considerations

Clarity about normative goals

To ensure that the events within each case were sites for empowerment rather than manipulation, both cases were transparent about the normative goals. Activating Transformative Mindsets workshops were explicitly linked to regenerative sustainability as a goal. Imaginative Distruptions was explicit that all events were intended to grapple with and respond (in different ways) to climate change.

Participants were self-selecting and the individuals who participated were already aligned with aspirations towards sustainability

Both cases took an emancipatory stance, and the events were deliberately intended to boost participants' self-efficacy. As discussed in Section 3.4.2, art has frequently been employed instrumentally in service of 'propaganda' (e.g., Bernays, 1929). Also, especially when working towards a normative goal, there can be a fine line between persuasion and manipulation (Noggle, 2020). Thus, each case focused on how practices could support those who are already actively seeking to expand their spaces of possibility. Linking to the literature on leadership in sustainability transformations, the goal was not to impose meaning but to create conditions where new forms of agency and imagination could emerge (Westley et al., 2013; Galafassi, 2018). The role of art was intended as a vehicle for meaning-making; rather than using art-based practices to encourage a single narrative, it intended to expand the participants' capacity to question, reflect, and reimagine.

Inclusion of minors

This research does not involve vulnerable populations as typically defined in standard research ethics literature, with one partial exception. In one setting, a small number of older teenagers were interviewed with the full knowledge and support of their parents or guardians, who provided informed consent. The teenagers themselves also gave verbal assent and expressed enthusiasm about participating. The questions were non-sensitive, focusing on general impressions and experiences related to the event or activity. All appropriate ethical safeguards were followed to ensure their comfort and autonomy. This reflects a contextual understanding of vulnerability, as discussed by Fisher and Ragsdale (2023), who argue that vulnerability should not be treated as a fixed attribute of specific groups, but assessed in relation to the particular research

setting, the nature of participation, and the actual capacity of individuals to engage meaningfully.

In *Activating Transformative Mindsets*, no potentially vulnerable populations were included.

In *Imaginative Disruptions*, two sub-events (Retreat and Vonk) welcomed children, who engaged in creative practices alongside adults. Their participation was carefully considered to ensure a supportive and appropriate environment:

- Parental awareness and presence: Parents were informed in advance about the event content and structure. The activities were intentionally designed to be inclusive of children, and parents were present at all times.
- Flexibility and autonomy: Parents had the freedom to step out, take breaks, or leave if they felt the need.
- Child-appropriate engagement: The creative practices were adapted to be accessible and engaging for different ages, ensuring they were participatory rather than overly abstract or demanding.
- Respect for agency and comfort: While children were encouraged to join, there was no pressure to participate fully in every activity. The setting allowed for natural movement between engagement and observation, accommodating their attention spans and interests.
- While ethical considerations around minors in participatory research can be complex, our approach was informal yet mindful—ensuring that participation was voluntary, safe, and enriching.

Ethic of reciprocity

Rather than approaching research as an extractive process—where knowledge is ‘mined’ from participants—I tried to combine a ‘research as learning’ and a ‘research as activism’ approach (Dillon & Wals, 2016). The goal wasn’t just to gather insights but to actively support participants in the regenerative sustainability work they were already doing. In *Activating Transformative Mindsets*, participants received tangible benefits: knowledge-sharing, hands-on training in arts-based methods for community engagement, and a beautifully designed, accessible toolkit. This toolkit (Pearson et al., 2018) laid out each method’s purpose, practical tips, and implementation strategies in an engaging, user-friendly format. Sample pages are shown in Annex D and Annex E, as well as in Figure 9 in Section 5.2.1 and in Figure 11 in Section 5.2.2. In *Imaginative Disruptions*, participants explored topics they cared about through creative practices led by professional artists and experts. These events weren’t focused on knowledge sharing; they were designed as rich learning experiences—intellectually, experientially, and emotionally—giving participants new tools and perspectives to bring back to their work.

Permissions granted

There was clarity that each event was a part of a research project and permission was freely granted for photographs and videos.

4.2.6 Return to researcher positionality

As described in Section 1.2.3, my background informs my research approach, prompting me to explore often-overlooked interconnections between cultural imaginaries, systemic structures, ethical frameworks, and ecological realities. At the same time, I recognize that my positionality carries risks. My focus on justice and sustainability, for instance, may predispose me to emphasize certain aspects of a situation while potentially overlooking others. My experience growing up as a white middle-class American woman with strong, warm family support for my education and careers also comes with a set of blinders and biases. To address these challenges, I adopted specific strategies to maintain reflexivity and openness. By reflecting critically on my assumptions (bracketing), engaging in dialogue with peers and collaborators (inter-subjectivity), and validating findings with project collaborators outside academia, I tried to approach the research with a balance of awareness, humility, and inclusivity.

First, to the best of my ability, I tried to practice bracketing by making a conscious effort to reflect on my own assumptions and temporarily set them aside. By acknowledging my biases and seeking to suspend them during data collection and analysis, I tried to remain receptive to perspectives and phenomena that might initially lie outside my field of view (Finlay, 2002). Second, I engaged in inter-subjectivity and validation by creating opportunities for dialogue with peers and collaborators (Finlay, 2002). Regularly sharing emerging findings and interpretations with others allowed me to check whether my conclusions resonate or whether alternative perspectives might reveal blind spots. These conversations were not only energizing and enriching, they also served as a critical sounding board, helping to challenge my assumptions and expand my understanding.

Ultimately, where I stand as a researcher deliberately reflects my normative stance on what matters most to me: the aspiration to build equitable, life-sustaining systems that honor human, nonhuman, and ecological well-being. This commitment shaped my research questions and methods and guided me to engage with voices and perspectives that are often marginalized—in the case of this research, nonhuman or more-than-human entities. While my positionality offers strengths, such as a heightened sensitivity to destructive, unjust societal systems and a drive for transformative change, I tried to remain vigilant about my own limitations, aiming for a research process that was reflexive and collaborative.

4.2.7 Research process and use of data

The following two chapters (5 & 6) present the cases in detail, sharing emergent insights that arose through engagement with participant-collaborators, participant-observers, and participant-attendees. I use the term research process rather than research methods to avoid confusion between the arts-based methods employed during the workshops and events and the tools and structures of the investigation itself. Although each case is quite different, the details of both processes reflect the overall methodology described in this chapter, which emphasizes co-creation, reflective sensemaking, and emergence.

During the research process, I used open-ended, probing questions in interviews and reflection guidelines, stayed responsive to emergence in both the structure and content of each case, and paid attention to nonverbal and contextual cues as part of pattern recognition and sensemaking.

The text references project documents and photographs that offer insight into the research process. They bring forward context, voices, observations, experiences, and moments that helped shape the inquiry. Quotations come from surveys, interviews, and project working documents. Photographs capture moments, environments, and interactions that were part of the process, selected to offer a window into how interpretations developed. Minor edits were made for clarity—adjusting grammar or punctuation—while preserving original meaning. All participant statements remain anonymous to protect confidentiality.

It is worth noting that, in this research, theory did not serve as a pre-planned blueprint but evolved through engagement, reflection, and emergent insight. Not every methodological choice—from interview phrasing to workshop structures—aligns neatly with the theoretical framework as it now stands. Rather than retroactively imposing coherence, I acknowledge this evolution as an integral part of the inquiry. Understanding deepened through interaction with real-world complexity, reinforcing the view that knowledge-making is situated, iterative, and dynamic (Barber & Jackson, 2015).

4.2.8 Note on data

The workshops in this research were designed as arenas of experimentation, not sites of data extraction (Dillon & Wals, 2016). They were live, relational spaces where participants worked with materials, engaged in creative tasks, and explored ideas—surfacing moments of resonance, hesitation, or surprise that became important sources of insight. What stood out wasn't necessarily what was said during interviews or surveys, but what carried energy: the

artifacts people created, the shifts in tone or engagement, the metaphors that stuck and were repeated. The reflections that informed the analysis emerged over time, through dialogue with collaborators involved in shaping and facilitating the work. Rather than treating workshops as resources for quotable material, I followed what felt alive and meaningful in the process itself.

This orientation is also why I chose to include very few direct quotes from interviews or workshops. The aim was never to extract clean statements as evidence, but to trace the dynamics and patterns that revealed something about imaginative leadership. As Lather (2007) argues, data is never neutral or “raw”; it is always shaped by the frameworks and commitments of the researcher. MacLure (2013) similarly warns against the seductive pull of ‘data glitter’—those polished quotes that feel satisfying to cite but may distract from more grounded insights and learning. Influenced by the practice framework of Appreciative Inquiry (Cooperrider & Srivastva, 1987), this research focused on what gave energy, what felt useful or worth paying attention to. Instead of breaking apart experience into discrete fragments, I looked for threads of meaning as they unfolded—through mood, gesture, artifact, and exchange.

Choosing not to include direct quotes could be read as limiting transparency or filtering out participants’ voices. But in this research, “data” didn’t come from fixed interviews or transcripts—it emerged through active engagement, co-facilitation, and shared experimentation. The people involved played different roles: some helped design and facilitate the workshops, others participated more fully as attendees, and still others acted primarily as observers. The insights I drew on came mainly from ongoing reflection and dialogue with collaborators who were deeply embedded in the process—not from isolated moments of verbal feedback. While participant voices mattered, quoting them felt out of step with the nature of the work. What surfaced as meaningful wasn’t located in statements, but in how people engaged, what they created, and what shifted over time. The decision to work with patterns, metaphors, and moments of shared energy was both practical and methodological. It aligned with the research design and helped reflect the actual conditions through which meaning was made.

4.3 Theory U as a Heuristic Design Tool

Across both cases, Theory U was used as a heuristic or seeing tool. Heuristics simplify problem-solving and decision-making by providing a flexible guide for exploration and action without imposing rigid rules or requiring a fully developed theory (Kincheloe et al., 2011). In addition to structuring events, Theory U offered a shared reference point that supported both the workshop design and the facilitation of participatory activities while also supporting

adaptability and emergence. It was not used as a formal (or even informal) theoretical framework.

In the process of designing the workshops for the *Activating Transformative Mindsets* case, the event co-designers (myself included) used Theory U (Scharmer, 2009) as a tool for structuring and making sense of the process. In *Imaginative Disruptions*, Theory U contributed very loosely to structuring the activity flow for each day of the retreat, and it informed aspects of the *Compose* masterclass. Theory U was not used in *Vonk*, as that event was entirely designed by a local artist collaborative, without significant feedback from the core team. At the inception of this research project, I looked into including Theory U more scientifically or theoretically, but despite its practical usefulness, I was unable to find concrete research to support its claims of transformative impact—e.g., longitudinal outcomes, shifts in decision-making patterns, or demonstrable systems-level change directly attributed to the use of the framework.

4.3.1 Decision to use Theory U as a heuristic and structuring tool

My introduction to Theory U came over 15 years ago through my professional work in sustainable economic development projects in the U.S. and internationally, and specifically during an in-person three-day workshop with Peter Senge and Otto Scharmer in 2009. Later, in 2015, during an Early-Stage Researcher (ESR) development module for the SUSPLACE ITN, we received three days of facilitation training from a Netherlands-based international consultancy that used Theory U as its guiding approach. This provided a shared foundation among the co-designers of the Action Hub workshops, who were all members of SUSPLACE network. Later, when I expanded the Action Hub workshops into full-day sessions with the Welsh Government, one of my primary co-designers (who was also the primary facilitator), as well as an environmental artist and event designer, also had experience with and a strong interest in Theory U, making it a natural fit. Similarly, in the early phases of the *Imaginative Disruption* project, although I was primarily a participant observer, I did contribute to shaping the events through a series of informal consulting sessions (that took the form of online conversations), working alongside collaborators who were also familiar with and drawn to Theory U.

The co-designers in both *Activating Transformative Mindsets* and *Imaginative Disruptions* selected Theory U for multiple reasons. First, it was already familiar to both co-design collaborators, making it expedient for organizing our approach without requiring extensive orientation. Second, it is conceptually straightforward and easy to communicate, even in its most simplified form. It established a shared language to discuss the design process

amongst collaborators and with participants. Finally, while not a formal theory in the strictest sense, it does have a foundation in academic and philosophical traditions, aligning well with the participatory and arts-based methodologies of this research.

Another reason for choosing Theory U as a heuristic is its explicit balance between structure and openness. On the one hand, it provides a clear, sequential movement—sensing, presencing, and realizing—that helps to scaffold a process of deep engagement. This structured progression creates a predictable framework within which participants can explore unorthodox practices without feeling lost or destabilized (Scharmer, 2009; Böhm, Moog, & Warnecke, 2012).³⁸ At the same time, Theory U explicitly incorporates space for indeterminacy, allowing for intuitive, emergent, and serendipitous insights, which are vital for cultivating serendipity, intuition, and lateral thinking.

Finally, Theory U supports an interplay between collective and individual processes. It emphasizes the importance of collaboration and shared sense-making while also creating space for introspection and deep reflection. The inclusion of a presencing phase—where participants connect with their deeper values and motivations—addresses what Scharmer (2009) refers to as the “blind spot of leadership”: the often-overlooked role of inner transformation in shaping external change. As discussed in Chapter 2, making space to engage the inner dimensions is vital in transformations toward regenerative sustainability, where decision-making is often dominated by technical, policy-driven, or procedural logics, leaving little room for the emotional, imaginative, and values-based dimensions that underpin meaningful transformation.

This has been echoed by scholars such as O’Brien (2018) and Ives et al. (2020), who argue for integrating inner capacities—such as mindfulness, empathy, and visioning—into sustainability practice. Examples include the use of guided reflection in climate leadership trainings, or arts-based exercises that help participants explore values and narratives often excluded from formal planning processes. Theory U acknowledges the importance and role of emotional intelligence and values, and is explicitly intended to open spaces of possibility, or in Scharmer’s terms “seeing with fresh eyes” and “sensing the

³⁸ Reinforcing the importance of a stabilizing structure, during the early exploratory stage of this research, three separate conversations with professional facilitators (via semi-structured interviews described in Section 5.1.1) who use creative methods emphasized that a stable facilitation structure can help participants leave their comfort zones while maintaining a sense of psychological safety.

field”. Theory U also includes a phase for reflecting, or ‘presencing’³⁹. This creates time for participants to intuitively connect with their deepest values and motivations; this is often missing from academic, community, governance, and corporate work on sustainability issues. Scharmer (2009) refers to this as ‘the blind spot of leadership’.

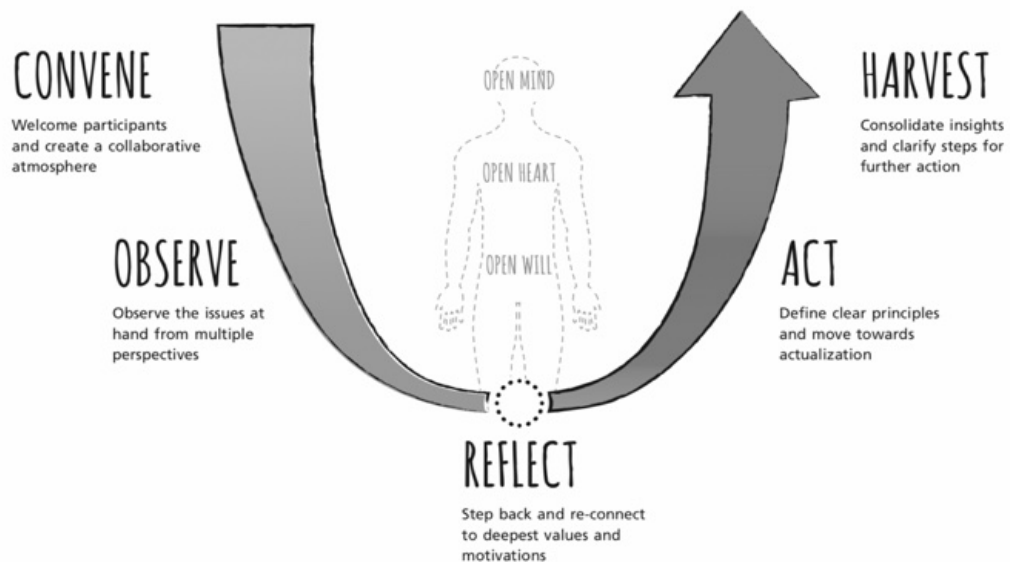


Figure 8. Theory U (Adapted)

Process of Observing, Reflecting, Acting, Harvesting. Source: Pearson et al. (2018) as adapted from Scharmer (2009) CC BY.

4.3.2 Critiques of Theory U

Sociologist Stefan Kühl (2016) characterizes Theory U as a management fashion, arguing that while it aspires to effect change across individual and institutional levels, it often lacks concrete mechanisms for broader organizational or societal transformation. Kühl also points out that Theory U tends to overlook structural conflicts of interest, such as those between different groups or classes, by

³⁹ Note: As a strategic decision for communicating clearly and accessibly to our target audiences, we chose to change the term ‘presencing’ (used by Scharmer 2009, and, the Theory U practice community) to ‘reflecting’ to describe the bottom of the U.

overemphasizing communal values and consensus, which can inadvertently suppress necessary articulations of dissent and hinder organizational learning processes. Additionally, the model's structured, phase-based approach has been criticized for oversimplifying the inherently complex and often chaotic nature of decision-making within organizations. Although I find these critiques valid, for the purposes of this research the Theory U structure proved adequate and helpful. The research did not involve participants with a high level of conflict or hierarchy and was not used for actual decision-making.

Further critiques highlight concerns about Theory U's philosophical grounding. Heller (2018) argues that Scharmer's references to philosophers such as Nietzsche, Capra, Varela, Husserl, and Steiner, for example, are inconsistent or contradictory, leading to an ambiguous epistemic foundation. Heller critiques Theory U for lacking theoretical rigor and for inadequately capturing real-world complexity, though he acknowledges its value in engaging non-conventional perspectives in leadership studies—such as embodied awareness, collective sensing, or presencing as forms of knowing.

In response, Scharmer (2020) defends the framework as a practical tool for transformation, arguing that it provides a structured-yet-adaptable approach to addressing systemic challenges, particularly in contexts like organizational change, education reform, or climate resilience work. Thus, given the way it was actually applied during the cases and in consideration of legitimate critiques of its robustness as a formal theory, I deliberately chose not to incorporate Theory U into my conceptual and theoretical framework, instead positioning it as a part of the methodology.

4.4 Moving into Case Studies

To summarize, this chapter has attempted to answer Research Question 4: *How can arts-based methods be better understood in processes of activating and strengthening imaginative leadership?* The methodology above has been proposed as a response. This question is methodological because it asks how arts-based methods themselves can be understood and worked with as part of the research. Before turning to the cases and exploring what these methods make possible in practice, it was necessary to clarify how they were being approached, what counted as insight, and how the research process would engage with them as ways to support imaginative leadership.

The two explored in the following chapters build on this methodological grounding in different ways. Each served as a context for working with and evolving ideas about imaginative leadership in real-world settings—allowing patterns, tensions, and insights to emerge through the doing.

- **Case 1** corresponds to Research Question 5: How can arts-based methods help sustainability practitioners grow capacity for imaginative leadership? To answer, this chapter details specific ways that arts-based methods can help practitioners anchor themselves in transformative mindsets—providing tools to reinforce and sustain the ways of thinking they already value, thus building their capacity for imaginative leadership.
- **Case 2** corresponds to Research Question 6: How can arts-based methods enable sustainability leaders to engage meaningfully with the imaginative and emotional dimensions of ecological challenges? To do so, it examines engagement with the emotional and imaginative dimensions of ecological challenges, highlighting how non-linear, experiential approaches to imaginative leadership enable people to deal with complexity in new ways.

These cases were not designed to demonstrate fixed outcomes or offer generalizable findings. Instead, they served as situated arenas of inquiry—places to notice what emerged, track how ideas shifted through practice, and explore how arts-based methods might support imaginative leadership in different ways. What follows are discussions of two distinct engagements that helped carry this inquiry forward.

5

5 ACTIVATING TRANSFORMATIVE MINDSETS

“At the very least, participatory involvement with the many forms of art can enable us to see more in our experience, to hear more on normally unheard frequencies, to become conscious of what daily routines have obscured, what habit and convention have suppressed.”

MAXINE GREENE (1995: 123)⁴⁰

⁴⁰ Maxine Greene (1917–2014) was an American educational philosopher, author, and social theorist known for her work on aesthetic education, imagination, and social justice in learning. A longtime professor at Teachers College, Columbia University, she argued that the arts and imaginative engagement are essential for critical thinking, personal agency, and societal transformation. Her influential works, including *Releasing the Imagination* (1995), explore how education can cultivate awareness, empathy, and the capacity to challenge dominant narratives.



This chapter details the case study *Activating Transformative Mindsets* which follows an experiment with the design and facilitation of creative and arts-based methods.⁴¹ As discussed in Chapter 3, it is well-established that arts and creative methods can be an effective way of engaging people in the context of social movements, academic teaching and research, and innovative problem-solving. At the same time, there is a gap in understanding how arts-based methods might be designed *specifically* to evoke and encourage mindsets that are conducive, *specifically*, to supporting societal change towards regenerative sustainability. This chapter, therefore, addresses

⁴¹ This chapter is adapted from Pearson, K. R. (2022). Imaginative leadership: A conceptual frame for the design and facilitation of creative methods and generative engagement. In *Co-Creativity and Engaged Scholarship: Transformative Methods in Social Sustainability Research*, Palgrave-Macmillan, 165-204.

Changes from the original include: 1) Introduction was rewritten to reflect the updated structure and changes made to integrate and update the chapter to fit into the flow of the overall monograph 2) In the original published chapter, the details of the methodology and research process was limited due to wordcount constraints—this revised chapter describes the process in more depth and points to supporting Annexes that have been added. The methodology has been moved to Chapter 4, integrated with broader methodology of this research overall, and significantly expanded. 3) The photographs that show aspects of the process and artifacts created during the workshops are more clearly explained and linked to the research process that led to specific learnings and informed speculations. 4) An additional section was added which describes a structure for creating transformative arts-based methods (that emerged from the research process). Once again, this was not included in the original article due to wordcount constraints but was an important outcome that was intended to link the research to practice in the spirit of action research. 5) In order to avoid repetition and to streamline the overall flow of the monograph, some of the study limitations were moved to methodology (Chapter 4) section and some moved to (or revisited in) the final chapter (Chapter 7).

the question: *How can arts-based methods help sustainability practitioners grow capacity for imaginative leadership?*

To answer this question, this chapter reflects on the process of co-designing and facilitating two different workshops grounded in creative practices and methods. Both workshops intended to support the imaginative leadership of sustainability researchers and practitioners by (a) activating specific conceptual frames and processes of self-reflection with the potential to open new spaces of possibility for sensing, perceiving, feeling, and acting, and (b) inviting participants to disrupt default anthropocentric worldviews and timescales and to draw more deeply and consciously from their own values and motivations in their work as sustainability professionals or researchers. The research focused primarily on the process of designing the methods and workshops—the theoretical inputs and practicalities that shaped them, and reflections on their potential to strengthen transformative imaginative leadership. It did not assess the ‘effectiveness’ of the methods themselves (see Section 4.1.2 for description of imaginative leadership as a stochastic process that resists cause and effect logic).

First, this chapter shares details of the research process that was used to develop insights and learnings in this case (Section 5.1). It then focusses on the conceptual and design theory that informed the workshops and outlines a preliminary list of *transformative mindsets* that emerged from literature, semi-structured interviews, and the co-design process (Section 5.2). Next, Section 5.3 describes the design and implementation of the workshops. After this, emerging from insights from the co-reflection process, it presents lessons learned from co-designing and facilitating these workshops (Section 5.3). This leads to a proposed, updated set of transformative mindsets (Section 5.4) that could support the concept of imaginative leadership moving forward. Additionally, a key outcome of the collaborative reflection was the development of a structure for designing effective arts-based methods for work with diverse groups, including students, academics, and practitioners (shared in Section 5.5). This structure reflects a synthesis of lessons learned, practical experimentation, and iterative refinement.

5.1 Research Process: Activating Transformative Mindsets Case

This section describes details of the process that I used to distill insights and learnings, as well as its connection to practice.

As summarized in Section 4.2, the *Activating Transformative Mindsets* case explored two collaborations focused on designing arts-based methods of engagement specifically to support sustainability leadership development: (1)

Action Hub: Arts-based methods for transformative design (referred to hereafter as ‘Action Hub’) was a 90-minute practice session with approximately 30 participants conducted during Transformations 2017, a transdisciplinary conference that took place in Dundee, Scotland. Co-designers included a cohort of six researchers from the SUSPLACE Innovation Training Network. (2) *Imaginative Leadership: Co-producing with nature and communities* (referred to henceforth as ‘Imaginative Leadership’) was a full-day workshop designed for sustainability professionals in the Welsh Government working in the area of community engagement (called front-line staff). In order to give the front-line staff from different regions an equal opportunity to attend, the workshop was conducted twice, once in Northern Wales and once in Southern Wales.

The research question that shaped the case was: *How can arts-based methods help sustainability practitioners grow capacity for imaginative leadership?* For the purpose of defining and designing this case, I understood this to mean: How can arts-based approaches be designed and applied in ways that support practitioners in recognizing, understanding, and engaging with transformative mindsets? The focus was on working with metaphors, mental models, and conceptual frames—tinkering with them, stretching them, and exploring how they shape what feels possible within regenerative sustainability.

Throughout this case, I played the roles of workshop architect, co-facilitator, and participant-observer. Although each workshop took place in under a day, the full process—from the initial iterative design phase through implementation and reflection—spanned six months (see Table 3 in Section 4.2). My involvement was central to the project's development, as I contributed significantly to both the theoretical and practical aspects. This included shaping the conceptual framework, designing the specific methods used, managing logistics both large and small, and engaging with participants and co-designers before, during, and after the workshops. While there were no formal titles among the core collaborators, I could reasonably be considered a driving force behind the workshops, ensuring the project's cohesion and impact at every level of its execution.

The workshops described in this case enabled collaborative development and experimentation with unconventional methods for sustainability leadership within the conventional form of a workshop. The aim was to support the agency and self-efficacy of key individuals who could be considered “convention entrepreneurs” (Kagan, 2011) already working towards sustainability transformations, as a leverage point for systemic and cultural change.

The focus of these experiments was not to track the impact of specific methods, but to use the design and implementation process as an arena for reflection, for reality testing the use of creative methods in the process of developing a theoretical framework for designing and applying creative methods, and to probe promising pathways for future practice and research. The learning process can be broken into four (*non-linear*) phases that

incorporate iterative loops throughout: (1) exploration, (2) collaborative workshop design, (3) execution, (4) reflection.

5.1.1 Phase 1: Exploration

The exploration phase combined semi-structured expert interviews with a broad, cross-disciplinary sampling of both academic and practice-focused literature related to the inner dimensions of sustainability transformations. While the interviews were initially structured following conventional semi-structured interview methods (Yin, 1994) in practice, they unfolded in a more dynamic manner, aligning more closely with what could be described as “co-constructed interviews.” Co-constructed interviewing is a relational and flexible approach to in-depth conversations that emphasizes the shared process of meaning-making between interviewer and participant (Patti & Ellis, 2017).

In total, I conducted 14 conversations/interviews in the Netherlands and the UK with people who work at the intersection of arts-based or creative practices in facilitation, community engagement, and sustainability. The conversations were intended to give insight into how and why professional practitioners use creative methods, as well as what makes them successful and/or challenging (in their perspective). The Netherlands and the UK were chosen as the primary sites of exploration pragmatically because, in these two places, I was linked to academic and professional networks related to ‘sustainable placeshaping’ via the SUSPLACE ITN. In the Netherlands interviewees were initially identified by one of the SUSPLACE practices partners specializing in facilitation and organizational change. Additional interviewees were identified via snowball sampling—a standard practice wherein researchers make initial contacts and then use recommendations to identify additional participants. Interviewees in the UK were identified by a SUSPLACE practice partner in a leadership development for ‘community front runners’ project in Wales, co-sponsored by the Welsh Government and the Sustainable Places Research Institute in Cardiff, Wales. Again, additional interviewees were identified via snowball sampling. The interviews in Wales not only added depth to my overall understanding of the topic, but also expanded the co-design and reflection team for the Imaginative Leadership workshop as two of the interviewees offered to join.

The open-ended questions that guided the expert interviews/conversations were as follows:

- Describe your work, types of clients/collaborators, when you use ‘creative practices’ (and what does that mean to you?)
- What inspired you to get involved (the origin myth of your approach and general background - work, education, mentors, etc.?)

- Motivation (why do you think creative techniques work?)
- Successes (at what times were you surprised by successes?)
- Frustration (were there times when something didn't work? Were there times when you noticed a mindset shift (a change of direction, and new way of thinking in yourself or others)?)
- How do you make people feel comfortable with the process of getting out of their comfort zone?

In addition to transcribing the full interviews, key ideas were captured in project notes. These ideas were shared and reflected upon with project collaborators and influenced some of our design choices. The interviews were not used to develop specific categories or themes.

The literature that shaped my conceptualization of how arts-based practices could contribute to sustainability transformations is described in detail in Chapters 2 and 3. The following is a short list of cornerstone ideas: The role of art for sense-making (e.g., Dewey, 1934), engaging diverse styles of learning and knowing (van Boeckel, 2013; Gardner, 2011; Mantere, 1998), processing information through multiple senses and somatic-cognitive processes (e.g., Sheets-Johnstone, 2015; Stein, 2012), the foundational role of metaphorical thinking in cognitive linguistics (Lakoff & Johnson, 1980; Lakoff, 1993), re-sensitizing ourselves to the environment (and specific places) (e.g., Grenni, 2020), releasing conditioned perceptions (Bourdieu, 1990), and engaging with sustainability issues (and each other) based on depth of emotional experience (Lertzman, 2015; Pikala, 2020).

The practice orientation of this case was informed by Joanna Macy's *The Work That Reconnects* (Macy & Brown, 2014) as well as by the earth-based, socially engaged practices found in permaculture (Macnamara, 2012). Both explore transformative ways of relating to the natural world, weaving together creative and pragmatic practices that emphasize attentiveness to emotional dimensions and interdependencies, to human relationships, and to the details, rhythms, and cycles of natural systems. The practice framework of Appreciative Inquiry (Cooperrider & Whitney, 2001) also shaped our process. Rather than focusing on fixing problems, Appreciative Inquiry invites attention to what already holds vitality—what's working well, including more intangible, place-based resources (e.g., Horlings et al., 2020). Moriggi (2022) goes into more depth on the way Appreciative Inquiry (AI) can influence the design of creative methods for sustainability transformations.

As discussed in detail in Section 4.1, the methodology was informed by bricolage Participatory Action Research (PAR) and Research through Design (RtD). PAR acknowledges and highlights the dual role of the researcher as scientist and social change agent, particularly in light of the need for urgent sustainability transformations (Wittmayer & Schöpke, 2014). Reflective sensemaking (Weick, 1995) and Practice-led research (Candy, 2006) guided our approach to the process of learning from the process.

Because the theoretical framework in Chapters 2 and 3 evolved alongside the exploration phase, its current form remains grounded in those initial ideas but has expanded, restructured, and refined them through iterative development.

5.1.2 Phase 2: Collaborative workshop design

Decision to Use Workshop Format

The decision to use workshops as the arena for inquiry was largely pragmatic. Workshops, as a format, have long been recognized for their ability to spark imagination and collective creativity, a concept first articulated by Osborn in *Applied Imagination* (1953) and later expanded upon by Isaksen et al. (2010). Workshops were chosen as the arena for experimentation in part because they provide accessibility, time-efficiency, and psychological safety. First, they have an accessible and flexible structure that accommodates a diverse range of participants. Second, they require a relatively low time commitment, making participation feasible even for those with demanding schedules. Third, workshops offer a familiar and socially accepted format, which can be especially important when engaging people in activities that push them beyond their usual ways of thinking or working (Sol et al., 2013).

Choice of Venues

The co-designers selected the *Transformations 2017* conference as a testing ground for this work due to its openness to non-traditional contributions, its diverse mix of academics and practitioners, and its explicit support for experimental approaches. These factors made it a strong fit for testing arts-based methods and an unconventional workshop format in a sustainability-friendly context.

The decision to hold the *Imaginative Leadership* workshop with the Welsh Government was made in collaboration with the SUSPLACE ITN practice partner based in Cardiff. This partner, whose role involved supporting leadership within the government, was particularly interested in exploring co-creative and participatory approaches. The *Well-being of Future Generations Act* (2015) in Wales explicitly calls for government officials to find practical ways to integrate co-creation and sustainability principles into their work, which aligned well with the goals of the workshop.

Additionally, the practice partner with the Welsh Government was familiar with my work on the *Action Hub* at the *Transformations 2017* conference and saw value in applying it within a governmental setting with frontline sustainability staff. This opportunity came with full institutional

support, including venue provision, materials, translation of documents into Welsh, and other logistical assistance.

Participant-Collaborators

Each workshop was co-designed with a unique constellation of collaborators, including co-researchers, stakeholders, and practitioners. Here, *co-design* refers to a collaborative effort to conceptualize, develop, and implement a participatory process.

In the *Action Hub* session, collaborator-participants dedicated extensive time to designing the process, refining methods, clarifying objectives, and working through logistical considerations. These collaborators also served as table hosts and facilitators during the event, guiding discussions and interactions. Following the workshop, each table host provided detailed reflections on their experience and observations, contributing valuable insights into the process. Artifacts from this phase include drafts of workshop designs, annotated planning documents, and iterative revisions reflecting the evolving structure of the sessions.

The concept of the *Imaginative Leadership* workshop was initiated together with a representative of the Welsh government specializing in leadership and sustainability. Additional co-designers included a professional performance artist working at the intersection of art and sustainability and transformative practices and a social entrepreneur working with Natural Resources Wales. The artist was hired as the primary facilitator of the events and the other two co-designers participated as participant-observers. The same workshop structure was repeated with two different groups of approximately 40 people each (one in northern and one in southern Wales) on two separate days.

Participant-Observers

During the *Action Hub* session, three participant-observers with expertise in sustainability transformations research joined the process. Their insights, given in written documents and verbal conversations, contributed to refining the methods and understanding how different mindsets were engaged throughout the workshops. See Annex C for the detailed guiding questions for the participant-observers.

During the *Imaginative Leadership* workshop participant-observers included: (1) an academic supervisor in the SUSPLACE network, (2) a member of *Action Hub* collaboration team, (3) two of the co-designers who were not active in facilitation. Participant observers volunteered to take photographs and notes and share observations after the event, which were captured through notetaking. More ideas, reflections, and observations were shared informally in ongoing conversation over the next year, which was not formally noted, but impacted my overall perception of the event.

Participant-Attendees

Participant-attendees were invited to engage with a series of specific methods of evoking different forms of *transformative imagination* (Galafassi, 2016) as a way to reconnect with personal values and expand spaces of possibility for thought and action.

The *Action Hub* invited people to attend from the pool of people who were participating in the Transformation 2017 Conference and were therefore assumed to already have a strong interest in sustainability transformations. Participants were self-selected based on those who were motivated to sign up in advance for the workshop (there were limited spaces available). More than fifty people attended.

The *Imaginative Leadership* workshop invited frontline staff working on sustainability initiatives with the Welsh Government in communities throughout Wales. Participants were self-selected based on interest and availability after the event was shared via a collaborator working in an official capacity in leadership development for the Welsh Government. Participants signed up in advance. More than seventy people attended over the course of the two sessions.

Designing for Transformation

To set the stage for meaningful engagement, each workshop design process began with structured discussions on goals—both for the collaborator-participants and the attendee-participants. These conversations explored personal motivations, research objectives, and broader aspirations, such as planetary health or cultivating “islands of sanity.”⁴² They also considered what would be most useful and generative from the perspective of attendees i.e., what would be most useful and generative from the perspective of targeted attendee-participants?

The methods were developed to engage specific transformative mindsets and were refined iteratively through experimentation and co-reflection during and after the workshops. Each phase of development

⁴² Margaret Wheatley, a leadership consultant, writer, and systems thinker, introduced the concept of ‘Islands of Sanity’—spaces where individuals and communities can resist despair, reconnect with their core values, and focus on what truly matters, even amid uncontrollable societal or systemic challenges. Drawing from her expertise in navigating complexity and fostering resilience, Wheatley proposes that “whether or not humans can stem the tide towards unsustainability, we have the possibility to contribute to ‘islands of sanity’ that evoke the ‘conditions for our basic human qualities of generosity, contribution, community and love’” (2017, p. 8).

incorporated direct input from collaborator-participants, ensuring that the methods remained both theoretically grounded and practically applicable. In each case, the final stage involved designing both the overall workshop structure and the specific methods used, balancing theoretical intent with the realities of facilitation and participant engagement.

Empirical Material

During the design process, detailed agendas were created and refined through a combination of in-person discussions and ongoing collaboration via shared Google documents. These documents served as a central working space where all collaborators—co-researchers, practitioners, and facilitators—could contribute insights, make annotations, and refine the workshop structure. Comments were actively discussed both in bilateral exchanges and group settings, ensuring that multiple perspectives were incorporated. The finalized agendas detailed each method's integration within the Theory U framework, its intended purpose, the transformative mindset it engaged, facilitator and/or table host scripts, and the materials required, including pre-prepared resources.

In addition to the structured agenda, supporting materials were developed to enhance participant engagement. At the *Action Hub*, one or two tables were provided with participant workbooks designed to help attendees engage more deeply with the methods and reflect on their experience. For the *Imaginative Leadership* workshop, a more detailed participant notebook was created, offering structured prompts and guiding questions. While these materials were not collected for analysis, their purpose was to scaffold participant reflection and support engagement with the transformative methods.

By incorporating multiple sources of data—meeting notes, annotated workshop drafts, finalized agendas, facilitator scripts, and participant-facing materials—the research process maintained a reasonable level of reliability and traceability. The iterative refinement of methods through direct collaboration and feedback further strengthened the validity of the approach, ensuring that the workshops were both thoughtfully designed and responsive to participant needs.

5.1.3 Phase 3: Execution

The execution phase encompassed the full setup, production, and facilitation of each workshop. While the specific details of implementation will be described in more depth in Chapter 5, this section focuses on the data collected during this phase.

A range of documents and artifacts were produced throughout the workshops that functioned as both process documentation and participant-generated outputs. These included:

- **Facilitation materials** – Presentations, written instructions for participants, and session guidelines used by facilitators and table hosts.
- **Visual documentation** – Photographs and, in some cases, short video clips capturing key moments of engagement, creative exercises, and the spatial setup of the workshops.
- **Participant-generated creative outputs** – Artifacts produced through specific methods, such as collages, poems, sketches, and mind maps, offering insight into participants' reflective and imaginative processes.
- **Observer and facilitator notes** – Handwritten or typed notes taken by facilitators, table hosts, and participant-observers, documenting emergent themes, group interactions, and key reflections from the sessions.
- **Post-workshop reflections and feedback** – Written reflections collected from table hosts and facilitators immediately following the events.
- **Participant surveys** – For the *Action Hub* workshop, a survey was distributed to attendees, with 16 respondents providing feedback. The survey aimed to capture participants' experiences, perceptions of the methods, and reflections on how the workshop supported their engagement with imaginative leadership. The full set of survey questions is included in the annex.
- **Follow-up engagement and limitations** – During the *Imaginative Leadership* workshop, rich data were collected through real-time documentation, participant-observer reflections, and post-workshop interviews with co-designers. However, planned follow-up engagement with participants did not take place due to a variety of personal circumstances for key people, including myself. While this limited long-term insights, the data collected during and immediately after the event still provided valuable perspectives on how participants engaged with the methods and ideas introduced.

Although participant workbooks and notebooks were created to guide engagement—such as the table-specific workbooks used in the *Action Hub* session and the more detailed participant notebooks for the *Imaginative Leadership* workshop—these were not collected as formal data sources. Instead, they were designed as tools to support participant reflection during the workshops.

All together, these empirical materials captured both the structured elements of the workshops and the emergent, creative dimensions of participant engagement. The combination of direct documentation, facilitator reflections, participant surveys, and creative outputs allows for a multi-

perspectival reflection on how all participants—participant-collaborators, participant-observers, and participant-attendees—interacted with the methods and ideas introduced.

5.1.4 Phase 4: Reflection

As discussed in more detail in Section 4.1.6, to reflect on the design process and the resulting workshops, I drew from reflective sensemaking (Weick, 1995), practice-led research (Candy, 2006), and arts-based and qualitative methods. *Practice-led research*, widely used in creative arts and performance studies, employs iterative cycles of action and reflection (Candy, 2006), contributing either to theoretical insights, practical applications (Smith, 2009), or new knowledge gained through creative engagement (Mäkelä, 2007). In this case, the “practice” consisted of the creative development and implementation of the workshops, thus the design of the workshops themselves provided the key data. The reflection process involved multiple layers of engagement with the data and collaborators.

The reflection process was structured through:

Collaborative discussions – Sessions with co-collaborators and participant-observers, where we reviewed the workshop processes, methods, and outcomes, both formally (in structured debriefs) and informally (in more organic discussions).

Review of participant feedback – Analysis of end-of-session evaluations and follow-up questionnaires, assessing patterns in responses to identify strengths, challenges, and emergent themes.

Iterative dialogue and “deep hanging out” – Extending beyond formal sessions, reflection included ongoing engagement with co-designers in both professional and informal settings. This aligns with Clifford Geertz’s (1998) concept of *deep hanging out*—a process of sustained interaction that allows for continued revisiting, reinterpreting, and synthesizing of insights over time.

Appreciative Inquiry approach – Drawing from Appreciative Inquiry principles (Cooperrider & Srivastva, 1987), reflection emphasized identifying what worked well, what contributed to moments of vitality in the workshops, and how these elements could be built upon in future applications. This was not done at the expense of critical discernment (see Moriggi, 2020) but rather as a way to surface enabling conditions for transformative engagement.

Synthesis into practical tools – Insights gained from reflection were not only documented but actively applied in developing a toolkit and an open-source database (Pearson et al., n.d.) for researchers and practitioners. This resource

(Pearson et al., 2018) provides detailed descriptions of each method used, the overall approach, and key learnings from both workshops.

By engaging in reflection across multiple formats—structured debriefs, participant feedback, informal yet sustained dialogue, and iterative synthesis—the reflection phase that the insights and learnings generated were rigorously examined and also refined through practical application.

5.1.5 Limitations

Two of the main limitations of this study were that the workshops took place over a short timeframe and that they weren't connected to a specific problem area that participant-attendees were actually working and they did not engage a group of colleagues already working together on ongoing projects. They were onetime events that were not embedded in existing work structures or ongoing collaborations. As a result, there was little opportunity for sustained follow-up or observation of how insights might carry forward into real-world settings or team dynamics.

Because of these limitations, I chose to focus on the design process and the reflective sensemaking that took place with the participant-collaborators. That arc of collaboration felt more grounded and meaningful than trying to extract conclusions from one-off interactions. Although we gathered reflections from participant-attendees and made observations about how they engaged with the material, I didn't find the results sufficient to draw specific conclusions based on those snapshots alone. Instead, their input became part of the broader tapestry that informed the reflective sensemaking about the process of developing the workshops.

5.2 Putting Theory into Practice: Creative Methods for Transformation

As outlined above, the design and implementation of the workshops were not just a backdrop, but a central part of the inquiry. In this section, I describe how the workshops were developed and carried out, since much of what I now understand emerged through that process. The act of designing—navigating constraints, making creative decisions, testing ideas in practice—was itself a generative space for reflection and learning.

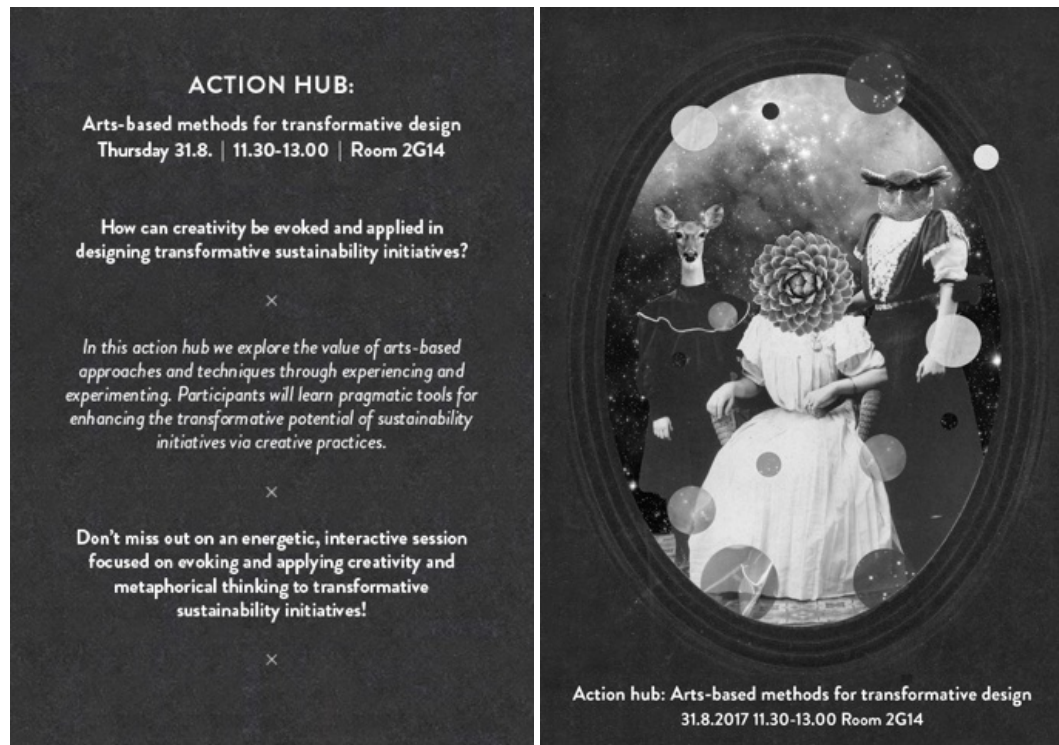


Figure 9. Invitation to Action Hub

The Action Hub invitation flyer was designed to communicate that the workshop would be a hands-on, exploratory space—welcoming creative experimentation, incorporating arts-based methods, engaging with more-than-human perspectives, and emphasizing the application of new skills in practice. Source: Malin Backman

5.2.1 Action hub: Arts-based methods for transformative design

The cohort of six co-designers for the *Action Hub* originally came together around a shared academic interest in theory and methodologies related to creative methods (see Section 5.1.2), but we also shared a more personal interest in using methods that make us (and our research participants) feel ‘energized’ and ‘inspired’. Our collective objective was to put theory into practice and experiment ‘exuberantly’. We were also motivated to share practical applications of our research that change-makers, action-researchers, and local leaders could use in their work.

As a first step for developing the workshop design, the co-designers collectively chose the change management framework of Theory U (see Scharmer, 2009) as a structural scaffolding. This choice is elaborated in more detail in Section 4.3. To summarize, we selected Theory U because it was already familiar to the co-design cohort, it is easy to understand, communicate, and use even in its simplest form (as described in this monograph), it is aligned with our methodological and theoretical grounding, and it balances a clear linear structure with space for iterative looping, for spontaneity, and for indeterminacy.

In parallel with anchoring our design process in a clear structure, we identified key transformative mindsets (Table 4) that would be woven into the design of our methods and overall approach. This process connected the guiding research question—How can arts-based methods help sustainability practitioners grow capacity for imaginative leadership?—to the theoretical framing on the inner dimensions of imaginative leadership (Chapters 2 & 3) helped sharpen the focus. The co-designers asked: Which specific mindsets matter most in this context? What kinds of metaphors or metaphorical language (Lakoff, 2010) might help spark more reciprocal relationships between humans and the more-than-human world? And pragmatically for the design process: how can these mindsets and metaphors be actively evoked, strengthened through specific arts-based methods?

During the exploration phase of the *Action Hub*, the co-design cohort (the participant-collaborators describe above in Section 5.1.2) identified a limited set of transformative mindsets (see Table 4 below) that was subsequently validated by the *Imaginative Leadership* co-designers. The list was derived via triangulation with input from literature, initial fieldwork (including ‘expert’ interviews), and previous work experience related to sustainability transformations. It was not intended to be a definitive or comprehensive list of *all* transformative mindsets, but to provide a reasonable starting point for experimentation. In the post-event reflection process, the conceptualization of these transformation mindsets was expanded and reconfigured, as presented in Section 5.3, Table 7.

Table 4. First Iteration ‘Transformative Mindsets’ (Summary)

Mindset	Core Concept
Regenerative Sustainability	The possibility that human activity could increase the biodiversity and health of social-ecological systems, as distinct from minimizing ecological or social harm (Mang & Reed, 2020; Wahl, 2016). Also refer to earlier discussion in Chapters 1 & 2.
Sense of Time	The ability to consider longer perspectives (both past and future) and multiple timescales has the potential to change the way of conceptualizing both problems and solutions (Macy & Brown, 2014; Stewart, 2020; Boylston, 2019).
More-than-Human Perspectives	De-centering anthropocentrism through imaginative consideration of ‘more-than-human’ (Abram, 1996; Macy & Brown, 2014) perspectives, including biological beings (e.g., animals, plants, fungi) and non-animate natural systems or entities (e.g., rivers, mountains, ecosystems).
Care for Place	Developing a sense of willing responsibility and caring for specific places, and with that an emotional connection with them (Altman & Low 1992; McEwan & Goodman, 2010).
Complexity/Uncertainty	Sensitization to the reality of dynamic complex systems and problems requires an openness to uncertainty and a willingness to experiment (Holling, 2004; Kagan 2011, 2017).

Source: Own Conceptualization (CC BY)

To demonstrate how the methods could be applied in practice, we structured the workshop around three hypothetical design challenges, to be explored in parallel small working groups within the overall workshop structure (see Table 5 below). In this context, a design challenge refers to an open-ended prompt that invites creative exploration. The choice of the challenges was guided by three factors. First, each was based on a real case personally known by one or more of the co-designers so that we could add realistic and grounded detail. Second, each was intended to be emblematic of a community-scale issue that would seem familiar to attendees, such as changing land use or reimagining shared public spaces. Third, each needed to be interesting and open-ended, but simple enough to grasp quickly within the time constraints of the workshop. Once the three challenges were selected, we drafted one to two guiding questions for each. Based on these, we sketched out five different working group tables of 4–6 people. Each would follow the same overall rhythm and time blocks but engage with different methods, explore different challenges, and emphasize different mindsets. This mix allowed us to prototype a range of combinations while keeping the overall workshop structure manageable.

Table 5. Design Challenges and Guiding Questions: Action Hub

Design Challenge	Description	Guiding Question (to frame the design challenge)
(1) Dismissed Military Area in Italy	Bottom-up cultural, economic, and ecological regeneration of a dismissed military area in Northern Italy.	(Group A) How can we imagine the distant future?
		(Group B) How can the dismissed military area include more-than-human perspectives?
(2) Abandoned Farmstead in the Netherlands	Re-imagining the potential uses of an abandoned farm in Overijssel, The Netherlands.	(Group A) How can the farm regeneration project include more-than-human perspectives?
		(Group B) How is a farm like a church?
(3) Moving the city center in Kiruna Sweden	Moving and re-designing a new city center in Kiruna Sweden due to the expansion of mining operations	How can the new town square incorporate more-than-human perspectives?

Note: Design challenges 1 and 2 were both split into two groups with different guiding questions. Challenge 3 was addressed by only one group. Source: Own Conceptualization (CC BY)

After defining the parameters of the workshop, we then focused on the specific content and flow of the activities, designing a series of very specific arts-based methods. Methods were created with the intention to root and anchor transformative mindsets via sticky metaphors (Lavazza, 2008; van der Stoep, 2014) and multi-sensory experiential learning (Moon, 2013). As discussed in Section 3.4, incorporating arts-based methods makes the core ideas more readily retrievable and personally resonant. By engaging participants through metaphor, movement, image, and emotion, these methods help translate abstract concepts into lived experience—strengthening the memory and cognitive accessibility (Lakoff, 2010; Lavazza, 2008) of the ideas (and mindsets). This, in turn, enhances participants’ self-efficacy by deepening their capacity to access and intentionally activate whichever mindset is most appropriate in a given moment.

In addition to self-efficacy, the methods were intended for uptake by the participant-attendees—to support them in using creative methods (based in transformative mindsets) in their own research and work. A detailed description of each specific method used during the workshops can be found in

Arts-based Methods for Transformative Engagement: A Toolkit (Pearson et al., 2018) and the companion website *Re.imaginary: Cultivating Cultures of Sustainability* (reimaginary.com). Both resources were developed to share with workshop participants and wider practitioner communities. Examples of how methods are laid out and described in the toolkit can be found in Annex D.

To make the workshop more tangible, Table 6 below outlines the Dismissed Military Area design challenge, highlighting the methods used and the associated transformative mindsets. This challenge was explored by one table group, hosted by a participant-collaborator and attended by one participant-observer. Figure 9 shows how the challenge was presented in the toolkit, including the case description shared with participants. The figure also illustrates how Theory U helped structure the progression of methods. Finally, after all of the detailed preparations, we delivered the workshop in Dundee, Scotland at the Transformations 2017 conference. Attendees of the conference self-selected to attend based on the event abstract in the conference agenda and on flyers that we distributed in the days leading up to the event (see Figure 9 above).

In the room, each table was hosted by one of the collaborators and three participant-observers were integrated into different table groups. Before the arrival of the attendees, the collaborators prepared the room with attention to making it as aesthetically pleasing and making the atmosphere as welcoming as possible in a conference room setting. We decorated the room with nature-based images and objects (e.g., flowers, pinecones, rocks) to stimulate a sense of biophilia. Many of these objects were also used during the activities, for example in the 'Circle of Objects' method (Method 1, Pearson et al. 2018: 18). Each table host made sure that materials for the arts-based methods (i.e., collage materials, paper, markers, etc.) were well-organized for smooth transitions between activities, that instructions were available verbally and in writing. After attendees arrived and settled at their tables, we introduced the concept of the workshop and our normative commitment to using arts-based methods in service to transformations towards regenerative sustainability.

As noted by table hosts (collaborator-participants), participant-observers, and confirmed by follow-up surveys, the attendee-participants' response to the room was positive and enthusiastic. They appreciated and noticed the care that went into setting up the workshop space and explicitly noted that it felt welcoming, creative, and well-prepared or as one participant wrote: [the space] the room "was pleasing and inviting and raised a sense of excitement about doing something creative and hands-on." Overall, the feedback from the attendees and the participant-observers was enthusiastic. In the closing harvesting sessions at each table, through informal conversations between table hosts and their small groups, and in comments shared by participant-observers, people expressed strong appreciation for the experience—alongside a few practical suggestions, for example requesting more time and adding methods that could build trust within the group.

Table 6. Action Hub Workshop: Sample Itinerary—Dismissed Military Area

Time	Theory U Phase	Methods	Description	Transformative Mindsets
10 min	Convene (in plenary)	Embodiment: Regenerative Paradigm	Participants were asked to physically demonstrate the feeling of reducing their ecological footprint, then asked to demonstrate the feeling of increasing their positive (regenerative) impacts and comment on the difference.	Regenerative Sustainability
5 min	Convene (in small groups)	Circle of Objects	Participants picked one of a group of presented objects (natural and human-made), explained why they picked it, and then strung it on a common thread.	n/a
15 min	Observe	Storytelling, Evoking the Senses & Silent Conversation	The host read a pre-written story of the dismissed military area that included geological time, more-than-human perspectives, and layers of cultural, ecological, and biophysical meaning. Participants were invited to listen to the story using all of their senses and to write down what they imagined experiencing (smell, look, feel, etc.) onto sticky notes. Silently, as a group, participants then organized notes into affinity groups.	Care for Place, Sense of Time, More-than- human Perspectives, Complexity/ Uncertainty
20 min	Reflect	Expanding Time & Inviting Non- human Stakeholders	The host shared a visual representation of different time scales depicted in the story of the case. Participants then chose a card representing a more-than-human stakeholder (bear, mountain, river, etc.) and were invited to quietly reflect on the story from that perspective. Next, participants repeated the Circle of Objects exercise above, but from the perspective of their character.	Sense of Time, More-than- human Perspectives

Time	Theory U Phase	Methods	Description	Transformative Mindsets
30 min	Act	Collage & Predicting Future Headlines	The host invited participants to imagine the place 100 years in the future and asked several guiding questions. Participants then created a collage envisioning the future from the perspective of their more-than-human character. Finally, in pairs, and then in the group, they extrapolated the most evocative qualities and messages of each collage and combined them into a 'future headline' (or headlines) for an imagined newspaper in the future.	Sense of Time, More-than-Human Perspectives, Regenerative Sustainability
15 min	Harvest	Learning & Commitment	Individually, then in pairs, and with the group, participants reflected on what they learned, what they could apply to their own lives and in their work, and what they felt grateful for.	n/a

Note: Each of these methods can be found described in detail in Pearson et al. (2018) and the associated open-source database reimaginary.com. See Annex D for examples of full method descriptions. Source: Own Conceptualization (CC BY)

Case 1 Dismissed Military Area

12.000 years before Christ, the first humans arrived. For millennia, people of all races and beliefs ventured into these isolated and mysterious forests and rocks, seen as a frontier land delimiting the rest of the surrounding world. The Celts created the first big settlement and called it "belo-dunum", meaning "shining city" – today Belluno. For centuries folks will inhabit the valley, adapting to the scarce resources and rigid weather. The valley's strategic position made it a favourite spot for all sorts of fortifications, and a refuge for those departing for battles in all directions.

Yet humans were just one part of this rich ecosystem. Legends narrate of bears, wolves, lynx, foxes, deer, chamois, eagles, mules, ravens, cows, owls. They thrived for centuries, along with ghosts, demons, witches, gnomes, medicinal and magic plants, mushrooms and trees. They won't thrive forever though. Aggressively hunted and drawn away by anthropogenic presence, between 1700 and 1900, both wolves and bears disappeared completely.

In 1900, two catastrophic wars completely changed the history of mankind. The Pallid Mountains were again a field for battle. At its base, a vast piece of land was donated to the army by the local municipality. The army barracks became home to several brigades, occupying 20.000 m² of buildings.

At the turn of the 21st century, the brigades abandoned the army barracks. The place was classified as "urban void". Its historical value and its strategic position made it the perfect experimental site for regenerative practices.

Several organizations decided to apply to work towards that aim. Among others, the so-called "House of Common Goods", a bottom-up citizen's initiative shaping the place both physically and symbolically through cultural activities and eco-friendly practices. A way of imagining and initiating change at the local level in partnerships with different civil society actors, based on mutual help and support.

Life slowly came back under the barracks, after almost 15 years of abandonment.

Meanwhile, after one century of silence, a wolf howl resounded in the valley again. He was not alone. The bear had also returned, leaving his silent traces in the heart of the forest.

HOW CAN THE REGENERATED AREA BECOME A TRULY TRANSFORMATIVE SPACE?



Credits: Corriere della Alps

Case 1 Workshop outline

1. CONVENE (5 MINUTES)

Circle of Objects (method 1, p. 18)

Objects (both natural and artificial) are presented to participants, who then pick one, describe how they feel connected to it, and either string it on common thread or place it in the form a virtual circle.

2. OBSERVE (15 MINUTES)

Storytelling (method 11, p. 31)

Host reads the story of the dismissed military area in Northern Italy, while participants take notes on stickies, noting any key words, emotions, associations, which are then shared with the group.

Evoking the Senses (method 9, p. 28)

On post-its, participants are asked to record initial associations with the place, based on their bodily senses (e.g. what does it smell/look/feel like?).

Silent Conversation (method 23, p. 50)

Participants are invited to read all the post-its in silence, and cluster them according to any intuitive relationships (for example: similarity, dependence, proximity, etc.).

3. REFLECT (20 MINUTES)

Expanding Time (method 13, p. 34)

As an introduction to the mindset shift, participants are invited to focus on how human-centered perceptions of time affect the understanding of reality and capacity to change. A visual representation of the different time-scales of human and non-human elements in the story is given as a trigger.

Inviting Non-Human Stakeholders (method 15, p. 38)

Participants choose a character-card representing all elements in the story (with info about its contribution to the ecosystem). After a few minutes of individual silent reflection they repeat the Circle of Objects exercise (method 1, p. 31), this time from the perspective of the new character. Participants are then asked to role-play their characters in pairs, telling the story of their character, discussing each perspective and impressions.

4. ACT (30 MINUTES)

Transition into action

Guiding questions are introduced: Imagine this place 100 years from now, in 2118. Imagine that we wish to celebrate the regeneration of the place. What will it be about? What is the story to celebrate? What does that look like? What is going on? Who is there?

Collage (individual) (method 18, p. 92)

Participants are asked to crystallize the story of regeneration of the place through a spontaneous collage, thinking from the point of view of their given character. Through the intuitive combination of images, they give shape to their vision for the future.

5. HARVEST (15 MINUTES)

Individual reflections

Participants are invited to reflect upon the process and outcomes of the workshop, thinking of what they have learnt (both from themselves and the group), what they are grateful for, and what they wish to apply further in their life and work.

Learning & Commitment (method 29, p. 59)

Participants share reflections with the group, and if time allows, with the larger crowd in the final plenary session before the closure.

Predict Future Headlines (method 21, p. 47)

Collage (in pairs & collectively)

In pairs, participants are asked to extrapolate the best qualities of each collage and combine them into a common one. Moreover, they are invited to think of a headline that would exemplify the story of regeneration on a local newspaper in 2118. Transitioning into a collective activity, participants work all together on a large common piece of paper, using pictures and fonts taken from old newspapers to construct the final headlines. If different visions clash, they discuss their different point of views and keep the stories as separate and yet part of the same newspaper cover.

Figure 10. Action Hub Detailed Structure of Case 1: Dismissed Military Area

Figure 10 shows the details of Case 1: Dismissed Military Area, explored by one of the table groups. The images, from Arts-based Methods for Transformative Engagement (Pearson et al., 2018: 65–66), are meant to illustrate the richness and rigor brought to each design challenge and show how Theory U helped to structure the progression of methods.

5.2.2 Imaginative Leadership: Co-producing with nature and communities (for frontline staff in Welsh Government)

The design and delivery of the *Imaginative Leadership* workshop built on the foundations of the *Action Hub* while adapting the content and structure to the context of working with front-line staff in the Welsh Government. Wales has been a global leader in developing sustainability policy—most notably the *Well-being of Future Generations Act* (2014), which reframes governance around long-term thinking (Jones et al., 2020). At the same time, translating policy into meaningful action takes ongoing work. The workshop was co-designed with participant-collaborators (section 5.1.2 above) who were already engaged in that effort—people committed to deepening sustainability leadership from within government and in a range of co-production projects and initiatives.

As with the development of the *Action Hub*, before designing specific methods, we started with the overall objectives of the workshop from the perspective of the participant-attendees. We aimed to (a) introduce the concept of creative methods and transformative mindsets, (b) demonstrate the use (and usefulness) of specific creative methods for uptake by participants to employ in their own projects, and (c) provide the opportunity for participants to work on actual challenges from their work through the lens of specific transformative mindsets. With consensus from the *Imaginative Leadership* co-design group, the structure of Theory U was carried over from the *Action Hub* (again, see Section 4.3 for a more detailed description of how this structure was used).

First, the participant-collaborators crafted a hypothetical design challenge based on the real town of Treherbert in Wales, which the local co-design team-members identified as emblematic of communities whose economic livelihoods used to depend on the now-defunct mining sector. In the post-mining era, many towns and villages have struggled to re-invent themselves and re-define economic (and ecological) well-being for themselves.

For the first half of the day, the workshop design focused on re-framing possible futures for Treherbert, evoking an expanded sense of time and more-than-human perspectives, using methods such as the *Timeline of Transformation* (Method 6), *Storytelling* (Method 11), and *Inviting More-Than-human Stakeholders* (Method 15), (see Pearson et al., 2018). For the second half of the day, building on these new perspectives, we structured a form of peer-to-peer mentoring that looked at specific challenges faced by participants, while still including more-than-human stakeholders. A complete outline of the workshop and the methods employed is shared in Figure 11. The *Action Hub* event venue was predetermined, but for *Imaginative Leadership* we were able to choose the locations. Based on their experience in place-responsive performative arts and sustainability, the artist/facilitator emphasized the importance of establishing relationality between the physical space of the

workshop (including its history and its symbolic/cultural dimensions) and the design and methodology of the workshop. We looked for spaces that had access to nature, that aligned with our sustainability values (i.e., minimal disposable plastics, availability of sustainably produced food), and that had some cultural/symbolic significance. As in the *Action Hub*, the collaborators put attention on creating a warm, welcoming ambiance in setting-up the room. We also provided a participant workbook that included instructions for each method, key references, and space to take notes.

Feedback was shared by participant-observers and participant-attendees during the harvesting phase of the event, and I subsequently conducted follow-up interviews (together with many informal conversations) with the co-designers in the months following the workshop. Overall feedback was positive and enthusiastic.

One participant-collaborator (who was acting as a participant-observer during the delivery of the workshop) captured observations of the day in a poem that was shared with participant-attendees (Figure 12 below).

Case 5 Workshop outline #1 MORNING

Workshop design framework

Unlike the previous cases described, this workshop took place from 10 am to 4 pm. The morning was focused on the representative case of the town of Treherbert, and the process led through the initial moment of the 'Act' phase. Instead of continuing with Treherbert, however, the afternoon session returned to the 'Reflect' phase and switched gears to focus on the real projects and dilemmas faced by the participants.

2. OBSERVE (90 MINUTES)

Storytelling (method 11, p. 31): The Old Story

Host reads the case representing an archetypal project ('Operation Treherbert'), as told in a 'business as usual' situation. As the case is read, participants note down any keywords, emotions, associations, and then share with their partners and table group.

Contrasting Tweet & Text (method 8, p. 27)

Participants first write a tweet about the project from the perspective of their official job and assumption that everything is going well. Next, they write a text to a trusted friend expressing doubts. Finally, they reflect on the exercise in pairs, practicing deep listening.

Storytelling (method 11, p. 31): The New Story

Host reads the second version of the project case, 'Treherbert, the Next Chapter.' Participants are asked to note down keywords, impressions, emotions, and associations, this time with special emphasis on listening with all five senses (e.g. smells/sounds/visual impressions/tactile sensations, etc.). Reflections are shared in pairs and then with the table group.

1. CONVENE (15 MINUTES)

Circle of Objects (method 1, p. 18)

Objects (both natural and artificial) are presented to participants, who then pick one, describe how they feel connected to it, and either string it on common thread or place it in the form of a virtual circle.

4. ACT (30 MINUTES)

Collage (method 18, p. 42)

Each table group is asked to create a moodboard that expresses their values and vision for action and possibility. The collages should be done intuitively and in complete silence. After 10 minutes, each person shares their interpretation of the collage, and together, the group comes up with an *Essential Title* (method 28, p. 58).

3. REFLECT (30 MINUTES)

Reflect 1: Inviting Non-Human Stakeholders (method 15, p. 38)

Each participant picks a card representing a human or non-human stakeholder and reads the short description. They are then invited by the host to connect with the entity on the card. At the conclusion of the exercise, each person writes words, feelings, or thoughts.

Prose Poem (method 17, p. 41)

Taking the perspective of their card, participants are invited to project themselves one hundred years in the future and to imagine that Treherbert Valley is a vibrant and thriving place for both humans and non-humans. They then write fragments of a story or a poem from the perspective of their character, thanking our generation for contributing to their well-being in future generations.

Case 5 Workshop outline #2 AFTERNOON

"THE IMPATIENT IDEALIST
SAYS: 'GIVE ME A PLACE
TO STAND AND I SHALL
MOVE THE EARTH.' BUT
SUCH A PLACE DOES NOT
EXIST. WE ALL HAVE TO
STAND ON THE EARTH
ITSELF AND GO WITH HER
AT HER PACE."

CHINUA ACHIBE

5. REFLECT (20 MINUTES)

Reflect 2: Close Observation (method 12, p. 33) (Switching to own project)

Participants think of a core question that they are living with in relation to themselves and their work. They are asked leave the building and to walk slowly or sit in one place, paying attention to what they see using close observation. They can take notes about what they observe, letting themselves follow their intuition. After returning to the room, reflections are shared in pairs and with the table group.

7. HARVEST (30 MINUTES)

Circle of Objects (method 1, p. 18)

In a variation on this method, participants pick an "art card" (postcards, or other), and share the significance of the card. They also discuss reflections on the experience, insights, and possibilities for integrating learnings into their work.

6. ACT (90 MINUTES)

Visual Storytelling (method 24, p. 51)

Participants pick a project or an issue that they would like support thinking through. Using a graphic form of their choice, they map out resources, allies, (including 'more than human' stakeholders from earlier exercise) and who or what might get in the way. The final diagram is shared in pairs or with the table group.

More-Than-Human Intervention (method 20, p. 45)

In a table group of 5-6 people, one person explains the details of their dilemma in three minutes. In a first round, each person has two minutes to ask clarifying questions, which can come from the perspective of other beings or from other generations, or from a place of complete "beginner's mind." In a second round, each person has three minutes to offer reflections, resources, and relatable personal experiences. An optional final round can include brainstorming solutions.

Figure 11. Outline and methods for the Imaginative Leadership Workshop

Source: Pearson et al. 2018: 82-83

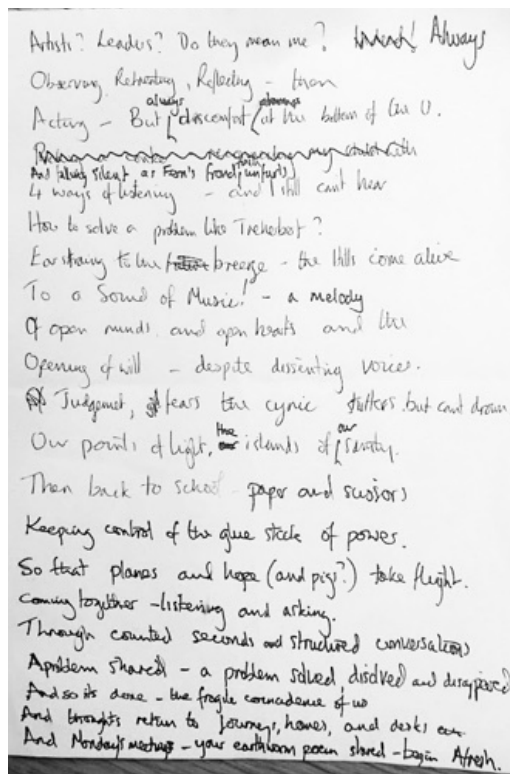


Figure 12. Harvest Poem for Imaginative Leadership Workshop

This image shares a poem written by a participant-collaborator involved in both the design and reflection aspects of the workshop, who also took part as a participant-observer during the event. Written as a reflective summary, the poem captures moments of insight, uncertainty, and humor that emerged throughout the workshop. It traces the emotional rhythm of the experience—from hesitation to creative flow—and draws on imagery and language used during the sessions. The poem offers a window into how participants made sense of the process in personal and imaginative terms. Source: Chris Blake

Text transcribed from image

Artist? Leaders? Do they mean me? Always
 Observing, Retreating, Reflecting — then
 Acting — But always discomfort at the bottom of the U.
 And talking silent as Fern's frond, faith that unfurls
 4 ways of listening — and I still can't hear
 How to solve a problem like Treherbert?
 Ears straining to the breeze — the hills come alive
 To a sound of Music! — a melody
 Of open minds and open hearts and the
 Opening of will — despite the dissenting voices.
 Judgement, tears the cynic stutters but can't drown
 Our points of light, the islands of our sanity.
 Then back to school — paper and scissors
 Keeping control of the glue stick of power
 So that planes and hope (and pigs?) take flight.
 Coming together — listening and asking.
 Through counted seconds and structured conversations
 A problem shared — a problem solved, dissolved and disappeared
 And so it's done — the fragile coincidence of us
 And thoughts return to journeys home and desks
 And Monday meetings — your earthworm poem shared — begin Afresh.

5.3 Putting Practice into Theory

This section takes another look at the transformative mindsets introduced earlier as part of the framework for imaginative leadership. While the initial list was always understood to be incomplete, it served as a valuable starting point for experimentation. When the co-design cohorts from both the *Action Hub* and the *Imaginative Leadership* workshops revisited the list during post-workshop reflections (as described in Section 5.1.4), there was broad agreement that the mindsets had been genuinely useful. Having a specific, targeted set of mindsets helped stretch our creative thinking and expanded our own capacity for transformative imagination.

The list supported our novel approach to designing and facilitating workshops rooted in creativity and aimed at supporting transformations toward regenerative sustainability. For example, it's unlikely we would have developed certain workshop elements without the anchoring provided by these mindsets. One such instance is the implementation of a series of methods (see Table 6 above) that combined the mindset of 'Deep Time' with 'More-than-Human Perspective' to support a shift in participant orientation:

Combining Deep Time and more-than-human perspectives: The host shared a visual representation of different time scales depicted in the story of the case. Participants then chose a card representing a more-than-human stakeholder (bear, mountain, river, etc.) and were invited to quietly reflect on the story from that perspective. Next, participants repeated the Circle of Objects exercise, this time from the point of view of their chosen character.

At the same time, revisiting the list helped us identify areas that could be refined and revealed a few notable gaps. The revised version (see Figure 13 below) offers a refreshed starting point—one that invites continued experimentation and supports further development of a flexible framework for imaginative leadership through generative engagements and creative methods.

Importantly, the revised list is intended for practical use. The list was created bearing in mind the importance of clarity and accessibility in order to increase the likelihood of wider uptake in other real-world contexts. Still, it is with humility that I note the limits of the revised list offered here. Each of these mindsets has been studied extensively across a range of disciplines and represents a vast, interconnected body of literature and practice. They have been framed and interpreted in many ways, and each opens into a much wider field of inquiry than can be addressed in this context. Given the scope and purpose of this research—and without attempting a comprehensive literature review of each area—the following discussion offers only a brief and necessarily partial summary of each. Figure 16 below depicts the dynamic way one of the methods engaged with More-than-Human stakeholders.

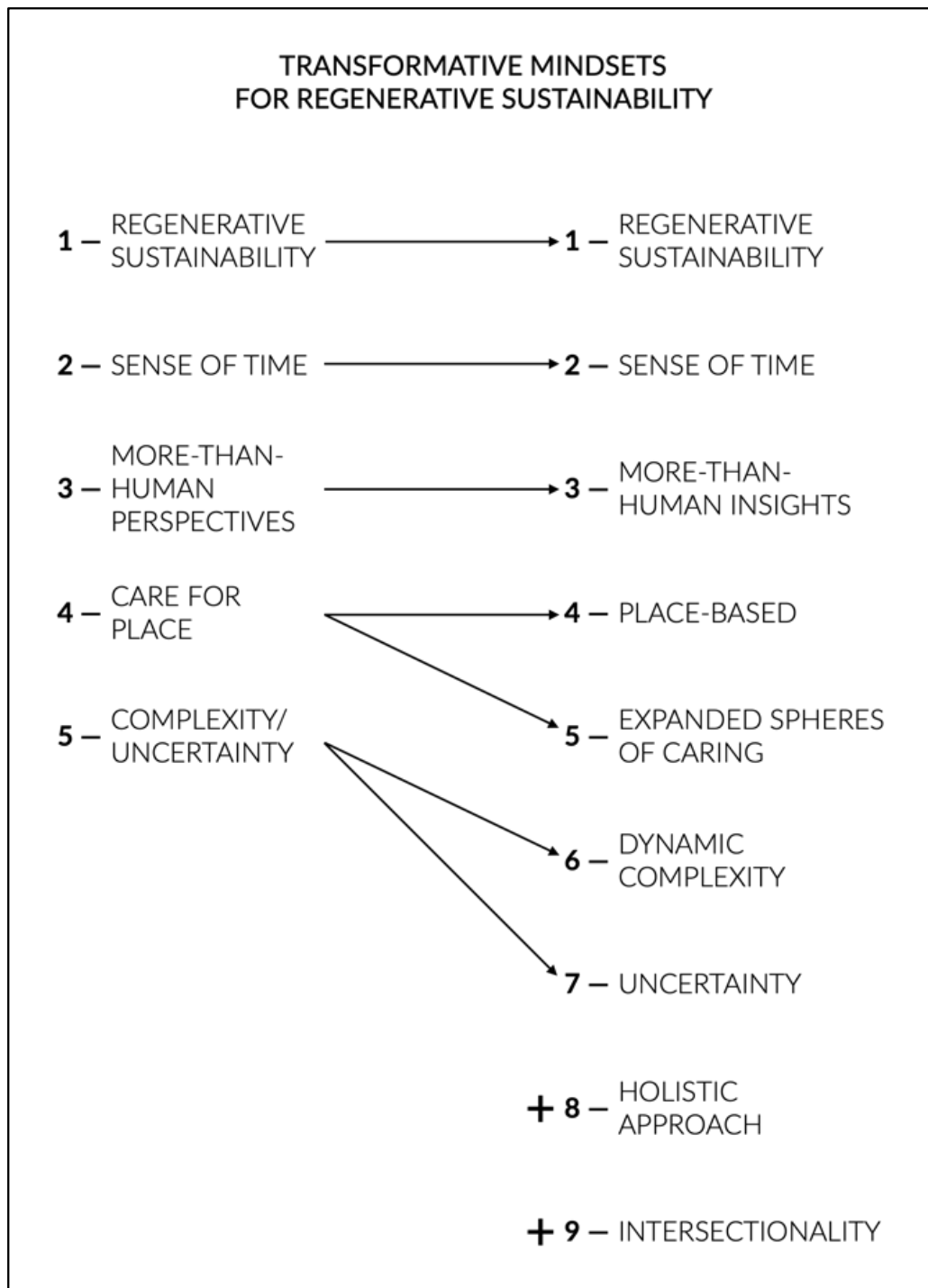


Figure 13. Revised List of Transformative Mindsets

Source: Own Conceptualization (CCBY)



Figure 14. Somatic Comparisons

These photos depict participants embodying the concept of sustainability as 'reducing your ecological footprint' (on the left) and the concept of sustainability as 'participating in regenerative activities' (on the right). Excerpt from Method 5: *Somatic Comparisons* (Pearson et al., 2018: 24-26).

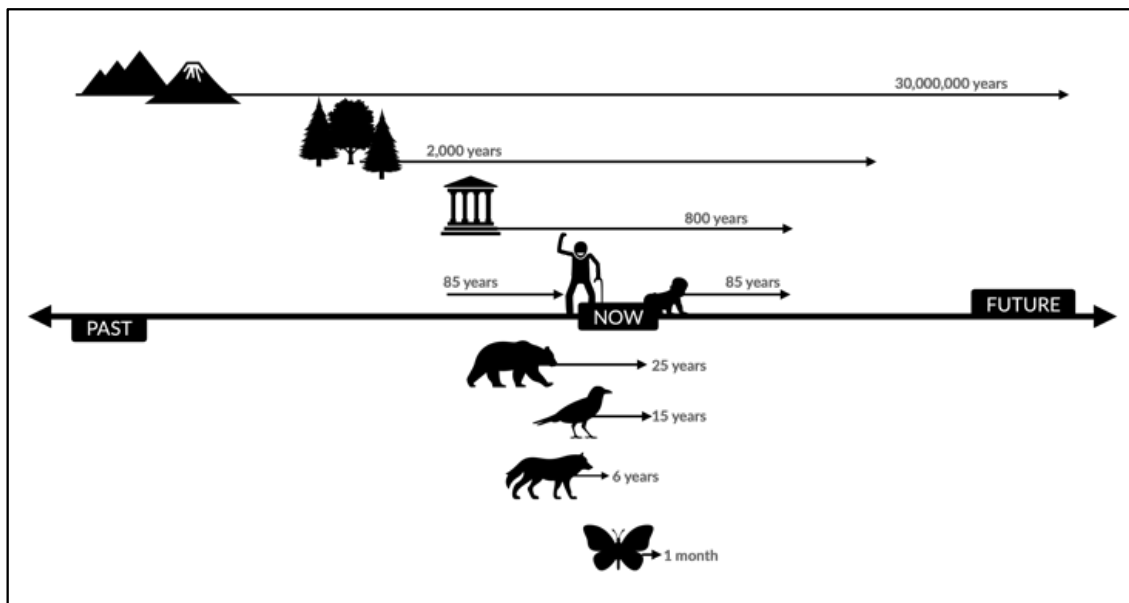


Figure 15. Action Hub Image for Expanding Time Method

Figure 15 shares a prop that was used to support Method 13: *Expanding Time*. This method is intended to disrupt participants' default experience of time, supporting them to look at a case study or a specific issue from multiple time-based perspectives. This exercise is intended to help us think in multiple time scales when we are considering a case or a project. Along with this image is a suggested script: "As humans we inhabit the Earth for a maximum 100 years, and our modern world emphasizes short term goals and quarterly returns. This can limit our ability to prioritize actions that could have positive impacts beyond our lifetime. What if we tried to disrupt this perception completely? The length of our lifespan acquires a different significance when we see it in relation to the lifespan of non-human elements. Some exist for far longer than we do. For instance, a mountain (more than 30 million years) or a building (2-300 years); conversely, some have a much shorter life, like a wolf (7 years), or a butterfly, that only lives for a month." (Pearson et al., 2018: 34-35).



Figure 16. More-Than-Human Stakeholders masks

Photograph of the co-designers and participant-observers at the Action Hub demonstrating more-than-human masks that were used in a range of activities and methods such Method 15: *Inviting Non-Human Stakeholders* (Pearson et al., 2018: 38).

Text describing the method: When considering a specific issue or case study, people typically approach it exclusively from human-centric perspective, prioritizing anthropocentric values, needs and visions. Learning to appreciate non-human perspectives, however, is crucial for socio-ecological harmony. This method brings 'more-than-human' viewpoints into the workshop by asking participants to embody the perspectives of specific beings and natural entities, such as animals, plants, rivers, forests, or mountains. The 'characters' selected are linked to the case or issue being addressed in the workshop.

Example of a text for engaging the perspective of a birch forest: We are many and we are one. While you might experience us as quiet and peaceful if you come out of the city for a visit, beneath your feet a superhighway of information flows. We communicate feelings and even share nutrients through our roots and symbiotic fungi networks. You might notice our beauty and grace as we mark the seasons with dazzling colors - our bright green leaves appear in early summer and turn into spectacular displays of colors in the autumn, falling and baring our luminous white bark in the winter. But not only are we beautiful, we give more practical gifts to all who dwell near us. We provide home and shelter to many, and we store carbon from the atmosphere as we grow. We gift humans with materials to build with and to burn for energy and we support the lives of those beings that you have hunted for food since the dawn of your history. We have many lessons to teach - could a human city ever match the beauty and bounty of a forest? (Source: Text from supplementary workshop materials)

First, *regenerative sustainability* (1) was validated by both co-designers and participants as a foundational concept for imaginative leadership. As a normative aim and as a transformative mindset, it represents a generative evolution in the concept and application of sustainability (Mang & Reed, 2020; Wahl, 2016). An example of a method that engaged this mindset was *Somatic Comparisons* (Pearson et al., 2018: 24), wherein participants are invited to physically embody two different paradigms or contrasting ideas related to sustainability. First, they are asked to stand up and then embody the idea of reducing their ecological footprint—getting as small as possible. Next, they are asked to embody the idea of regenerative sustainability—in which human activity would increase the flourishing of life systems. In the second case they want to be as big as possible and expand their “footprint” (see Figure 14 below). This activity complements more intellectual and information-based ways of understanding the idea of regenerative sustainability.

The importance of *sense of time* was highlighted by participant-collaborators, observers, and attendees. Although most participants worked in the field of sustainability, in informal feedback sessions, participant-attendees shared that they found it challenging to imagine 100 years or even 20 years into the future and they appreciated the chance to reflect through the lens of multiple timescales. In Method 21: *Predicting Future Headlines*, we asked participants to write an imagined headline in a future ‘newspaper’ with the assumption that we have achieved some level of sustainability transformation. They project themselves imaginatively into the future, clarifying and personalizing possibilities and aspirations for a particular case. To guide this process and help anchor it in a future-oriented mindset, we invited participants to: “Imagine this place in 100 years’ time. An acorn that now falls to the ground will be 20 meters high; 10,000 butterflies will have lived and died; your grandchildren will be old and have grandchildren of their own...” (Pearson et al. 2018: 48).

The value of *more-than-human perspectives* was also confirmed. The more-than-human can be considered empathically and ethically (Abram, 1996; de La Bellacasa, 2017), in planning and decision-making (Macy & Brown, 2014) and from a legal rights-of-nature perspective (Boyd, 2017), but also more instrumentally as inspiration for innovation. The practice of biomimicry (Benyus, 1997), for example, aims to learn from and appreciate the design intelligence (“3.8 billion years of research and development”) inherent in natural systems as input for innovations, not only for technology and infrastructure, but also for social and economic innovations (i.e., what could an economic system learn from a forest?). The term *more-than-human ‘perspectives’* was therefore modified to the more expansive term *more-than-human ‘insights’* (3).

Many participant-attendees indicated in informal feedback sessions and conversations that they valued the opportunity to engage with the design challenges and their own projects through an imaginatively more-than-human lens. Participant collaborators and observers noted that energy was high

around these activities. The quality and thoughtfulness of the artifacts created revealed that participant-attendees engaged deeply with the topic.

The mindset of *caring for place* in the initial list was indeed a useful lens for designing methods that evoke an emotional, sensory connection to specific places. Upon reflection, however, *caring* as a stand-alone concept was woven into so many dimensions of the design process that it emerged as foundational to our approach on multiple levels. Therefore, we split this mindset into its two components: *place-based* (4) and *expanded spheres of care* (5).

A *place-based* lens (see Massey, 2005) emphasizes an attentiveness to the specificity, assemblage of relationships, and the ‘situatedness’ of what makes a place *a place* (biophysical, symbolic, cultural, relational, etc.); places are ‘where things happen’ in terms of sustainability transformations (Horlings et al., 2020). It also implies a felt mutuality or attachment; this can be both affective/emotional (Altman & Low, 1992; McEwan & Goodman, 2010) and pragmatic, appreciating our (inter) dependence with tangible and intangible place-based resources, for example (Horlings et al., 2020).

One of the arts-based methods used to invite a transformative, place-based perspective was Method 11: ‘Storytelling’ (Pearson et al., 2018: 31–32). This method encourages the use of narrative to surface layered histories, ecological relationships, and cultural perspectives tied to a particular place. The following excerpt offers an example of how this abstract idea was translated into practice during the *Action Hub* workshop. The text was used to introduce a design challenge based on a real situation in the Nordic city of Kiruna, which is being forced to relocate its center due to land subsidence—the gradual sinking of the ground caused by decades of iron ore mining beneath the city. The story served to situate participants in the broader social, ecological, and temporal dimensions of the challenge:

The City of Kiruna prepares to move its heart... Once upon a time, about 6,000 years ago, human beings began to settle in the far Northern bioregion of Lapland. Since then, 240 generations of people have lived, loved, and survived there. The northern lights have danced overhead, the rivers have flowed, and other inhabitants such as bears, wolves, foxes, birds, and forests have participated in the creation of a complex and interconnected web of life, in which the local people participated and thrived. Recently, however, in 1900 a city called Kiruna was founded by people from the south—people who were not used to this environment. The settlement was built to support a mine intended to extract the iron ore that had been created during a time when Kiruna was deep under an ocean. The mine was operated by humans acclimated to a very different bioregion and culture and as the deputy Mayor of Kiruna once said, “We are symbiotic: the town is here because of the mine, otherwise no devil would have built a city here.” (Source: workshop agenda script)

This script demonstrates how re-storying can ground a design challenge in the particularities of place—inviting participants to engage not just with the

technical dimensions of a problem, but also with its historical, cultural, and ecological entanglements.

Next, the care dimension in *expanded spheres of care* (5) highlights both an expanding circle (Singer, 1981/2011) of ethical concern (*who* is being cared for) and the attitudes and practices for expressing care (i.e., *how* to care). The expanded sphere moves beyond self and immediate kin to include humans ‘others’, the more-than-human, and even future (and past) generations. It is a bigger concept than the original concept of ‘*caring for place*’. Across literature related to care and sustainability transformations, a broad scope of caring is emphasized as an essential component of leadership for regenerative sustainability (see Moriggi et al. 2020 for a longer discussion of care and transformation and Schein (2015) for an overview of the caring/ecological worldview).⁴³

Throughout the workshops, we made a conscious effort to turn the mindset of *expanded spheres of care* into concrete practices. This included being attentive to and inclusive of diverse—and often overlooked—voices and perspectives, as well as supporting the physical and mental well-being of participants and co-designers. We found that intentionally designing the workshop ‘container’ was essential to supporting these practices of care. That meant attending not only to the physical space—its acoustics, aesthetics, temperature, and lighting—but also to the quality of relationships among participants and facilitators. We also paid attention to often ‘invisible’ forms of care, such as the food provided or how materials were organized.

In our initial list, *complexity* and *uncertainty* were considered as one mindset. Both were present and played important roles in shaping our approach, but in practice they were quite distinct and deserving of focused attention. Much has been written about how the ability to respond to *dynamic complexity*⁴⁴ (6) is an underdeveloped capacity (Kagan, 2011; Schein, 2015). Complex adaptive living systems (a watershed for example) are often not predictable or rationally knowable in terms of observable relationality between cause and effect as they are in ‘complicated’ mechanistic systems (Burns, 2015; Holling, 2004); they therefore require a probing and experimental approach to problem solving. This links the concept of stochastic sustainability that I propose in Section 4.1.2. In addition, in conceptualizing complex living systems,

⁴³ Moriggi et al. (2020) propose an in-depth framework of caring in relation to sustainability transformations that includes ethically informed practices, emotional awareness, and relational response-ability (Haraway, 2016) – i.e., the ability to respond to the context at hand.

⁴⁴ Burns et al. (2015), for example, identify complex living systems as an overarching paradigm in sustainability leadership (in opposition to the Newtonian mechanistic worldview).

queer ecology adds another dimension, in which diversity is appreciated, and essentializing or reductionist categories placed on self and others are problematized ('freaked out'), and instead considered more fluidly (see Kagan, 2011, 2017). While there are many ways to use creative methods to engage with complexity⁴⁵, the methods we developed during the workshops proved insufficient to evoke this 'mindset.' This shortcoming stemmed partly from its combination with uncertainty in our original list, and partly from the inherent challenge of engaging meaningfully with a mindset of complexity within such limited time frame.

Instead of conflating complexity and uncertainty, *Uncertainty* (7) can be thought of as an essential attitude in the face of complexity. It's also an epistemological stance. The capacity to be open to 'not knowing' emerged as a golden thread frequently emphasized by practitioners, artists, participants, and the co-designers in both projects and in literature (see Kagan, 2017). This stance can be linked to the ability to look at problems through new imaginative perspectives (e.g., more-than-human), to weakening the static hierarchy of the expert/audience duality, to opening the scope of possibilities for action, to communicating in new ways, and to re-defining constellations of collaboration (Arora, 2019; Kagan, 2017; Clampit et al., 2001). Uncertainty can also be characterized as 'beginner's mind'—a concept central to many mindfulness traditions and, in modern applications, widely used in fields such as medical diagnosis and care (Epstein, 2003) and pedagogy (Kochhar-Lindgren, 2001). In contrast to a static destination, Kagan (2011) frames sustainability as a dynamic "search process," emphasizing that we do not fully understand complex living systems—or even what a regenerative or sustainable society could or should look like in the future.

In addition to revising the original list of transformative mindsets, during the design, execution, and reflection processes, the co-designers reflected on two gaps. First, was the importance of a *holistic approach* (8) to knowledge,

⁴⁵ Sacha Kagan discusses the role of art in engaging with complexity, particularly in the context of sustainability. In his 2011 book *Art and Sustainability: Connecting Patterns for a Culture of Complexity*, Kagan explores how art can foster a deeper understanding of complex systems and contribute to cultural transformation toward sustainability. He highlights the importance of developing a sensitivity to interconnected patterns and embracing complexity, suggesting that art plays a pivotal role in helping individuals and communities perceive and engage with these intricate relationships. Kagan emphasizes how art can serve as a tool for exploring and understanding complex systems, acting as a catalyst for cultural and systemic change toward sustainability. Specifically, he looked at the works of and perspectives of artists such as Susi Gablik, Robert Smithson, Alan Sonfist, Joseph Beuys, the Harrisons, Mierle Laderman Ukeles, Patricia Johanson, Aviva Rahmani, Lynne Hull, David Haley, Shelley Sacks, Fern Schaffer, and Gilah Yelin Hirsch, amongst others.

places, and people. A holistic approach considers context and relationality, including historical, biophysical, cultural, social, psychological, and symbolic dimensions; it acknowledges both the embeddedness and embodiedness of both social imaginaries and physical realities (Haraway, 2016).⁴⁶ Through this lens, knowledge must be grounded in context and specific places (Horlings et al., 2020). Importantly, all participants (in the broadest sense possible) were considered with a ‘whole-person approach’ that considered their well-being, thoughts, emotions, motivations, perceptions of place, and constellation of relationships through time.⁴⁷ From a holistic perspective, the methods themselves were embedded in the context of the process (or the ‘container’). A holistic approach can be woven into the fabric of an event, as demonstrated in the process of incorporating a relational response to our event location in *Imaginative Leadership*.⁴⁸ Moreover, the twin concepts of mutuality and interdependence are central to a holistic mindset, and the co-designers emphasized these ideas repeatedly throughout our design process (from a philosophical perspective). While interdependence was implied in the storytelling dimension of some of the methods (see the example of ‘re-storying’ a case Pearson et. al, 2018: 80–81), it was not made explicit—perhaps because it was not included in the initial list. The concept of interdependence has deep roots in Indigenous and non-Occidental philosophies, knowledges, and worldviews (Avalos Cisneros, 2015), but has only more recently been mainstreamed within Western positivist sciences such as ecology (Callenbach, 2008).

The second gap identified during our reflection sessions was a lack of attention to *intersectionality* (9). Coined by Kimberlé Crenshaw, the term intersectionality refers to how different forms of oppression and identity—such as race, gender, class, and colonial histories—intersect and compound one another (Crenshaw, 1989). In the context of sustainability and regenerative development, intersectionality highlights how social injustices are entangled with ecological degradation (Kaijser & Kronsell, 2014; Maina-Okori et al., 2018). For example, Kaijser and Kronsell (2014) show how climate adaptation policies in Sweden focused on protecting private property and infrastructure—reinforcing class and gender inequalities—while ignoring the everyday

⁴⁶ See Warm Data Lab (n.d.) for a promising approach to addressing the deep relationality and complexity inherent in social science research. Warm Data Lab. (n.d.). Warm Data Lab. Bateson Institute. Retrieved February 2025, from <https://batesoninstitute.org/warm-data/>

⁴⁷ ‘Whole person approach’ has been applied in many contexts, such as medical care (Thomas et al., 2018) and pedagogy (Fadeeva et al., 2010).

⁴⁸ It also points to research about the way metaphors can be embodied or grounded in physical environments.

experiences of immigrant women, who were more likely to live in vulnerable housing or depend on public transport. Without an intersectional lens, such efforts may appear neutral or well-meaning but end up protecting dominant interests and reproducing existing hierarchies of privilege and exclusion. Without explicitly addressing these connections, sustainability efforts risk reproducing the same dominance-based structures—such as extractivism, hierarchy, and exclusion—that drive both social harm and environmental destruction.⁴⁹

During the workshops described in this chapter, the connections between ecological harm and social injustices such as racism, colonialism, or gender-based violence were not made explicit. Other initiatives have begun to explore these intersectional links using guided creative methods within the broader frame of imaginative leadership. One example is Forum Theater (Boal, 1979), an interactive method where participants act out real-life situations of oppression and try out different responses, allowing space to surface power dynamics and rehearse alternative actions. An example in practice is described Olvera-Hernández et. al (2023) who describe Forum Theatre as a mechanism for exploring local people's values in environmental governance in Chiapas, Mexico. For further perspectives, see Maina-Okori et al. (2018) on intersectionality in sustainability education, and Méndez (2018) on the life and murder of Berta Cáceres, a Honduran activist whose environmental leadership was inseparable from Indigenous identity, gender, and resistance to extractive industries.

The revised list of mindsets is summarized in Table 7 below, along with key transformative aspects and recommendations for further reading.

⁴⁹ Environmental racism and the genocide of indigenous people, for example, cannot, in reality, be separated from the so-called 'ecological dimensions' of unsustainability, such as biodiversity loss and pollution/ degradation of natural environments.

Table 7. Revised Transformative Mindsets

Mindset	Transformative Aspect
(1) Regenerative Sustainability	From minimizing harm to generating resilience and vitality for the biosphere and its inhabitants. Mang & Reed, 2020; Wahl, 2016
(2) Sense of Time	From chronic short-termism to an expanded ability to think in multiple time-scales, especially incorporating long term perspectives. Macy & Brown, 2014; Boylston, 2019; Steward, 2020
(3) More-than-human Insights	From anthropocentrism to attentively, imaginatively, and ethically including more-than-human perspectives in processes of knowledge co-creation. Abram, 1996; Benyus, 1997; Boyd, 2017; de La Bellacasa, 2017
(4) Place-based	From universalist approaches to ‘emplacement’—grounded in and contextualized and emerging from a relational approach to place-specificity. Massey, 2005; Macnamera, 2012; Horlings et al., 2020
(5) Expanded Spheres of Care	Expanded spheres of ethical concern for humans, places, and our ecological selves. de La Bellacasa, 2017; Moriggi, 2020; Schein, 2015; Singer, 1981/2011; Haraway, 2016
(6) Dynamic Complexity	Limitations of mechanistic mindset for problem solving and knowledge creation; De-essentializing living systems, diversity and queer conviviality. Burns et al., 2015; Holling, 2004; Kagan, 2011, 2017; Boylston, 2019
(7) Uncertainty	From a ‘need-to-know’ model of expertise to comfortability with not knowing; framing sustainability as ‘a search process’ instead of a destination. A way of defining the epistemological imagination in terms of process-based approaches, as a opposed to goal oriented transformations. Arora 2019; Kagan 2017; Clampit et al. 2001; Epstein 2003; Kochhar-Lindgren 2001
(8) Holistic Approach	From abstracted, to embedded (physically, relationally, and semiotically), situated and contextual (often place-based), and interdependent (from compartmentalization to mutuality). Includes a ‘whole-person’ approach to design and facilitation. Avalos Cisneros, 2015; Callenbach, 2008; Haraway, 2016; Fadeeva et al., 2010; Thomas et al., 2018
(9) Intersectionality	Intersectionality highlights how extractive and violent relationships with the biosphere are deeply connected to systems of inequality and harm within human societies. Maina-Okori et al., 2018; Kaijser & Kronsell, 2014; Méndez, 2018

Source: Own Conceptualization (CC BY)

5.4 Guidelines for Designing Transformative Creative Methods

The process of reflecting on the workshops not only pointed to refinements in the conceptualization of specific transformative mindsets, but also led to insights into the process of designing effective methods. Through iterative feedback sessions, the core co-designers (as described in Section 5.1) synthesized these insights into structured guidelines for crafting methods with the intention to evoke transformative mindsets.

5.4.1 Fit for purpose

First and foremost, any creative method must be fit for purpose. This means designing the method with the participants, context, and goal in mind—so it clearly supports what the activity (and the workshop overall) is trying to do. For instance, a specific method might be used to build trust among participants, co-create a shared vision, surface hidden power dynamics, or collaboratively generate new knowledge (Kimbell & Bailey, 2021; Lewis et al., 2020). Importantly, arts-based methods are not appropriate for all situations and challenges. Poorly conceived methods risk appearing trite, irrelevant, or even infantilizing—potentially undermining group dynamics rather than enhancing them. Instead, methods should invite genuine engagement by explicitly connecting to meaningful objectives (Tseklevs et al., 2017). When a method has a clear purpose, people are more likely to engage with curiosity and openness—setting the stage for the kind of reflective, collaborative atmosphere where transformation can take root (Blomkamp, 2021).

Equally important is the iterative and adaptive nature of creative methods. In practice, methods often need to be adjusted based on emerging group dynamics or contextual shifts. What works well in one setting might fail in another, even with similar goals. Facilitators play a crucial role here, serving as navigators who must read the room and make real-time adjustments to keep participants engaged (Sanders & Stappers, 2008). Furthermore, methods should encourage collaboration and acknowledge the diverse perspectives participants bring to the table. Effective creative approaches work with, rather than against, this diversity, enabling a richer exploration of ideas and fostering a sense of ownership among participants (Manzini, 2015).

Moreover, creative methods should embrace complexity rather than seek to oversimplify it. Many challenges tackled by such methods are inherently complex, involving interrelated systems, competing priorities, and diverse stakeholders. Simplistic or overly prescriptive methods often fail to address

these complexities, leading to superficial outcomes or resistance from participants. Instead, methods that embrace a systemic lens and encourage iterative, participatory processes are better suited to engaging with complex sustainability challenges (Snowden & Boone, 2007).

Finally, the success of any creative method relies on a balance between structure and flexibility. Methods should provide enough scaffolding to guide participants while leaving room for improvisation and emergent outcomes. This balance ensures that methods remain purposeful without stifling creativity or innovation (e.g., Kimbell, 2011).

5.4.2 Elements of transformative effect

To design methods with a transformative effect, collaborators identified four essential categories that should be considered, clarified, and, where useful, intentionally integrated: (1) specific creative practices, (2) the types of intelligence the method engages, (3) oft-overlooked stakeholders, and (4) one or more transformative mindsets. Using these categories, the co-design cohort collaboratively created a deck of cards to be used by practitioners when designing methods. Each of the categories is represented on one side of the cards (Figure 11) and specific examples of this category on the other (outlined below). The images on the cards were chosen intuitively based on a resonant aesthetic and free association of the concept with the image.

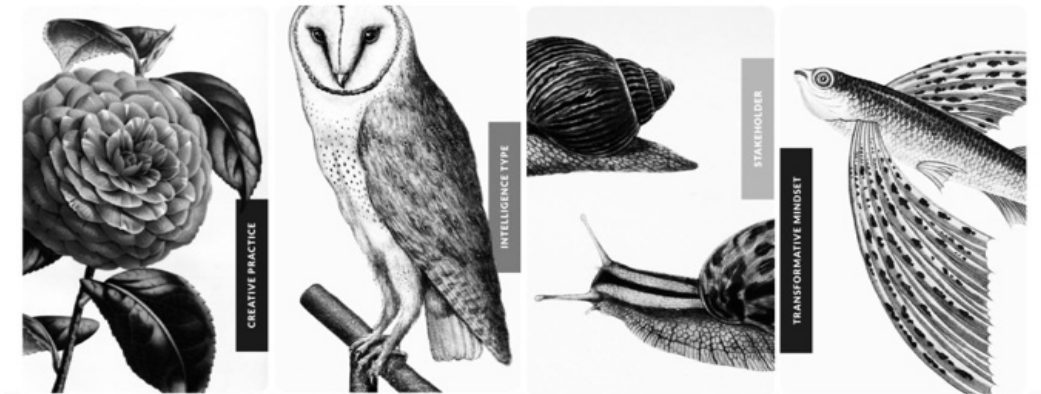


Figure 17. Method Cards for Designing 'Transformative' Arts-based Methods

Source: Developed by Re.imaginary

(1) Type of Creative Practice

The choice of creative activity—whether it involves storytelling, drawing, movement, or another medium—should resonate with the participants and be accessible to all. Creative methods should foster a space for exploration, curiosity, and playfulness, offering alternative modes of engagement that move beyond verbal or linear thinking (Taylor, 2017). Activities such as arts-based approaches allow participants to express themselves in ways that are often constrained by traditional cognitive or linguistic frameworks, encouraging deeper engagement and imagination (Leavy, 2015). Research in participatory and arts-based methods highlights the value of incorporating varied creative practices to support diverse forms of expression and meaning-making (Barone & Eisner, 2011).

Examples of Creative Practices:

- Engaging multiple senses: Working with the hands, incorporating aesthetic dimensions, cooking.
- Thinking metaphorically or symbolically.
- Design fields: Architecture, landscape architecture, fashion.
- Movement-based: Dance, walking, performance.
- Visual arts: Drawing, painting, collage, calligraphy, photography, graphic design, sculpture.
- Theater: acting a part, imaginatively embodying.
- Literary forms: Poetry, fiction, creative nonfiction.
- Storytelling: Oral traditions, narrative techniques.

(2) Multiple Intelligences

Effective creative methods leverage multiple intelligences, drawing on Howard Gardner's framework, which includes linguistic, spatial, kinesthetic, interpersonal, and intrapersonal intelligences, among others (Gardner, 2011). For example, methods incorporating physical movement activate kinesthetic intelligence, while visual arts engage spatial intelligence, allowing participants to connect with ideas, experiences, and one another in unexpected ways (Nolan, 2009). While Gardner's Multiple Intelligences (MI) theory has been critiqued for its lack of empirical validation and its blurred distinction between intelligence and talent (Visser, Ashton, & Vernon, 2006; Waterhouse, 2006), proponents emphasize its value as a conceptual framework for broadening our understanding of cognitive diversity (Gardner, 2011). Transdisciplinary research supports the practical benefits of engaging multiple ways of knowing in collaborative problem-solving and systems thinking, revealing emergent dynamics and more nuanced understandings (Meadows, 2008; Nicolescu, 2006).

Gardner's "Types of Intelligence":

- Naturalist Intelligence: The ability to recognize, categorize, and interact with elements of the natural world, such as plants, animals, and ecosystems.
- Musical Intelligence: Sensitivity to sound, rhythm, pitch, and melody, with an ability to create, interpret, and appreciate music.
- Logical-Mathematical Intelligence: Strength in reasoning, pattern recognition, and problem-solving, particularly in mathematical and abstract concepts.
- Existential Intelligence: A deep sensitivity to philosophical and existential questions, including meaning, purpose, and interconnectedness.
- Interpersonal Intelligence: The capacity to understand and interact effectively with others, including communication, empathy, and collaboration.
- Bodily-Kinesthetic Intelligence: Proficiency in physical movement, coordination, and using the body to express ideas or solve problems.
- Linguistic Intelligence: A strong ability to use language effectively, whether through writing, speaking, or storytelling.
- Intrapersonal Intelligence: Deep self-awareness and the ability to reflect on one's own emotions, motivations, and personal development.
- Spatial Intelligence: The ability to visualize, manipulate, and navigate spatial environments, crucial for design, art, and movement-based activities.

(3) Inclusion of Overlooked Stakeholders

Transformative creative methods prioritize inclusivity, inviting perspectives and voices often excluded from traditional processes. This includes community members, individuals with lived experiences that challenge dominant narratives, and even nonhuman stakeholders, represented metaphorically or symbolically (Whyte, 2018; Plumwood, 2002). Such inclusivity ensures that the process is rooted in diverse ways of knowing and being, enriching the outcomes and fostering more equitable practices (Reed, 2008). Participatory approaches in environmental and social research emphasize the importance of inclusivity in addressing complex, interconnected challenges, as diverse stakeholder engagement reveals hidden dynamics and potential synergies (Chilvers & Kearnes, 2020).

Examples of Overlooked Stakeholders:

- Human perspectives: Youth, elders, future generations, ancestors, minority groups, people with disabilities, individuals of marginalized socio-economic or caste status.
- More-than-human perspectives: Specific flora and fauna, geological or ecosystem features (mountains, rivers, canyons, rocks), broader ecosystems (coral reefs, watersheds, forests).

(4) Connection to Transformative Mindsets

Each creative method should be intentionally designed to evoke or amplify one of the transformative mindsets discussed above. By structuring methods to guide participants toward new ways of seeing, thinking, and engaging with the world, practitioners can facilitate shifts in understanding and inspire participants to activate these mindsets as a form of imaginative leadership. Embedding transformative mindsets into creative practices connects participants with their capacity for systemic change, enabling them to envision and co-create regenerative futures.

Transformative mindsets, as outlined in Table 7 above: (1) Regenerative Sustainability; (2) Sense of Time; (3) More-than-human Insights; (4) Place-based; (5) Expanded Spheres of Care; (6) Dynamic Complexity; (7) Uncertainty; (8) Holistic Approach; (9) and, Intersectionality.

Designing Methods

In sum, bringing together the four elements outlined above—creative practices, multiple intelligences, overlooked stakeholders, and transformative mindsets—can help shape methods that break out of predictable patterns and invite deeper engagement. The method design cards offer loose prompts and a way to mix and match elements with intention, while remaining responsive to the specific people and context. What works well in one setting might fall flat in another, so methods need to be designed and facilitated with care. Whether through movement, metaphor, or by bringing unexpected voices into the conversation, strong method design helps people notice new things and think in different ways, hopefully opening a space of possibility.

5.5 From Spark to Sustained Practice?

The two workshops explored in this chapter tested the ways that arts-based methods can activate transformative mindsets with people already working in the field of sustainability. The *Action Hub* applied creative techniques to real-world design challenges, using Theory U to balance stability with open-ended exploration. The *Imaginative Leadership* workshop adapted these principles for a policy setting, engaging Welsh government staff in creative processes that expanded perspectives on leadership and place-based sustainability. Across both cases, the creative practices employed helped participant-attendees engage with transformative mindsets—considering, for example, more-than-human perspectives, longer time horizons, and regenerative possibilities. In conversation and through feedback, participants-attendees expressed that these approaches are valuable and energizing, while participant-observers noted the high levels of concentration and positive engagement with the

methods at all points in the workshops. Still, the short duration limited deeper engagement and follow-through.

One takeaway was that, beyond the creative practice itself, *how* a method is framed, facilitated, and structured is important. The methods dovetailed with participants' existing work while nudging their thinking in new directions. At the same time, a single session can only go so far—lasting change would require ways to keep experimenting and applying these ideas beyond the workshop. Future work will need to look at how these methods can be sustained over time, and also how they work in settings where power dynamics, conflicting priorities, or institutional constraints shape what's possible. The methods developed here are promising in terms of supporting imaginative leadership towards regenerative sustainability, but their impact most likely depends on how they're adapted and integrated into everyday practice.

Further discussion about this case—situated within the theoretical framework, guiding research questions, and its relationship to the Imaginative Disruptions case—continues in Chapter 7.

6

6 IMAGINATIVE DISRUPTIONS

“Our task is to make trouble, to stir up potent responses to devastating events, as well as to settle troubled waters and to rebuild quiet places.”

DONNA HARAWAY (2016: 1)⁵⁰

⁵⁰ Donna Haraway is a boundary-blurring thinker whose work has shaped feminist theory, science studies, and environmental humanities for decades. Known for *The Cyborg Manifesto* and her emphasis on multispecies entanglements, she challenges us to resist both despair and simplistic fixes. This quote, from *Staying with the Trouble*, reflects her call to remain with the mess of the world—to stir things up when needed, but also to nurture spaces of care, 'response-ability', and collective repair and reflection.



This chapter introduces the design and implementation of the *Imaginative Disruptions* research project⁵¹ and explores the insights that emerged through the process.

As described in Section 4.1, the methodology for developing and interpreting this case drew on participatory and practice-led research approaches. The project was created to help people engage with the layered challenges of climate change by using creative and arts-based practices to open new ways of thinking and responding. I participated as both a project advisor and a participant-observer, focusing on research sub-question six: *How can*

⁵¹ This chapter is adapted from Eernstman, N., Pearson, K.R., de Vrieze, A., Wals, A. Bjurström, A.E. (2021). Designing Collective Artist Residencies: Cultivating imaginative disruptions and lightheartedness in times of gravity. *Airea: Arts and Interdisciplinary Research*, (3), 17-34. <https://doi.org/10.2218/airea.5314>.

Changes from the original paper include: 1) Most of the background theoretical context was moved and integrated into the theoretical framework in Chapters 2 & 3) The section describing the research methods in the original published paper has been significantly expanded (now section 6.1); 3) The descriptions of each of the three subevents in shared in Section 6.2 have been expanded and augmented with specific references to data (including more detailed descriptions of photographs) and reflections captured during the structured reflection process described in the new research methods research section 6.1; 4) Insights and reflections in Section 6.3 have been reinforced with more detailed references to data and reflections captured during the structured reflection process; 5) Conclusions from the original paper have been moved to Chapter 7 and have been expanded and integrated into the flow of the overall discussion and conclusions. It is worth noting that no information has been removed from the original published paper. The content changes made were intended to expand and underpin insights and learnings and the structure changes made were intended to conform the content to the structural flow of the monograph as a whole.

arts-based methods enable sustainability leaders to engage meaningfully with the imaginative and emotional dimensions of ecological challenges?

To explore this question, a core group of collaborators, including myself, looked for patterns across the design and delivery of the diverse creative practices used in *Imaginative Disruptions*. Through a structured reflective process, we surfaced recurring themes around how these methods support emotional and creative engagement with ecological and social complexity.

Section 6.1 gives a brief overview of the case and explains the research process and methods. Section 6.2 describes each subevent in the broader case study in more detail, drawing on a variety of data sources. Section 6.3 shares the thematic insights that emerged. Section 6.4 offers a closing reflection on what was learned. Further discussion is shared in Chapter 7.

6.1 Research Process: Imaginative Disruptions Case

A group of academic partners initiated the *Imaginative Disruptions* project (2017–2019) across three European countries. This project experimented with locally relevant climate change issues through arts-based approaches designed to *disrupt* unsustainable, habituated patterns of thinking and doing. The project was launched in response to a call for proposals from The Seedbox, an international environmental humanities initiative based at Linköping University in Sweden, funded by Mistra, The Swedish Foundation for Strategic Environmental Research. The winning proposal outlined a project structure with three distinct sub-projects, each unfolding in Sweden, the United Kingdom, and the Netherlands. Each sub-project had the freedom to design its own participatory, arts-based engagement or artwork in collaboration with local artists, ensuring relevance to the local context. At the same time, the core international team provided space for collective brainstorming, peer-to-peer support, and consultation.

Imaginative Disruptions Sub-Projects

1. **RETREAT** – A four-day residency that placed participants in the role of climate refugees relocated from a coastal community to a holding camp on higher ground. Families explored the imagined impacts of climate change through a guided resettlement journey, questioning and playing with the comforts they take for granted. The experience asked: *What do we truly need when all we know is washed away?*
2. **VONK** (Dutch for ‘spark’) – A one-day event designed by local artist collective *De Waterlanders*, featuring curated performative

experiences that connected people through collective exploration of emotions surrounding the transition away from natural gas. The event surfaced public doubts, concerns, and knowledge gaps, while creating space for dialogue and expression.

3. **COMPOSE** – A transdisciplinary Masterclass, *The Art of Being a Researcher in Turbulent Times*, exploring the role of researchers as both authors of facts and actors in the world. The workshop invited participants to reflect on their embeddedness in research while maintaining scientific rigor and composure.

More detailed texts outlining the context of the subcases as written by each in-country coordinator are available in Annex F. The above text is from the Imaginative Disruption scientific report to the funding organization.

While each of the three events differed in topic, emphasis, process, and structure, they all shared a common focus on exploring the emotional dimensions of climate change rather than prioritizing future-oriented planning or scenario-building. A brief summary of each sub-project is provided in Table 8, followed by more thorough descriptions in Section 6.2.

Table 8. Overview of Imaginative Disruption events

Event	Retreat	Vonk	Compose
Topic	Climate refugees	Energy transition	Role of the researcher in the face of climate change
Setting	Rustic, rural wooded camping area in central Cornwall (UK).	A relatively prosperous neighborhood in a small university town in the Netherlands.	University classroom, local historic tower and 20 min walk between these two places in Gothenburg, Sweden.
Duration	4 days	4-6 hours	8 hours
Participants	20 people (7 families) including people from ages 2-50.	Around 100 people: neighborhood residents including children and elderly residents.	15 people including university students and middle-aged adults.

Event	Retreat	Vonk	Compose
Design process	Local transdisciplinary group (artist, outdoor instructor, academic) organized and designed the event with ongoing consultation from members of the Imaginative Disruptions Core Team.	A local artist collective was commissioned and had nearly complete autonomy to design the project with input from the core research team and people involved with the energy transition initiative. Members of the artist collective live in the affected neighborhood.	Core team of academic partners (three of whom are also artists) worked during a long weekend to design the masterclass. The process was emergent and consisted of informal conversations and brainstorming sessions.
Forms of participation by attendees (summary)	Planned creative activities, in which the participants were actively making. Everyone participated in daily tasks e.g., cooking, cleaning, creating shelter. Emergent: participants initiated new activities (e.g., children created play areas and proposed a 'talent show').	Scenes performed by artists collective, with neighbors as engaged audience. The audience was invited to 'join in' at 2-3 points during the performance. Various people from the neighborhood helped out during the day. Participants shared soup and drinks together.	Core team created the design of the masterclass in which each activity facilitated "making" practices by the attendees of the event.
Outputs and data	Collective artwork turned into a mobile gallery space (called the Boatbarrow), photographs, audio and video recordings, interviews with participants, reflective sessions (during event), reflections and notes (after event), post event survey.	Photographs, audio and video recordings, interviews with participants, reflections and notes (after event).	Photographs, audio and video recordings, reflections and notes (after event).
From all the video material a short documentary summarizing the project was produced by the Seedbox organizers (Annex M). A documentary film maker produced a short video (in Dutch) about Vonk (Annex N). There is incomplete documentary of edited video footage without sound for Compose (Annex O).			

6.1.1 Participant roles

A core, consistent group of participant-collaborators worked together to reflect upon all three sub-events engaging at different levels during different phases and aspects of the project. Additional participant-collaborators and participant-observers participated in each subevent. Participant-attendees did not overlap and were entirely composed of local, interested, self-selected people.

Core participant-collaborators

Researcher (Myself): Participant-observer, project advisor, and primary coordinator of rounds of iterative reflection. Participated in all three events and contributed to event design of Retreat and Compose.

Collaborator 1: Imaginative Disruptions Project Coordinator, in-country coordinator for Retreat, artist, and educator specializing in community learning through performative means. Central to project design, execution, and follow-up.

Collaborator 2: In-country coordinator for Compose, artist, and drama lecturer focused on drama and collaborative learning for sustainability. Engaged in all design phases, though limited in follow-up due to personal challenges.

Collaborator 3: In-country coordinator for Vonk, educator, and consultant in sustainable food systems and transformative learning. Participated in project design and some reflection sessions but had limited engagement due to health constraints.

Collaborator 4: Participant-observer and advisor, coordinator of a network exploring sustainability and place-shaping. Involved primarily in Retreat and Vonk, contributing reflections to Compose despite not attending in person.

Collaborator 5: Advisory role, professor of transformative learning. Attended Compose and engaged in reflective discussions on all three cases.

RETREAT

Participant-collaborators: Included organizers of the event (including collaborator 1), as well as professional artists who were engaged to lead multiple activities throughout the event. See Annex H for final agenda and list of activities. The artists leading specific activities could also be considered attendees because they were not involved in designing the whole event or in ongoing post-event reflections. They designed their own activity with autonomy.

Participant-observers consisted of myself and Collaborator 4, who were tasked with documenting event through photography, recording audio and video clips,

and engaging in daily co-reflection sessions guided by specific questions (outlined below) which were captured by notetaking.

Participant-attendees consisted of 7 families. They created artifacts, participated in a feedback round at the end of the event, and 5 of the 7 families in attendance responded to a follow-up online survey.

Data: Nine interviews were recorded with attendees on site on the last day of the event. Two of the interviews were with two people simultaneously, so in total there were eleven interviewees (see Annex I for list of interviewees). Interviews averaged 15 minutes. The questions that guided the interviews were simple and open-ended: What was your motivation for coming, did anything surprise you? How would you describe this event to a friend afterwards?

VONK

Participant-collaborators: Myself and Collaborators 1, 3, and 4 participated in set-up logistics and organizing (i.e., coordinating food and setting up post-safari community discussion area) and pre-structuring data-collection for the event (i.e., defining questions, coordinating with documentary film maker and additional participant observer). Collaborator 3 conducted all pre-organizing for the event, invited attendees from the neighborhood, and coordinated with the artist collaborative who created the neighborhood safari. Collaborator 3 was also a community member in the sense that they lived in the neighborhood where the event took place, and their family was actively engaged in the ongoing community discussions around the topic of energy-transition that was centered in the event.

Participant-observers: Myself and Collaborators 1 and 4, an additional visiting researcher, and a documentary filmmaker acted as participant observers. Specific roles and questions were discussed beforehand. For example, because the event was in Dutch (which the visiting researcher and I don't speak), we focused on observing non-verbal cues, body language, flow, etc. Collaborators 1 and 4 observed and took notes on the event content and on unrecorded, short, informal, guided conversations with attendees.

Participant-attendees: Approximately 100 people from the neighborhood that was engaging in the energy transition. Children and adults were present, but few (if any) teens or young adults.

Data: Photos of artifacts and interactive art performances (the neighborhood art safari), ten interviews on site, notes from participant-observers and

participant-collaborators.⁵² A short, four-minute documentary video of the event was made by MugMedia in collaboration with RTV Rijnstreek, the public local broadcaster for the municipality of Wageningen (see Annex N).

COMPOSE

Participant-collaborators: Collaborators 1, 2 and 5 participated in the design process and acted as facilitators during the event. One additional outside collaborator and I worked on the design and preparation for three days leading up to the event.

Participant-observers: I acted as a participant-observer (taking photographs and notes during the event). The additional collaborator acted more as observer, documenting the event through photos and sharing observations.

Participant-attendees: Attendees consisted of x people — students and researchers from the university. Attendees created artifacts, participated in a feedback round at the end of the event, and 5 out of 15 responded to a follow-up online survey (survey questions can be found in Annex L).

Data: Photos of artifacts and process, survey responses, reflection notebook, pre-event draft agendas and discussion notes.

6.1.2 Sense-making and reflection process

The *Imaginative Disruptions* project employed an interdisciplinary methodology drawing from practice-based research, arts-based research, and qualitative methods. Like action research, practice-based research—widely used in creative arts and performance studies—uses iterative cycles of creative doing and reflective evaluation (Nelson, 2013). In this case, the *practice* was the co-creation and facilitation of the three experimental engagements, and *reflection* was embedded throughout as a key component of learning.

From the outset, the project placed more emphasis on process than on conventional expectations of ‘data collection.’ As the initial project documentation explains, “The ‘data’ of the research project emerges from...people talking, creating and reflecting together. We aim to collect what

⁵² The initial co-reflection sessions took place 45 minutes immediately after the event. I don't speak Dutch, so I relied primarily on non-verbal information to observe the events, but I engaged side conversations with the audience and had some bits of the performances translated while they were happening. Collaborator 3 shared insights based on participant observation (as a Dutch speaker), also based on short, informal interviews conducted immediately after the performances.

the residencies generate in ways that don't disrupt the activities and allow us to record things that we didn't know we were going to document in advance" (Imaginative Disruptions, n.d.). Moreover, it was guided by the idea of embodied, situated knowledge, drawing from Haraway's (1988) concept of 'views from the body' and Conquergood's (2002: 146) description of research grounded in "active, intimate, hands-on participation and connection ... a view from ground level, in the thick of things."

To assess the process and outcomes of these interventions, we employed a layered data collection strategy, integrating multiple methods across different roles (designers, participants, and observers). Data sources included:

- **Observational Data** – Researchers acted as participant-observers, documenting events through structured and unstructured notetaking.
- **Visual and Audio Documentation** – Over 500 images, 40 hours of video, and audio recordings captured participant engagement and artistic outputs. Images were used primarily for reference during reflections. Video was used to create two 'final' videos, one covering all three events, one—only available in Dutch—focused on Vonk. Videos were shared within networks to communicate results to wider audiences (see Annex N).
- **Interviews** – 25 participants were interviewed at different stages, using semi-structured guiding questions to explore experiences and insights. Interviews were transcribed and referred to during reflection processes.
- **Surveys** – Follow-up surveys gathered reflections from participants in Retreat (7 respondents) and Compose (5 respondents). Surveys were used to inform reflections.
- **Creative Reflections** – At Retreat, participants used art-based reflection methods, leaving thoughts and impressions through drawing, collage, and diary writing inside a secluded caravan.
- **Creative Artifacts** – Objects, images, collages created during the course of the events
- **Performance Artifacts** – At Vonk, texts from interactive performances and audience-generated contributions provided additional data.

To evaluate the creative practices, we applied qualitative and art-based methods (Leavy, 2015; Norris, 2017). The research team functioned as observers during the development and execution of the practice, interviewing each other at different times during the process. We documented the practices in detail through notetaking, through still and moving images, as well as audio. A selection of participants was interviewed after the events, both in the form of semi-structured interviews and an online survey.

In Retreat, we experimented with different art-based methods that enabled the participants to reflect and give feedback on their experience during

the residency. Various prompts in a secluded caravan, invited participants to leave their thoughts and opinions through different media (collage, drawing, diary writing, etc.). In the Netherlands, data consisted of video footage and interviews, as well as texts from the series of the interactive performances, and individual and discussion notes from multiple participant observers. From the practice in Sweden, we have visual records of the artifacts and activities, as well as notes from the design process and from the participant observers.

Reflection was structured through daily debriefs during each event and follow-up discussions post-event. Notes were taken collaboratively in a shared online reflection notebook, allowing all team members to contribute asynchronously. During many of the discussions, each individual recorder their own responses to guiding questions, and then questions were discussed collectively, with a designated note-taker tasked with double checking to make sure that all of the ideas were captured.

The following general questions guided the more structured part of our reflections for all three events. Tangents were made, side conversations had, but we returned to these questions throughout.

Guiding Questions for co-reflection:

- What does an art-based process/ making processes open-up?
Does it allow people to engage with issue differently?
- Where is the energy? Where is the concern? What is exciting people and holding their attention?
- What is not being said? Are there any “elephants in the room”? Arenas of conspicuous silence?
- Elements of metaphorical thinking? (interesting metaphors that are being applied)
- How did people express and explore emotions? Where did people find strength?
- Was there a sense of intergenerational learning? If so, how was it expressed? (restate around intergenerational knowledge exchange, also care for future generations)
- Mindsets of Sustainability—for example, expanded sense of time, larger sense of ecological self (empathy for nonhuman), comfort with uncertainty/complexity, others...
- Most interesting concrete observations?
- What key ideas or insights emerged
- What further questions emerged
- Where were the tensions or paradoxes?
- What really worked? What might be enhanced or tweaked in another iteration?

6.1.3 Co-reflection and thematic analysis

To assess the results and the learnings that came out of three of these experiments, the core project group employed an interdisciplinary research methodology that drew from practice-based research, art-based and qualitative methods. Like action research, common in social and educational sciences, practice-based research, used predominantly in the creative arts and performance studies, employs iterative cycles of reflective doing that inform a body of theory (Nelson, 2013). The practitioner-researcher assesses the value and potential of a practical engagement in the world (i.e., the making of a performance, object or creative process) through reflection and evaluation. The practice in our research project consisted of the three iterative cycles of collective creative process in the three contexts described.

After the data was collected, following an inductive and iterative approach to analysis (Thomas, 2006), the core collaborators acted as “professional strangers” (Agar, 1980) to critically identify key themes. Themes were first identified individually, then shared and discussed to reach synthesis and agreement. The guiding questions for this analysis were:

1. *What are the most important dimensions of our collective learning about using art to engage people with climate challenges?*
2. *What essential ‘ingredients’ contributed to transformative engagement, and how might they inform future initiatives?*

To ensure consistency, these themes were revisited across multiple reflective sessions with project collaborators, following the method of “deep hanging out” (Geertz, 1998) through sustained formal and informal discussions.

We deliberately did not limit our analysis to elements of the theoretical framework. This research served different purposes for different collaborators, and it was important to leave space for emergent insights beyond pre-existing conceptual structures. Keeping the analysis open allowed unexpected patterns, tensions, and generative ideas to surface, enriching the overall understanding of how arts-based methods can engage sustainability leaders in meaningful ways. What came out of these sessions are considered ‘learnings’ or ‘insights’ rather than ‘findings’ (see Section 4.1.6).

6.2 Subevent Descriptions

6.2.1 Retreat: Re-inventing home in an imagined climate refugee camp

Location: Cornwall, UK

The first sub-project, called Retreat, was primarily designed and led by a local community-focused artist, her partner (outdoor instructor and forest school educator) and one of the core academic partners, who is also a practicing artist. It began with the premise that the participating families were climate refugees in an imagined world 70 years from now. In this future world, coastal homes have become uninhabitable, sea levels have flooded harbors and eaten away land, causing houses to fall into the sea. The event kicked off with an alarming video-message calling for the imagined climate refugees to report to a holding camp (see Annex G for full text).

After arriving at the ‘camp’ (in reality, a rustic wooded camping facility), the attendees spent the next four days participating in creative activities, facilitated by various artists, that explored different emotional dimensions of climate change (Figure 18 below gives a glimpse of the camp environment). The flow of facilitated activities was designed loosely according to the structure of Theory U (observe, presence, act) (Scharmer, 2009) and moved through the different levels of Maslow’s hierarchy, with participants exploring the emotional impact of different ‘needs’ being affected by climate change. They also participated in the daily chores of the camp, such as cooking and cleaning.

In parallel to the scheduled activities, at different ‘stations’ across the camp, the participant-attendees engaged in a range of making processes, often simultaneously and in an unstructured way, which helped them to think through a particular aspect of climate change. For example, near the camp bathroom, was an installation called ‘the doors of perception’ which invited people to add graffiti to blank doors in response to different prompts throughout the four days (see Figure 19 below). And off in a secluded area of the camp, the organizers had prepared a ‘creative caravan’ where people could retreat and journal, draw, or collage, in response to specific prompts (Figure 20 below).

On the first day of Retreat, a ceramic artist with a PhD in climate science invited participants to create a ceramic figure of something each participant would miss were they to leave their homes behind (see figure 21). This exercise invited discussion, amongst families and between families, on the idea of loss and fragility (also represented in the materiality of the ceramic). As the artist explained, “working with environmental issues through an art-based medium such as clay allows access to people’s emotions” (source: post-event interview).

Later, in a Forum Theatre session (see Boal 2008), participants were taken through an embodied imaginary journey of climate refugees by enacting tableaux of leaving home, of crossing a large sea, and of arriving at a camp (Figure 22). This exercise led to deep emotional responses and unexpected tears, and to discussions around kindness, compassion, and mutual aid and support. As one participant said, the workshop “was incredibly powerful, I didn’t expect to have that kind of reaction to it.” (Retreat Interviewee). This activity linked to an exercise that used copper to create an individual talisman representing something that gave people courage, strength, and hope (Figure 23). Once again this was a springboard for discussion about how people might strengthen their own resilience in the face of climate change.

Other activities included song-writing sessions that resulted in a ‘ballad’ of the participants’ imagined climate-change experience, a talent show, and a game called Cards for Humanity (see figure 35 in Section 6.4.1)⁵³ created for Retreat that used juxtaposition and humor to describe life in the camp. The creation of groups of stick figures (Figure 24) gave families the chance to work together on an activity that all ages could master and to discuss their family dynamics and support structures.

One of the primary activities was an ongoing project to create a mobile exhibition space for the results of participants’ various artistic endeavors. At the same time, it was designed based on a collectively imagined home that would be able to weather rising sea levels. The design sessions, which included all ages of participants, consisted of drawing sketches, developing design principles, prototyping with found objects, and illustrating a final plan. The resulting “Boatbarrow” (Figure 25) was later exhibited in a gallery space with a curated selection of objects made by the participants over the four days.

Description of the Boatbarrow as distilled by the organizing artist after the event: “The ‘Boat Barrow’ our collaboratively designed and constructed ‘vessel’ that would voyage forth...carrying the creative cargo safely and amphibiously, was ceremoniously launched with music song and naming ceremony. Selected pieces adorned the hull, deck and bow as a mobile art gallery. Collectively naming her we selected our ‘entries’ at a village fete, where we became judges of our own ‘Best in Show’ pieces complete with rosettes and food raffle framed beneath the bunting. Ceramics held our vulnerability, our insecurities, representing what we could not leave behind or our ‘home comforts’ we would miss and have come to rely on. The fragility of our securities. The insecurities of our securities. Copper Talismans engraved

⁵³ This game made as a family-friendly, context-specific version of the popular game ‘Cards Against Humanity’ which employs adult scatological and black humor to comedic effect.

affirmations of our strengths our riches our omens, that we would take forward on this unknown journey – intentions we would hope to meet on the way, offering protection from hostilities and manifesting our hopes at our new destinations. Our Stick people community – represented our need for support from each other. Stronger though our family and community connections.” (School of Outdoor Art, n.d.)

After the event, the participant-attendees reflected on their experience through short interviews and later through an online survey, and feedback was universally positive, emphasizing inspiration, community spirit, and an appreciation of having the opportunity to spend reflective creative time wrestling with deep and emotional issues related to climate change. One attendee described the event as: “Highly memorable and intuitively informative, this is something that sits alongside the finest books on climate change narrative and shines a light on the priority of community engagement as we look strategically to a changing world” (Retreat Survey Respondent). Another enjoyed all aspects, such as “Sitting round the campfire, eating together, the people, the yummy food, the community spirit, working together, the children having fun together, making music, making the barrow boat, making the copper jewelry, the cards for humanity” (Retreat Survey Respondent). Finally, in response to the question *If you had to tell somebody what Retreat was, then what would you say? Please summarize Retreat in a few sentences* one participant summarized clearly and eloquently that it was: “A chance for different families to come together and share skills, stories and play. Using hands on workshops and community building to encourage thinking about climate change and the real-life impact this has on people rather than just statistics you hear on TV” (Retreat Survey Respondent).



Figure 18. Camp Environment

The camp consisted of an area for tents and campers, a kitchen building that included bathrooms and showers, and areas of fields and forests where the additional activities took place. The camp areas were comfortable and well appointed, but we did experience a day of intense and unusual summer storms which added a level of intensity and discomfort to imagined emergency holding camp.

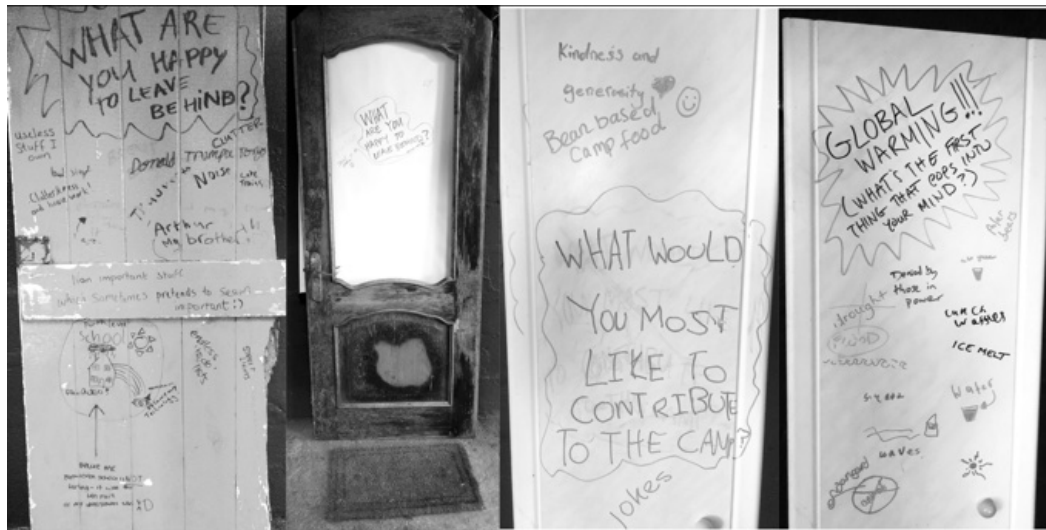


Figure 19. Doors of Perception

Near the camp bathrooms, we placed three doors that invited graffiti. Each door asked a different question each day: #1: What are you happy to leave behind? What is (a) home? Global warming: what's the first thing that pops to your mind? #2: What's most annoying about being climate refugee? Global warming? #3: What are you happy to leave behind? After 4 days in the climate refugee camp, what do you think of global warming? What would you most like to contribute? Some examples: People wanted to leave school, bills, social media, streetlights. People were afraid of floods, droughts, ice melt, food insecurity. Interestingly, on day four people emphasized the importance of community and connections.



Figure 20. Creative Caravan

The “Creative Caravan” was a place away from the main camp activities where participants could go for quiet and non-structured creative activities. Some of the prompts in the caravan included a request for diary entries (describing an experience in narrative form), making a collage of an important moment or event, or writing a postcard to a friend or family member describing an experience of the Retreat.



Figure 21. Making Ceramic Figures of Loss

In this exercise, each person created ceramic representations of something that they would miss if they had to leave home. These figures were kiln-fired and returned to the makers on the last day of Retreat.



Figure 22. Forum Theater Activity

The leader of the Forum Theater activity invited participants to enact their imagined journey as a climate refugees from leaving home to travelling across a body of water to establishing a refugee camp and finally engaging in mutual support.



Figure 23. Copper Talismans

Using metal stamping and cutting tools, each person created a talisman that represented an idea that gave them hope and strength.



Figure 24. Stick Figures

The figures were created from simple plaster and gauze and found sticks. Each person first created the figures individually to represent themselves and other important people or pets and then the figures were joined together to support each other.



Figure 25. Boatbarrow: Qualities and Images

"A beautiful construction that accommodated our needs. Collectively designed by all participants. Aged 2 to 48. Made in 4 days. A vessel that would ride the tides of time and see us through environmental challenges. Meeting our needs. Protecting the fragility of our clay expressions of all that we are attached to. What we will have to leave behind. Keeping safe. Transporting our riches, our talismans. Our attributes, the skills we could take to the world and share a helping hand. Making connections. Preserving our humanity. Celebrating our individuality, acknowledging community. Our stick people needed each other for support." (from Retreat Cornwall @retreatcornwall Facebook post)

6.2.2 Vonk: Exploring the unruly emotions that lurk beneath pragmatic measures.

Location: Wageningen, The Netherlands

The second sub-project was called Vonk, which means 'spark' in Dutch. Neighbors in a small Dutch city were invited to explore the emotional aspects of their imminent (non-fictional) energy transition from natural gas to local renewables. The energy transition initiative was led by community members who are deeply committed to a transition towards a more independent, self-determined, and localized system. There is a lot of support, both local and national (the initiative received national funding as an exemplary energy transition project), yet there was no clear pathway forward. Many people in the neighborhood, even those who are ostensibly pro-energy transformation, have doubts or are even skeptical about the whole initiative.

Vonk was a 1-day event curated by a local artist collective that led people through a 'Neighborhood Safari' consisting of a series of dynamic performances throughout the neighborhood (Figure 26). The artist collective describes a Neighborhood Safari as "a theatrical tour through a neighborhood along scenes that, for example, deal with themes that are current in the neighborhood or about that one typical place. A central opening, splitting up into small groups to walk or cycle past a number of short scenes and a joint closing with a snack and a drink. The audience meets the neighbourhood and each other in an accessible way" (Waterlanders, n.d.).

The short scenes in the Safari brought various doubts, questions, and anxieties to the surface that were present, but not typically expressed in public meetings and strategy sessions. In the first scene, for example, the audience witnessed a woman's disjointed climate musings. As we watched her make a cup of tea, a recorded narration projecting her train of thought boomed out of speakers. Familiar feelings of guilt, doubt, and uncertainty mingled and contorted until she slid off the chair in exhaustion (Figure 27). As one participant-observer described it: "The first activity involving the woman on the chair, being bombarded by noises, words, from different microphones was a strong sensory experience. I felt disoriented, and thus immensely connected to the focus of the theatre, which I perceived to be the overwhelming feeling of information surrounding us, telling us what to do. A significant moment was when the actor began filling a cup with tea, and unaware, kept filling the cup till it was overflowing. This was disruptive, someone who has lost control, it is just not something one does as it means cleaning up. Interestingly, while I saw the adults look on with dismay, the children thought it was very funny" (Vonk Participant-observer).

The second stop on the safari featured an interactive sketch centered on housing. Participants were invited to pull what initially appeared to be a flat,

two-dimensional frame from the ground—only to discover that, through collective effort, it transformed into a three-dimensional structure (Figure 28). The performance was anchored by a monologue exploring the need to work together to create housing solutions, particularly in the face of flooding, energy shortages, and the imagined arrival of displaced Amsterdam hipsters seeking refuge in smaller towns like Wageningen. When the artist called for volunteers to help raise the house, there was a moment of hesitation—but gradually, people stepped forward, adding their hands to the work and becoming part of the unfolding scene.

Later, in the third scene, the audience stood in a circle and whilst a performer in the middle narrated the history of fossil fuels and energy grids. We were asked to shape certain parts of his story in the provided clump of clay. At the end of the scene, he invited us to create a large circle out of the clay by connecting each individual string of clay to that of our neighbors. We then carefully lifted the circle clay together, as a metaphor for how a community powered energy grid might work (see Figure 29).

The final performance was an improvised monologue by one of the performers who is also a resident of the neighborhood. He shared his doubts and fears about the energy transition project, inviting audience members to reflect on their own misgivings and hesitations. Afterwards, people gathered to eat soup and exchange experiences and explore some of the small whimsical ideas for alternative energy generation such as the Apple Battery (Figure 30).

Throughout the Vonk event, observers consistently remarked on the unusually high level of engagement from both children and adults. Participants remained attentive and focused, with no signs of distraction or disengagement—no drifting into side conversations, no glazed-over expressions. Each of the four installations blended dark or difficult themes with bursts of humor that kept the energy alive. In the first installation, people laughed at the exaggerated inner voices, a moment of shared, self-deprecating recognition. In the second, laughter bubbled up around the call for volunteers—nervous but willing, as if people felt a flicker of responsibility. Jokes about flooded-out Amsterdam hipsters seeking refuge in Wageningen drew wry smiles. Even in the third and fourth pieces, where the tone sometimes turned more contemplative, small moments of humor shimmered through. One of the participant-observers noted, “I was very impressed by the engagement of the participants during the activities. Both children and adults were really present, paying attention, involved.” The performances seemed to surface a collective grappling with uncertainty—one participant reflected that “a lot of people are trying to figure out what needs to happen,” and that this tension was “demonstrated beautifully” (Vonk Interviewee). Another simply offered: “Artists can always bring a new perspective... I think it is fun” (Vonk Interviewee). Together, these reflections suggest that the event not only held attention, but also opened up space for honesty, shared insight, and even laughter amidst complexity.



Figure 26. Through the Neighborhood



Figure 27. Emotional Overwhelm



Figure 28. Raising a House



Figure 29. Circle of Clay

This image shows an activity led by the Waterlanders Artist Collective in which participants created a circle of clay representing the future community-based energy grid of the neighborhood. As one participant-observer described the activity: "The last activity involved participants standing around a round table, each with a ball of clay, molding the history of energy production in the Netherlands, from peat, to trees, to gas. Molding the clay in my hands, with each new shape representing a different form of extractive mining by Man over nature, I was impressed by the way each form merged fluidly into another, all these cosmic moments in time - ephemeral. A significant moment was at the end of the activity when all the balls had been rolled into sausages, connected to one another into one large circle. We held this clay circle up together—we were all connected. But the clay was so fragile, so easy to break, which for me was the take home message from this day: we will only manage to regenerate our one and only planet if we work together, but we are humans, creative and innovative, but also fragile. How do we create environments in which we feel safe and cared for, but which also force us to leave this comfort zone and dare to try something different, something necessary?"



Figure 30. Apple Battery

The Apple Battery was part of a collection of fun activities and interactive installations about energy in the local corner park.

6.2.3 Compose: A transdisciplinary Masterclass in the art of being a researcher in turbulent times of fake news and climate change.

University of Gothenburg, Sweden

The final Imaginative Disruptions sub-project was a one-day ‘masterclass’ about being an academic researcher in the face of climate change and this era of ‘fake news’. It consisted of two distinct phases: (a) the planning and (b) the execution. A group of four colleagues from the core research/design team, along with one outside expert on art and environmental education, holed up for a long weekend at a rural farm to reflect on the learnings from the previous two residencies and design this final one. The question guiding the design was, how can we support academics to explore the role of the researcher in these ambiguous times, especially in the face of ‘alternative facts’ and existential climate crisis? The result was a day of hands-on making and creative, non-linear practices intended to explore what it means to be impacted by and embedded in our research while, at the same time, attempting to retain a degree of scientific distance and composure. The workshop was conceived according to the storyline of the archetypal ‘quest’, in which the protagonists (the participant-attendees) travel out of the known (a room in the university building) on a journey to a place where they encounter a series of challenges and trials, to return where they started wiser. Our ‘heroes’ walked up a hill adjacent to the campus to a castle overlooking the city of Gothenburg (Figure 31).

There they participated in different visual and somatic activities that invited them to explore the concepts of ‘research frame’ and perspective. For example, people were invited to “work in small groups to create Sketch (draw / symbols / words) what you see through your window of perception from a climate change context: What do you see through the lens of climate change? What could offer strength, what could offer connection? What makes you vulnerable? How is it affected by climate change?” (Source: Supplementary workshop documents)

Back in the university room, they assimilated and shared what they learned through a guided ‘conversation in clay’ devised by art educator Jan van Boeckel (Figure 33).

Reflections from participants suggest that the Compose event struck a mostly successful balance between inspiration and intensity. One respondent described it as a “very creative and inspiring way of bringing different ideas together and forming new knowledge with others” (Compose Survey Respondent), highlighting the generative nature of the experience. Another appreciated the thoughtful design of the day, even while noting that “perhaps you tried to fit too much in there” (Compose Survey Respondent)—a reminder

of the challenge in holding spaciousness amid ambition. As one participant succinctly put it, the experience pointed toward a deeper truth: “Beyond obvious lies the reality. Creative thinking and conscious choices” (Compose Survey Respondent). Together, these reflections speak to an event that both stretched the imagination and asked much of its participants—a dense, dynamic container for possibility.



Figure 31. Crossing the Threshold in the Hero's Journey



Figure 32. Creating in the Castle

The image to the left shows an activity of looking through different shapes, metaphorically representing different perspectives and the image to the right shows how one group metaphorically explored their relationship to climate change.



Figure 33. Conversation in Clay: Compose

Three of the survey respondents mentioned that the Conversation in Clay was their favorite part of the event. For example, one said that “the conversation in clay... took the dialogue to another level” (G. Respondent)

6.3 Insights and Reflections

As detailed above in Section 6.2, during and after each of events described above, I, together with a group of core collaborators, revisited the data collected and engaged in a structured and iterative process of reflection guided by specific questions. Through these reflective sessions, three categories emerged: (1) Light hearts in the midst of heavy realities; (2) Comfortable spaces to be uncomfortable together; (3) Design for deep participation. Each of these categories is elaborated below.

6.3.1 Light hearts in the midst of heavy realities

First, we recognized that the elements of play and humor contributed to an atmosphere of lightheartedness and to participants' positive experience of dealing with what is normally regarded as a heavy topic. For example, even the most serious and emotionally heavy activity during Retreat—the Forum Theatre session in which participants explored the experience of being climate refugees—began with a game which evoked a lot of laughter (Figure 34). In an interview with the facilitator, she explained that starting with play helps people to open up to the difficult emotions later in the exercise. Many participants cited this exercise as the most impactful of the four days and after the event we reflected that it represented a microcosm of balance between playfulness and serious emotional engagement.

During both Retreat and Vonk, we observed that the involvement of children and young people contributed to the playful, lighthearted environment. Within moments of arriving at the holding camp at Retreat, the children had created a makeshift slide out of debris and made connections across families through their spontaneous play. They organized a talent show and endless extemporaneous games and brought a youthful enthusiasm and willingness to dive-in to each new arts activity. Multiple adult participants observed that the experimental spirit of the children helped everyone to engage with the heavy subject of the weekend in a more lighthearted manner—helping them connect with each other and to somehow metabolize the overwhelming challenge of climate change. In a follow-up survey, one participant described Retreat as: “A place to play, reflect on current issues, and leave with hope for the future” (Retreat Survey Respondent).

During the performances of Vonk, the children played a similar role—adding energy, laughter, and delight during the performances, particularly during the hands-on moments such as illustrating the performer's story with clay images and holding up the large clay circle. In the less-structured

moments of eating soup at the end of the performance, the children played spontaneously.

The importance of play shouldn't come as a surprise, as there is an abundance of research that discusses its relevance from educational (Vygotsky, 1978) and evolutionary perspectives (Pellegrini, 2009), and points to its importance in coping with stress (Magnuson & Barnett, 2012) and in design processes (Holopainen & Stain, 2015; Johansson & Linde, 2005). Play is regarded as intrinsic to being human, and is firmly at the heart of creativity and art. It creates space to drift and fail—to take risks and experiment (Brown, 2010). Yet, when it comes to our daily adult existence (and increasingly children's lives, due to mounting pressures on educational establishments to start academic learning at an ever earlier age) there seems to be very little space for playing (Gray, 2011) or for experimenting, musing, drifting and failing (Rosen, 2019). When it comes to the practice of making art—the 'mucking about' with materials in a studio and the testing of different processes to arrive at new and interesting outcomes—there is expansive space for play. As well as play, 'failure' is seen as a prerequisite for the successful creation of art (see the numerous texts devoted to the topic, such as the 2010 book *Failure* by Lisa Le Feuvre). From the overall very positive feedback we received from families after the experience, we came to realize that there is a great desire for adults and children to (a) carve out spaces in their lives to reflect on climate change, and (b) explore the matter in a playful, experimental fashion. Retreat seemed to function as a space for families that already had an awareness of climate change to work their way through the personal and emotional sides of the concept using hands-on workshops (making) and playful interactions.

In addition to play, humor—both planned and spontaneous—contributed to the atmosphere of lightheartedness and the collective learning in all three events. Both Retreat and Vonk included humor by design. During Retreat, for example, we played a humorous word/card game that was designed for the event, using local references (see Figure 35 below). The camp rang with belly laughter into the night and through the pouring rain of a storm. In Vonk, each of the performances expertly and intentionally entwined humor and gravity, and participants could be observed laughing one minute, and nodding seriously and thoughtfully the next. During Compose, humor was not designed into the structure, but emerged spontaneously, particularly during the design phase, in advance of the masterclass, in which there was more unstructured time for cooking and eating together.

Viktor Frankl, in his 1946 memoir *Man's Search for Meaning*, explains that during his time in a concentration camp humor "was another of the soul's weapons in the fight for self-preservation. It is well known that humor, more than anything else in the human make-up, can afford an aloofness and an ability to rise above any situation, even if only for a few seconds" (Frankl, 1985: 63). Humor has been shown to support learning processes (Lovorn, 2008) and trauma recovery (Sliter et al., 2014; Mooney, 2000). It is also used to form and

strengthen social connections (Lynch, 2010). Humor can enable people to handle stress (Abel, 2002) which can help them process serious and frightening topics that, without humor, could cause an emotional shut-down (e.g., Frankl, 1985; Booth-Butterfield & Wanzer, 2016).



Figure 34. Forum Theater exercise at Retreat

A playful game as entry point for exploring more difficult emotions later on. Source: KR Pearson

SIDE A

WHAT NEVER FAILS TO LIVEN UP A PARTY? _____.	AN EPIC BALLAD FOR THE ANTHROPOCENE WILL FEATURE _____.	_____ GETS ME THROUGH THE LONG DARK NIGHTS.
WHEN I'M PRIME MINISTER OF THE UK, I WILL CREATE THE DEPARTMENT OF _____.	WRITE A HAIKU ABOUT A CLIMATE REFUGEE CAMP (USING 2-3 CARDS)	_____ MAKES ME SMILE EVERY TIME.

SIDE B

a soggy tent.	extreme temperatures.	beans-based camp food.
a composting toilet.	a time capsule with McDonald's french fries in it.	local organic chicken.

Figure 35. Sample of Cards for Humanity Game

In this game, each person has a series of cards with the blanks (examples are in the image to the left) and a series of cards with nouns (examples are in the image to the right). They are matched together for comic effect. Source: Created by KR Pearson

6.3.2 Comfortable spaces to be uncomfortable together

The presence of lightheartedness in all three events linked to our reflection on the balance between comfort and discomfort in grappling with heavy topics. In relation to climate change, some research suggests that while there are many benefits to incorporating humor, without a balance of fear and anger, humor alone can lead to emotional distancing from the topic (Boykoff & Osnes, 2019; Skurka et al., 2018). Essentially, if people are too overwhelmed, they can't respond creatively and proactively (Lertzman, 2015), but if people are too comfortable, they aren't motivated to change (Chaves & Wals, 2018).

Throughout the project, we observed the power of creating convivial environments in which people feel safe and cared for, but which also nudge us to leave our comfort zones. During Retreat, for example, once people arrived and set up camp, the 'holding camp' quickly resembled a 'summer camp'. Even through two days of severe storms, everyone kept in good spirits and contributed to maintaining and storm-proofing the camp. At the end of the four days, several participants admitted that they had been relieved by the easy atmosphere, as the tone of the invitation video had been quite serious and alarming, and they hadn't known what to expect. In fact, many of the parents shared their initial doubts about whether or not to share the invitation video with their children, stuck between wanting to involve them in the important topic of climate change, but not wanting to terrify them. In one interview, a young participant explained that she was glad Retreat made her worry more about climate change because it made her want to act and it also gave her some insight as to how to act ("we cannot be competitive, we have to do it together"). Another parent explained that "Retreat completely exceeded our expectations and my son said afterwards that it has helped prepare him if he ever had to leave his home suddenly. The wonderful range of inspiring people (adults and kids) were what most surprised us. It was really encouraging to meet such a diverse group with diverse skills and experiences" (Retreat Survey Respondent). This seems to be in line with the recognized need to face the (often painful) reality of the threat as a first step towards developing personal and local responses to climate change (Macy, 2012).

The retreat created a lighthearted, welcoming space that allowed parents and children to engage in unfamiliar or challenging experiences together—something that people in general expressed a desire for in informal conversations, interviews, and in survey responses (also see Figure 36). One participant shared, "I was a little nervous that I might be expected to be 'expert' in my field, it was great that people were allowed to just 'be'. I was expecting to be pushed out of my comfort zone, instead the retreat experience felt safe, inclusive and playful even though we were required to leap into the unknown often" (Retreat Survey Respondent). Another described it as "a wonderful, challenging, warm, fun, thought provoking and inspiring weekend that will stay

with us for a long time” (Retreat Survey Respondent). For many, the strongest memory was the sense of connection: “We really loved it and didn’t want to leave it was the amazing people we met and just hanging out doing art together eating and working together that made us feel we had made a little community in just a few days” (Retreat Survey Respondent).

The structure of Vonk was quite different. The event did not require people to leave the comfort of their neighborhood or their daily lives, but it did create a space to bring up uncomfortable emotions and doubts and unspoken tensions surrounding the energy transition project. Many people commented that they recognized the feelings that were played out in the performances and they felt empowered by seeing them externalized and shared publicly. Community meetings and local politics usually follow specific ‘ritual’ forms which do not typically surface and reflect the emotional dimensions of an issue (Diamond, 1985; Feldman, 2019). Through the Vonk performances, feelings of frustration, anxiety, and insecurity suddenly became legitimate elements in the transition process that could be openly discussed, rather than repressed or bottled up. In this sense, the habituated container for holding neighborhood planning conversations and making collective decisions was disrupted. It is worth noting that if not done skillfully, bringing in emotions through the arts could have been too far outside people’s comfort zones and could have backfired and made people more suspicious and withdrawn (Wals & Peters, 2017). The quality of the performances and the preparation of a welcoming environment—including warm food served to the audience—created a comfortable and safe environment in which people were visibly at ease.

During the Compose workshop, the familiarity of the workshop structure and the professionalism of the facilitation created a safe environment that supported people to participate in activities that were outside their comfort zone. At certain moments, participants felt unsure and uncomfortable about the process—what was the point? What was the outcome? This was by design: an important part of the Hero’s Journey is ‘the dark night of the soul’ when the hero must face and grapple with elements of chaos before they conquer (or integrate) the enemy and emerge triumphant. After participants experienced the event as a whole, during the final round of in-person collective reflection they expressed satisfaction and enthusiasm about the opportunity to reflect creatively and non-linearly on their role as academics in the face of climate change. Later, one survey respondent described the event as a “very creative and inspiring way of bringing different ideas together and forming [sic] new knowledge with others” (Compose Survey Respondent) and another appreciated the “the conviviality of it all” (Compose Survey Respondent).

In sum, the three generative engagements demonstrated that dealing with difficult topics related to runaway climate change requires eliciting (positive and negative) emotions, and facing harsh realities, but in a way that makes participants feel stronger and more connected to one another. Arts-based methods can help create a kind of liminal safe-space or so-called ‘holding

environment' in which people step outside the everyday habits of silence and denial and are able to process deep and troubling issues (Nicholsen, 2002). And artmaking in this context allows participants to express and explore emotions through multimodal (embodied, visual, linguistic, etc.) processing.

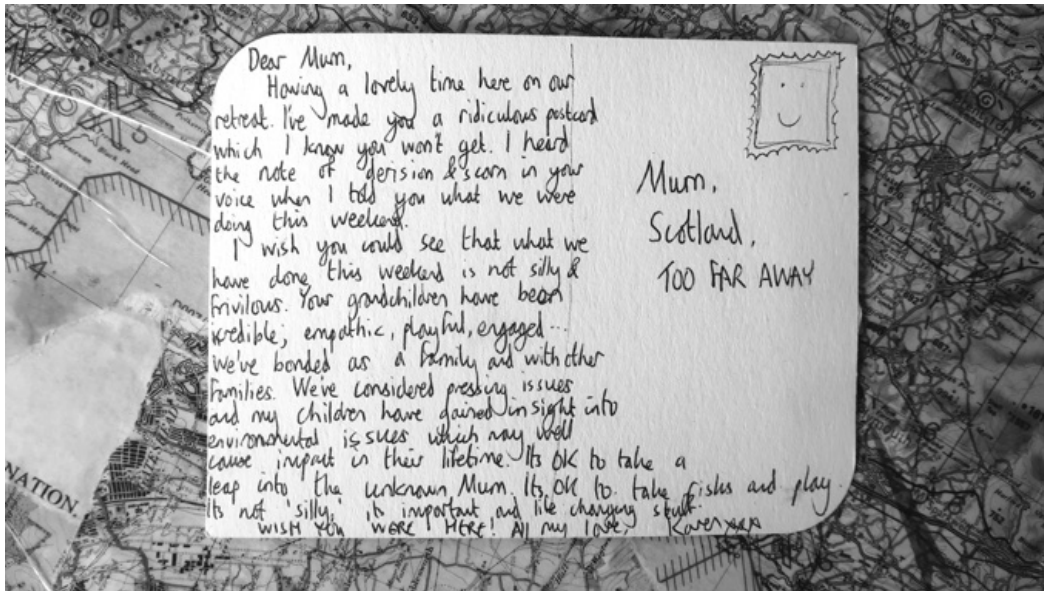


Figure 36. Postcard from the Creative Caravan: Retreat

Text from the postcard: "Dear Mum, Having a lovely time here on our retreat. I've made you a ridiculous postcard which I know you won't get. I heard the note of derision & scorn in your voice when I told you what we were doing this weekend. I wish you could see that what we have done this weekend is not silly & frivolous. Your grandchildren have been incredible, empathetic, playful, engaged... We've bonded as a family and with other families. We've considered pressing issues and my children have gained insight into environmental issues which may well cause impact in their lifetime. It's OK to take a leap into the unknown Mum. It's OK to take risks and play. It's not 'silly'. It's important and life changing stuff. Wish you were here. All my love..."

6.3.3 Design for deep participation

A third area of learning was about how different forms and levels of involvement can shape the participants' experience. In comparing the three sub-projects, we observed that the participants had different, as artist Jeppe Hein terms it, "levels of influence" (Schikowski, 2016: 767) in each respective participatory art event. We also noted that participants' levels of influence extended beyond the realm of the artworks and into the informal or semi-structured activities involved in creating and maintaining the 'container' of the event via supportive or care tasks such as cooking, cleaning, and eating together.

In Retreat, for instance, the facilitated activities and creative engagement stations offered participants a ‘high’ level of influence. The activities were carefully designed in advance by the local team, but built into the design were structures that enabled everyone to be part of the making process and allowed for emergence. Some activities had formal instruction and guidance (such as making clay figures or a copper talisman), and others were ‘stations’ where people could work independently and respond to creative, topical prompts. The adults and children moved in and out of structured activity as they wished, filling the time in between with unorganized play, talking, eating, or just hanging out. Although the facilitators provided a framework and invitation for the engagement, the content and outcome of the engagement was entirely shaped by the participants. What emerged was very much ‘of’ the participants, whilst the distinction between non-artist participants and artist initiators became fuzzy and almost entirely indistinctive. Consequently, there was a real sense of collective meaning-making as insights and ideas emerged through making and being together, in the liminal spaces between activities, and through unplanned collective creation where groups of people sought solutions for practical problems.

In addition to the structured activities of arts and making during Retreat, the families also joined in daily camp activities such as preparing and sharing meals, doing dishes, and making the campfire which added to the conviviality, connectivity, trust between participants and a democratic sense of ‘being in it all together.’ The combination of the structured, semi-structured and the spontaneous, further blurred the line between the professional artists/organizers and the participants and created ample space for reflection and meaningful conversations. Literature on ‘commensality’, or cooking and eating together, supports this conclusion and points to the importance of these activities in building trust and connections (e.g., Giacomani, 2016; Marovelli, 2019).

Vonk was structured with more separation between ‘artists’ and ‘audience.’ It consisted of four performances scattered throughout the neighborhood that required some responses and participation (such as playing with clay and holding part of the stage set), but it was highly guided and left little room for open-ended, undirected creativity on the part of the audience. Several of the participants-observers noted that the moments when the audience was asked to participate created visibly high levels of energy and engagement amongst the crowd. Compose was also highly structured in a workshop format, but many of the activities allowed people to express themselves creatively and to communicate with each other via making objects. As compared to Retreat, the participants in both Vonk and Compose didn’t have as much opportunity to demonstrate agency in terms of contributing to emergent structures.

While Vonk and Compose followed relatively well-established formats of creative participation in artistic responses to climate change—namely, site-

specific performance (Pearson, 2010) and arts-based workshops (Pearson et al., 2018)—we suggest that Retreat introduced a novel kind of relationship between artists, participants, and artworks. In order to make that argument, we draw from Matarasso’s definition of ‘participatory art’ and the concept of ‘practicable’ as discussed extensively by Bianchini & Verhagen. Matarasso defines participatory art on the basis of two characteristics; firstly, that it “involves the creation of art” (2019: 48), and secondly, that everyone involved in the creation is an artist, whether professional or not. Aligning with a trend in social art in which emphasis on the completed work of art is shifted to the processes of its creation (Bishop, 2012; Lacy, 1995; Kester, 2011), the ‘artistic quality’ of the art in this context is irrelevant. What matters is the fact that by making and creating, or responding to something creatively, the participants bring something into the world and thereby “conjure up new possibilities in all our imagination” (Matarasso, 2019: 49), which in itself is transformative. Herein, Matarasso argues, lies the power of (participatory) art. ‘Practicable’ art, according to Bianchini & Verhagen, denotes artworks in which the distinguishing feature “is their capacity to accommodate the concrete involvement of their viewers and to generate an activity that may transform the works themselves as well as their audience” (Bianchini & Verhagen, 2016: 1).

Based on these two interpretations we argue that Retreat was both participatory and practicable, with (a) the process design allowed for high levels of openness that enabled participants to almost entirely determine the outcome of the work, and (b) the implicit recognition that because of this influence and creation, everyone involved was an artist. If everyone is indeed an artist on an equal basis—regardless of whether they are art professionals or the initiators of the process—then, we would argue, the process ceases to be a ‘participatory artwork’ in which non-artists work alongside artists, but instead takes the shape of a group of artists experimenting together, playing with ideas and materials, testing and failing: a scenario that mirrors the notion of an ‘artist colony’ or ‘artist residency.’ The difference between participatory art on the one hand and a collective art residency on the other is nuanced, but as we will demonstrate in the next section, acknowledging this distinction ultimately determines how highly we value everyone’s ability to be creative and artistic with the purpose of generatively engaging with climate change.

6.4 Conclusions: The Collective Artist Residency

Historically, artist residencies have existed to provide artists with a retreat from everyday life, thereby creating working conditions that are “most favorable to the production of enduring works of the imagination” (Wiseman, 2006: 10; Lübbren, 2001). Often located in rural, idyllic spots, the residency

provides the artist with isolation and ‘incubation’ to maximize their artistic potential. A related concept is that of the ‘artist in residence,’ which emphasizes the interaction between the artist and non-artists in their everyday organizational settings. In this scenario the artist, who is an outsider, is embedded in an institution or organization and typically creates work that “creates possibilities for [...] free play or shifts between a given reality and another while leaving room for ambiguity and uncertainty” (Lithgow & Wall, 2019: online). There are increasing numbers of residencies that invite socially-engaged artists to develop projects in and with communities, indicating a trend towards residencies being “less about supporting isolated practice of artists and more about using art as a way of collectively responding to the global challenges of our time” (Badham, 2017: online). This includes different ‘climate change residencies’ such as Cape Farewell, where scientists and artists traveled to the Arctic on so-called expeditions, which resulted in a range of pieces created by the artists in response to their experiences and observations. All of these scenarios, however, still typically conform to a pattern in which the locus of creativity and making is with the professional artists, who work *with* community members that are notably *non-artists*.

We would argue that the durational and participatory qualities of Retreat echo the idea of an artist residence, as participants ‘retreated’ from their everyday obligations and were given dedicated time to do, explore, experiment, and produce creative work. Contrastingly, in our conceptualization of a ‘collective artist residency’, the emphasis shifts away from lead artists toward the collective results of collaborative creative inquiry: all involved engage on an equal basis in the process of making objects and knowledge. Retreat provided the non-professional artists/makers with a comfortable space to creatively and collectively explore a potentially uncomfortable subject matter, generating art together as a means for inquiry, conversation, and meaning-making, resulting in tangible artifacts.

Emphasizing this engagement as a novel concept matters for two reasons. First, participant feedback—strongly positive across the board—suggests that people, whether or not they are professional artists, appreciate open-ended spaces for making art without strict direction. As mentioned above, adults rarely encounter chances to explore meaningful themes through playful experimentation, even though the benefits are well established. Consistent with the principles of cultural democracy, we argue that spaces for artistic meaning-making should be available to everyone, not just those identified as artists.

Second, we believe that explicitly calling this form of engagement an artist residency, acknowledges the value of *everyone’s* creativity, experimentation, and playful engagement with societal issues. This is especially relevant in the context of urgent and complex issues such as climate change, as research has demonstrated that when people feel overwhelmed and anxious about an issue, their capacity to come up with new solutions is reduced

(Albrecht, 2011; Clayton et al., 2014; Lertzman, 2015). As a problem grows more urgent and stressful, people are less able to play, experiment, imagine and test possible ways forward, and, as a consequence, their horizon of possibility and sense of agency shrinks, which, in a vicious cycle, again increases their feeling of stress and anxiety. Therefore, whilst we recognize the need for urgent action and technical solutions that directly mitigate (the effects of) climate change, we argue that there is also a societal need for places where people can come together to muse, make, reflect, tinker and 'doodle'. This could take the form of dedicated spaces where young and old can break away from everyday obligations and stressors, retreat from the constant, reductionist, fear-inducing deluge of media coverage of climate change as a hyperobject (Morton, 2013). People can be critically informed about predicted challenges and changes, but can also express emotions of anxiety and frustration in the face of an uncertain future, take time to play and experiment, to find personal and collective ways through impending crises.

Essentially, a *collective artist residency* can be characterized as a temporal and physical space or 'holding environment' that supports collective, democratic processes of artistic/aesthetic making as a way to generatively engage with issues related to climate change (or other 'wicked' issues). Based on our experience and process of iterative reflection, we suggest some guiding principles that could be useful to consider in designing a collective art residency:

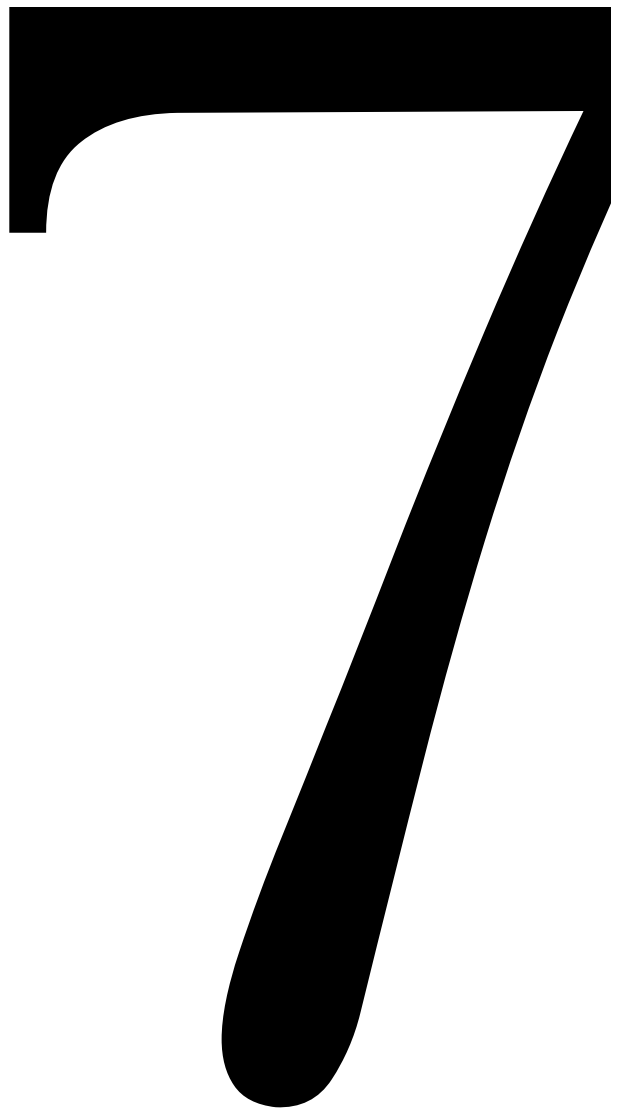
- *Deeply participatory*: The foundational element of the residency is that the boundaries between facilitators and participants, or artists and non-artists, are dimmed, wherein everyone contributes to the shared experience and the collective creation and exchange of knowledge. This includes participation in the art-making processes, as well as the care of 'container' (i.e., cooking, cleaning, etc.).
- *Balanced between comfortable/uncomfortable emotions*: As per critics of 'feel-good art' that is 'only' convivial and purely seeks to create harmonious uncritical encounters between people (see Jackson, 2011 and Bishop, 2012), a collective artist residency creates an opportunity for people to tease out the heavy matters that impact their lives through playful, lighthearted experimentation. The design intentionally balances seriousness with humor and seeks to create a safe 'holding environment' which supports the exploration of complex/painful emotions, whilst also allowing for dissensus (Ranciere, 2010).
- *Highly experiential*: Evoking an expressive, somatic, or emotional experience and integrating processes of reflecting with doing and making.

- *Cross-sectoral and intergenerational*: Bringing together people of all ages and societal sectors, e.g., linking community members (young and old), policymakers, and scientists to share perspectives, whilst also acknowledging that children are instigators of play and hands-on experimentation.
- *Place-based*: Exploring a locally relevant issue with global implications, informed by participants' experiential and situational knowledge, and directing localized or personal responses to the issue in question.

We suggest these principles serve as aspirational and flexible guidelines or points of consideration, rather than as strict criteria or as a basis for quality assessment.

In sum, the collective artist residency redefines what it means to use creativity in response to complex societal challenges like climate change. It takes a different approach from outcome-driven programs because rather than focusing on finished works or specific deliverables, it prioritizes open-ended experimentation and exchange. And unlike residencies where artists work independently within businesses or institutions, this model brings together a group of people who actively create as co-participants, shaping the experience through shared practice. More than a space for making art, these residencies create the conditions for unexpected connections, fresh insights, unruly emotions, and ideas that might not emerge in isolation. When people are given time, freedom, and structure to think together, new possibilities might open up.

Chapter 7 takes another look the insights and learnings discussed in this chapter, putting them in the context of the theoretical framework developed in Chapters 2 and 3 and relation to the case study *Activating Transformative Mindsets* described in Chapter 5.



7 LANDSCAPES IN THE LOOM, A FINAL LOOK

“The survival of civilization and the well-being of humankind in the future will require a dramatic shift in the dominant cultures of global society—a veritable cultural renaissance”

BOYDEN (2001: 112)⁵⁴

“The truth of art lies in its power to break the monopoly of established reality to define what is real...Art cannot change the world, but it can contribute to changing the consciousness and drives of the men and women who could change the world”

HERBERT MARCUSE (1978: 33)⁵⁵

⁵⁴ Stephen Boyden is an Australian human ecologist and former biomedical scientist who made a remarkable shift in his career—from studying disease to exploring the health of human societies in relation to ecosystems. He helped pioneer the field of urban ecology and was one of the early voices calling attention to the cultural dimensions of sustainability. What makes Boyden especially interesting is his insistence that biology alone can’t explain or solve our planetary crises; for him, the patterns of thought and culture that shape human behavior are just as critical. His call for a “cultural renaissance” reflects decades of interdisciplinary work trying to bridge scientific insight with societal transformation.

⁵⁵ Herbert Marcuse, a German-American philosopher and prominent member of the Frankfurt School, was known for his Marxist orientation and critiques of capitalist society. In *The Aesthetic Dimension* (1978), he argues that while art cannot directly change the world, it can unsettle dominant notions of reality and influence the consciousness of those who might bring about change. While I do not share Marcuse’s political orientation, I find this passage compelling for how it frames the transformative potential of art in shaping perception and possibility.



The poet, philosopher, artist, and storyteller in each of us shapes our sense of what is important, worthwhile, and possible. When we are touched and moved by the emotional resonance or compelling aesthetic of an artistic endeavor, new pathways emerge in the landscapes of our imagination, countering the stifling, fatalistic perception that ‘there is no alternative.’ This research project has proposed that imaginative leadership can contribute to a cultural renaissance toward regenerative sustainability by sparking new stories, metaphors, and practices that support transformative mindsets and open new spaces of possibility.

This final chapter weaves together the threads that have emerged throughout the research process. Here, I draw insights from the empirical cases back into a broader perspective shaped by the conceptual framework, relevant literature, and the central research question: *How can arts-based practices contribute to imaginative leadership in transformations toward regenerative sustainability?* I also look back with a critical perspective and imagine what’s next: What worked well, where stumbling blocks appeared, and how might I approach things differently if I were starting again? Overall, this chapter reflects on what this inquiry has uncovered and afforded, how the pieces connect, and what this all might mean for what Macy and Brown (2014) describe as “the essential adventure of our time”—societal transformations toward a healthy planet.

Specifically, Section 7.1 revisits the five guiding sub-questions and the overarching research question, drawing together insights from across the theoretical and practice-led chapters. 7.2 offers a reflective look at the research process itself—what worked well, where tensions arose, and what might be approached differently. Section 7.3 articulates the emergent concept of *generative engagements*—creative encounters that invite transformation by engaging the emotional, embodied, cultural, and systemic dimensions of experience. These are further understood through the Four Quadrant (4Q)

framework, offering a way to design and reflect on engagements across different dimensions of change.

Section 7.4 returns to the conceptual framing of imaginative leadership, considering how it evolved over the course of the research. Section 7.5 offers a set of provisional design considerations and invitations for those working at the intersection of arts, imagination, and sustainability. Finally, 7.6 turns to what's next, naming the questions, uncertainties, and possibilities that remain alive at the close of this inquiry.

7.1 Return to Research Questions

In this section, I return to the five guiding sub-questions that structured the research across theory, methodology, and practice and then briefly address the primary question: How can arts-based practices contribute to imaginative leadership in transformations toward regenerative sustainability?

7.1.1 RQ 2

How do the inner dimensions of sustainability support transformative agency toward regenerative futures?

In Chapter 2, in response to this question, I established the problem domain of transformations toward regenerative sustainability and developed a “lexicon” that brings together concepts from multiple disciplines to better understand how inner dimensions shape transformation. I started by looking at transformation towards regenerative sustainability using the Four Quadrant (4Q) model which maps phenomena across two intersecting axes: individual to collective, and interior (intangible) to exterior (observable). This produced a four-quadrant map that shows how personal experience, and collective forces interact across both inner and outer dimensions. The intention was to create a structure that could hold the complexity of these dynamics while still being usable and understandable in practice. Still, while various aspects of the inner dimensions are often referenced in sustainability literature, the specific concepts within them are rarely defined clearly or situated in relation to one another. In response to this confusion, I created a lexicon of the inner dimensions that includes various ways that people make sense of themselves and the world around them, and how they participate in shared cultural patterns. From this, I distilled four categories of influence within the inner dimensions: meaning-making, ways of knowing and being, identity and self-understanding, and shared cultural patterning. These move from individual processes to collective processes within the inner dimensions.

This framework supported a different way of understanding agency. Rather than seeing it as something located within the individual alone, the research highlighted how agency emerges from an entangled field of influences—including emotional readiness, available metaphors, collective narratives, and cultural norms. These inner dimensions don't operate separately from structural or material conditions; they interact with them constantly, shaping how people interpret situations, what feels possible, and how they choose to act. From this view, transformative agency is not a stable trait or a predictable outcome—it arises when meaning shifts, emotions surface, and new stories begin to take hold. Inner dimensions help create the conditions through which action can emerge, especially in times of complexity, uncertainty, and change.

7.1.2 RQ 3

How can arts-based practices activate transformative mindsets and grow imaginative leadership? (theory)

To explore this question, in Chapter 3 I developed a theoretical framework that defines imaginative leadership as a mode of engagement that expands what people perceive as possible, reshapes how challenges and futures are imagined, and helps surface ways of seeing and perceiving that support transformation. This understanding of leadership shifts the focus away from directing action or delivering outcomes, and toward activating the deeper layers of how people make sense of the world. Drawing from literature on transformative leadership, imagination theory, and cultural change, the framework defines four ways leadership interacts with meaning: framing, priming, reflecting, and imagining. These describe how worldviews, assumptions, and emotional orientations are shaped and reshaped over time. Imaginative leadership, in this sense, grows through relational and iterative engagement—not through control or persuasion, but by cultivating the conditions under which new interpretations and actions can emerge.

Within this framing, the role of arts-based practices becomes central. The chapter shows that artistic practices work directly with the inner dimensions identified earlier—engaging emotion, metaphor, narrative, and embodied experience in ways that bypass purely rational understanding. Art can disrupt familiar frames, open space for uncertainty, and invite people to inhabit new perspectives, all of which are essential to activating transformative mindsets. These mindsets—such as openness to complexity, comfort with ambiguity, and a sense of ecological entanglement—are not taught through instruction, but stirred through experience. The arts can offer the kind of experiential, symbolic, and affective engagement that has the potential to create the shift in perception and imagination. In this way, the framework

developed in Chapter 3 helps explain why arts-based practices can activate transformative mindsets and cultivate imaginative leadership.

7.1.3 RQ 4

How can arts-based methods be better understood in processes of activating and strengthening imaginative leadership? (methodology)

In Chapter 4, I addressed this question through the design and articulation of a case study research methodology. Constructing the methodology became a way to better understand arts-based methods—by inquiring into how to research imaginative leadership in a manner consistent with its character. I framed imaginative leadership as a complex and emergent process, where outcomes are unpredictable and shaped by context, emotion, and interpretation. The methodology needed to reflect that same orientation. I used Bricolage as the guiding approach, drawing from Participatory Action Research, Research through Design, Practice-led inquiry, and reflective sensemaking. These traditions were brought together through cycles of iteration and reflection—each contributing tools and sensibilities suited to different parts of the inquiry.

The methodology was grounded in an enactivist and interpretive stance, where knowledge is understood as arising through participation, embodied experience, and reflective engagement. This approach made it possible to stay attentive to the kinds of insights that imaginative leadership requires—those that are often subtle, relational, and nonlinear. The chapter made clear that what counted as insight in this research was not determined in advance. This understanding created the foundation for engaging with arts-based methods as a form of inquiry. Rather than separating method from context, the methodological choices were shaped through doing the work, and by tracking what kinds of meaning and possibility emerged in the process. In that way, the research methodology was intended as a grounded way of understanding how arts-based methods might support imaginative leadership through reflective attention to what unfolded.

7.1.4 RQ 5

How can arts-based methods help sustainability practitioners grow capacity for imaginative leadership? (empirical)

In the case study *Activating Transformative Mindsets* (in Chapter 5), I investigated this question through a practice-led inquiry into the process of designing and delivering two workshops that employed arts-based methods of

engagement. The research focused on how arts-based methods could be intentionally developed to support practitioners working within the complexity of sustainability contexts. The workshops were structured around a set of transformative mindsets—such as regenerative sustainability, care for place, more-than-human perspectives, long-term thinking, and comfort with uncertainty—drawn from literature and interviews, then shaped further through iterative cycles of design and reflection.

The design process was the central site of inquiry. Participant-collaborators were involved throughout—testing activities, offering feedback, and shaping the methods in context. Participant-attendees contributed through their engagement in the workshops and through the creative artifacts and reflections that emerged. Arts-based practices such as story, metaphor, image, and movement were built into the workshop structure to invite new forms of attention, interpretation, and connection. The research traced how the design opened space for imaginative engagement and how particular methods resonated with or challenged the intended mindsets.

Through this process, the research surfaced a revised list of transformative mindsets and offered a prototype structure for designing methods that integrate conceptual clarity with experiential depth. The workshops served as experiments in creating the kinds of conditions where imaginative leadership might take root. The insights came from reflecting on what the design revealed, what shifted during facilitation, and what remained resonant afterward.

7.1.5 RQ 6

How can arts-based methods enable sustainability leaders to engage meaningfully with the imaginative and emotional dimensions of ecological challenges? (empirical)

In Chapter 6, I explored this question through a case study on the project *Imaginative Disruptions* which was comprised of a series of participatory arts-based events across three countries: the UK, the Netherlands, and Sweden. Each event within the project was designed in collaboration with local artists and participant-collaborators to explore ecological themes that carried emotional and symbolic weight—such as climate displacement, extractive energy systems, and uncertain futures. The engagements invited reflection and response through story, performance, image, and movement, engaging layers of experience often overlooked in strategic or technical approaches to sustainability.

Participant-attendees were welcomed into creative settings that encouraged emotional, aesthetic, cognitive, somatic, and social processing.

Activities such as collaborative making, play, and shared contemplation created space for a sense of lightness and care while also holding discomfort, ambiguity, and challenge. These experiences allowed ecological issues to be felt more fully and to be held in relationship rather than solved or resolved. Insights from across the events informed a set of design principles for future Collective Artist Residencies: they should be deeply participatory, balance comfort with discomfort, emphasize experiential engagement, and include cross-sectoral, intergenerational, and place-based elements.

The contribution of this case lies in how the design process, creative engagements, and reflections with participant-collaborators illuminated the conditions that support meaningful emotional and imaginative engagement. Arts-based methods helped shift the tone and texture of sustainability work—offering symbolic language, shared experience, and relational depth. These events made room for imaginative leadership to take shape through grounded, embodied, and culturally responsive practices.

7.1.6 Back to the overarching RQ 1

How can creative and arts-based methods meaningfully support imaginative leadership for regenerative sustainability?

The two case studies relate to the primary research question in different ways: *Activating Transformative Mindsets* centered around the design of arts-based methods with potential to open new spaces of possibility and *Imaginative Disruptions* explored the process of creating immersive arts-based experiences. Each worked with different rhythms, settings, and expectations, but both used the arts to shift how participants encountered complexity and made sense of ecological challenges. They showed different ways creative practices can shift perception, interrupt default habits, and make room for forms of engagement that are usually left out of sustainability work.

As summarized in Table 9, the two cases produced different kinds of outcomes. *Activating Transformative Mindsets* focused on cultivating imaginative leadership within professional and design-oriented contexts. It generated a list of potentially 'transformative mindsets' and a practical framework for crafting 'fit-for-purpose' arts-based methods. A methods-based approach is suited to contexts where people want to explore the inner dimension of sustainability initiatives imaginatively, while staying grounded in a familiar workshop structure and linking directly to tangible outcomes.

Imaginative Disruptions, by contrast, explored more open-ended, collective creative engagements. It resulted in a set of principles for what we called 'Collective Artist Residencies', where the focus wasn't on generating a usable product but on holding space for shared reflection, cross-generational

connection, and emotional resonance. These residencies took various forms—a retreat on climate displacement, a site-specific performance about energy transitions, a reimagined university masterclass—but all created conditions for people to connect in ways that typical planning processes, workshops, or lectures rarely allow.

Table 9. Case Studies Overview

Case	Sub-event	Key Results
Activating Transformative Mindsets	Action Hub Workshop	(1) A compendium of transformative methods; (2) a structure for creating “fit for purpose” methods for nurturing imaginative leadership.
	Imaginative Leadership Workshop	
Imaginative Disruptions	Retreat	Concept of “Collective Artist Residencies” with 3 elements:
	Vonk	(1) Light hearts in the midst of heavy realities; (2) Comfortable spaces to be uncomfortable together; (3) Design for deep participation.
	Compose	

7.2 Complexities and Constraints

7.2.1 Methodological complexities and constraints

Looking back at my research process, I can identify several limitations or gaps in my methodological approach that could be addressed in future research. First, there is a risk of bias due to the informality of my approach and the blurry boundary between data collection and co-creation. Second, there were challenges in maintaining objectivity and avoiding conflicts of interest in analysis and reporting due to relationships with collaborators and institutional support structures. Third, my cases intentionally avoided topics that might have confrontational elements. Fourth, my cases, including collaborators and participants, were largely situated within pro-sustainability communities.

One significant methodological challenge involved the risk of bias through my relatively informal approach to both co-collaborators and

participants. As this research emphasizes collaboration and trust-building, the conversations and even interviews often adopted a conversational tone to foster openness and mutual understanding. This relational approach can encourage people to share candidly, creating a richer and more nuanced data set. However, it also risked introducing bias through leading questions, implicit affirmations, or overly casual interactions that might steer responses in ways unintentional but significant. Balancing my highly relational approach with methodological rigor was a persistent tension, requiring careful reflection on how the tone and structure of interactions might shape the data collected. A part of any inconsistencies in structuring my data was the highly emergent nature of the research. It looks relatively tidy when structured into an academic format, but, like much of experimental, explorative qualitative research, the day-to-day reality of the research project was messy. In future iterations of research, I would err even further on the side of structured note-taking and even pre-structured auto-analysis forms at every stage of the process.

Additionally, the conversational nature of interactions often blurred the boundary between data collection and co-creation. This dynamic made it challenging to separate participants' authentic reflections from ideas that may have been influenced by the researcher's framing or prompts. While this was not necessarily a limitation in the traditional sense, it underscored the co-constructed nature of knowledge in PAR-adjacent approaches, where the process is as important as the outcomes (Kemmis et al., 2014). At the same time, the aims of the research were transparently normative and intended to explore potential rather than to measure or analyze "as is" attitudes and behaviors. This focus on potential allowed for greater flexibility in interpreting data but also meant that findings were less about capturing an objective reality and more about envisioning possibilities. The intention to generate insights about personal and affective dimensions and to evoke subtle transformative mindsets justified the conversational approach because it supported a safe and convivial atmosphere needed for a generative engagement in which people felt free to try methods that might be outside of their comfort zones. However, this required ongoing critical awareness of how my own positionality and interaction style might shape what was being "discovered."

The collaborative nature of this research often led to close relationships with participants and co-designers, including friendships and alliances. While these relationships were essential for fostering trust and co-creation, they introduced challenges in reporting honestly and critically. An aversion to criticizing allies or supporting institutions risked compromising the rigor of the analysis. In fact, early on in my explorations, I dropped a potential case that comprised a three-day artist retreat focused on sustainable place-shaping due to a potential conflict of interest. I had reservations about the ethics and the underlying practices of the proposed retreat. It could have been interesting and illuminative to investigate this case and its ambiguous outcomes, but the power dynamics in my own research project were such that it would have caused problems within the umbrella structures funding my research. This decision

underscored the ethical complexity of working closely with collaborators while maintaining integrity and objectivity in research. To mitigate this issue within the cases that ended up being the core of my case investigations, a co-evaluation process was implemented which shifted the role of the researcher from judge to collaborator in assessing outcomes. This helped navigate the tension between maintaining relationships, meeting expectations of supporting institutions, and ensuring honest reporting.

Next, as discussed in Section 4.2.2, this research intentionally avoided controversial topics, areas of conflict, or contentious decision-making processes. While this focus was strategic due to limited time and a core emphasis on developing creative methods to support transformative mindsets, it also represented a limitation. Addressing topics such as power dynamics, eco-anxiety, conflicting values, and hidden agendas could have enriched the findings, particularly given the value of surfacing conflict in social learning for sustainability (Wals & Heymann, 2004). Within different parameters, creative methods hold significant potential to engage with and address these dimensions, offering opportunities for deeper generativity in addressing complex issues (Kenter et al., 2019).

Finally, my cases were largely situated within a community of people who already cared about the topic of sustainability and were motivated to engage with it (see Section 4.2.4 for reasoning). This focus allowed for productive collaboration and innovation, as participants were already aligned with the goals of the research. The group was diverse in terms of disciplinary backgrounds, drawing from fields such as art, design, ecology, and social sciences, and included participants from multiple generations. However, there was a notable lack of diversity in socio-economic and ethnic backgrounds. Nearly all participants were from Northern Europe, and the group was predominantly white. This homogeneity likely influenced the perspectives and priorities brought to the table, potentially narrowing the range of insights and solutions explored.

Working within this relatively homogenous demographic meant that the findings might not fully reflect the challenges of engaging with individuals or groups who are skeptical, indifferent, or actively resistant to sustainability initiatives. Additionally, the lack of broader socio-economic and ethnic diversity might have limited the applicability of the findings to contexts where power dynamics and systemic inequities play a more pronounced role. These gaps underscore the importance of expanding future research to include a wider range of voices, particularly those from communities that are often underrepresented in sustainability discussions yet disproportionately affected by environmental and social challenges.

Future research could explore how generative engagements and creative methods function in contexts where sustainability is not a shared priority, potentially revealing new strategies for bridging divides and fostering dialogue. For example, it would be valuable to test these methods in settings where

participants hold conflicting views on environmental issues or where systemic barriers create resistance to change. Additionally, actively incorporating participants from more diverse socio-economic, ethnic, and geographical backgrounds could provide fresh perspectives and help uncover blind spots in existing approaches. Expanding the arenas of application for generative engagements could illuminate both the limitations and the broader potential of these approaches in driving transformative change.

These methodological challenges highlight both the strengths and the limitations of my research approach. While the informal, collaborative nature of the work fostered trust and creativity, it also introduced risks of bias and ethical complexity. Similarly, focusing on aligned participants within the sustainability bubble provided a strong foundation but constrained the diversity of perspectives. By addressing these limitations in future research—particularly by engaging with conflict, power dynamics, and less sympathetic audiences—creative methods and participatory approaches can continue to evolve as tools for fostering transformative mindsets and systemic change.

7.2.2 Challenge of rigor

In addition to those listed above, there were areas of weaknesses in the rigor of applying clean, appropriate methodological approaches. For example, there was a lack of a clear structure for categorizing and integrating the various disciplines that were woven into my theoretical framework. Coming from outside academia, with a background shaped by liberal arts and an interdisciplinary master's program, my initial approach was somewhat naïve. I embraced the openness of interdisciplinary inquiry but struggled to map the breadth of ideas I encountered, leading to a lack of precision in some aspects of the theory development. A more deliberate approach to mapping the theoretical inputs could have been beneficial. Or, on the other, hand starting with a developed framework, applying it, and adding to it.

Additionally, while I received some guidance in qualitative sociology and participatory approaches, my grasp of these methods felt incomplete. I often found myself navigating the qualitative research process without feeling one hundred percent confident in the theoretical and methodological foundations underpinning it.

Another challenge was tracking the various experiential threads that shaped my research. Multiple workshops, interviews, projects, and speculative exercises informed my work but often went undocumented. The lack of systematic record-keeping made it difficult to trace connections and reflect deeply on how these elements influenced the study. While the core research cases were well-documented, capturing all the rich experiences that shaped my thinking may have been an unrealistic goal.

These weaknesses reflect the real challenge of juggling interdisciplinary inquiry, personal learning, and methodological rigor. Being upfront about the messy and nonlinear nature of the process feels important—not to excuse the gaps but to give an honest picture of how the work unfolded. While these limitations show where more structure or planning could have helped, they also point to opportunities for growth and lessons learned along the way—key parts of this academic journey.

7.2.3 Transdisciplinarity in practice

Transdisciplinarity was a core part of how this research was designed and carried out. As described in Section 1.2.4, it was both an epistemological stance and a methodological choice. The field of transformations towards regenerative sustainability is complex, and it raises questions that can't be answered from within a single discipline. Moreover, because this arena has explicit urgency toward pragmatism and action, it involves a clear intention to engage with people and ideas outside of academic settings. That made it necessary to work with multiple ways of knowing and to stay open to forms of insight that didn't always fit within conventional research categories.

The transdisciplinary nature of the research process was clearly manifest in the design and delivery of the workshops and the collective artist residencies; both case studies brought together people from different backgrounds—artists, researchers, local practitioners, and others—to explore ideas and questions together. The arts-based methods themselves combined knowledge and norms from across and beyond disciplinary boundaries—some explicit, some not. Rather than applying a set process, each setting required attention to the people involved, the context, and what was unfolding.

Working across these differences involved ongoing interpretation and adjustment and often required slowing down to make space for different forms of expression and understanding. Each context brought different expectations around language, pace, and purpose. Some participants were more comfortable with structured processes and clear outcomes, while others responded more to open-ended exploration or creative forms of expression. Making space for all of these ways of working required an alertness and flexibility, and at times, it created tension or uncertainty around what “success” even looked like. For example, was the priority to design the workshops with the Welsh Government as a pragmatic “training the trainer” program so that the method could be easily used by the front-line staff in their own work? Should it have been focused on practical outcomes and professional support? Or was it engaging a group of interested people willing to experiment on themselves and reflect on their own mindsets and the inner dimensions of transformation? Or both? The balance of expectations was different for each person.

There were also challenges in communication. Familiar words like “sustainability,” “leadership,” “art,” and “participation” had different nuances and associations for different people. I didn’t try to force agreement on definitions. Rather than trying to resolve those differences, I treated them as part of the process. They pointed to the complexity of the work and the limits of any one vocabulary. Staying in relationship across those differences often mattered more than reaching agreement. In fact, this pointed to a possible dimension of imaginative leadership that I didn’t explore directly or consider in depth: the capacity to translate across boundaries. This could include the ability to notice and empathetically grasp the default mindsets and mental models that people are using to make sense of things. Research suggests that this kind of attunement can help create openings for change. Renée Lertzman’s work on environmental melancholia (2015), for example, shows how acknowledging people’s unspoken fears, grief, or ambivalence in the face of ecological crisis can interrupt paralysis and allow for more honest and constructive forms of response.

7.2.4 Theoretical gaps and issues

Through the process of developing these cases and analyzing the results, I encountered several interesting theoretical arenas that tempted me to stray from my focus. Here I briefly describe how the following topics could be explored in relation to imaginative leadership: (1) Problematics of democratic approaches to artmaking; (2) Problematics of participation; (3) Coherence versus dissonance; (4) Psychological chaos of multiple conflicting frames. While these issues fell outside the scope of this monograph, they would be worthy of further attention.

(1) Problematics of democratic approaches to artmaking

One dimension of the theoretical framework that was not fully addressed in this research involves the tension between the democratic ethos of artmaking—epitomized by Joseph Beuys’ assertion that ‘everyone is an artist’ (Beuys, 2007)—and the recognition of the unique contributions made by professional artists with years of dedicated expertise. This research adopts a Beuysian perspective, emphasizing the importance of inclusive, participatory approaches to artmaking in fostering generative engagements, particularly in addressing complex challenges such as climate change. However, this democratic framing of artmaking does not fully explore the distinct roles and contributions of professionally trained artists, whose dedicated practice and mastery over time bring invaluable expertise to cultural and societal processes. Future research could more explicitly address this tension, examining how these two approaches intersect and diverge in their impact and value.

Art is valued differently depending on the context. Participatory and community-based art often prioritizes inclusivity, collective meaning-making, and the democratization of creativity, where the process of engagement may be more important than traditional measures of artistic excellence (Bishop, 2004). Conversely, professional art is frequently evaluated through the lens of technical skill, innovation, and aesthetic mastery—qualities that emerge from sustained and rigorous practice. While this research situates itself within a democratic framework, future investigations could examine how professional artistry might complement and enrich participatory art, particularly in addressing societal challenges like climate change. Such an inquiry could explore how the technical expertise, conceptual depth, and boundary-pushing capacities of professional artists can enhance collaborative and participatory approaches without undermining their democratic ethos.

This raises broader questions about the balance between inclusivity and expertise in arts-based engagements. While a Beuysian approach is instrumental in organizing and democratizing generative, arts-based practices, future research could investigate the specific ways professionally trained artists contribute to these efforts. For instance, how might their specialized skills in storytelling, visual communication, or performance amplify the transformative potential of participatory art? Moreover, future work could explore how participatory and professional approaches might be integrated in a way that respects the value of both, fostering a richer and more nuanced understanding of art's role in addressing complex societal issues. Addressing this gap could deepen both theoretical and practical understanding of how diverse approaches to artmaking contribute to cultural and systemic transformation, while also acknowledging the professionalism of art and artists that emerges through sustained, dedicated practice.

(2) Problematics of participation

The binary distinction often drawn between participation and non-participation oversimplifies the complexities of how individuals engage with art. Bruno Latour challenges this divide, noting that even contemplative observation—often classified as non-participatory—can be deeply active and engaging. As he argues, “I can’t think of any more incredibly lively activity than to sit in front of a painting and contemplate it” (Latour, 2016: 775-776). This perspective suggests that participation is not always physical or visible but may include intellectual, emotional, or reflective engagement.

On another level, participation itself is not necessarily a universally applicable framework and should not be uncritically celebrated as inherently transformative or democratic. Claire Bishop (2012) critiques the concept of participation, arguing that in some cases, it can reinforce the status quo rather than disrupt it. She highlights the “tyranny of participation”—a phenomenon where enforced involvement in participatory art or cultural projects may suppress dissent, stifle critical thought, or neutralize an individual's right to be socially disruptive. In such cases, participation can become a mechanism of

control, co-opting individuals into systems of power under the guise of inclusion. For example, projects that emphasize community participation but fail to address underlying power imbalances may ultimately reify existing hierarchies rather than challenging them.

While this issue is not the central focus of this monograph, it raises critical questions about the assumptions underlying participatory approaches. Future research could explore the conditions under which participation serves as a tool for genuine transformation versus when it functions as a mechanism for maintaining the status quo. This could involve examining how different forms of participation either challenge or reinforce power structures and how participatory practices might unintentionally inhibit the critical or disruptive potential of individuals and groups. In future studies, it would be interesting to develop a more nuanced understanding of how participation relates to imaginative leadership.

(3) Coherence versus dissonance?

A third area for deeper exploration is the interplay between coherence and socio-emotional dissonance in fostering transformative imagination during generative events. Dissonance arises when values, beliefs, or actions conflict, creating psychological discomfort. Originally framed as cognitive dissonance (Festinger, 1957), the concept has since expanded to include emotional and relational dimensions, such as emotional dissonance, where suppressed or fake emotions can lead to anxiety, burnout, or apathy (Harmon-Jones & Mills, 1999; Cooper, 2007). This raises important questions for generative events: how does alignment between an event's structure, values, and environment enhance learning and engagement? Conversely, how might dissonance—when the setting or practices contradict transformative principles—undermine these efforts?

In this research, efforts were made to create coherence by aligning event values with regenerative sustainability, such as avoiding bottled water, offering healthy, plastic-free treats, and integrating nature into the aesthetics. These choices aimed to foster trust, reduce distractions, and support participants in engaging deeply with the event's themes. Future research could examine how such coherence affects openness to transformative mindsets and the capacity to imagine alternative futures.

Conversely, environments that embody non-transformative mindsets—such as rigid hierarchical structures, unsustainable practices, or disjointed aesthetics—could potentially dampen creativity and engagement. When the physical space, organizational structure, or symbolic elements of an event appear to contradict its stated purpose, participants might experience a sense of disconnect that could undermine trust and openness. For instance, a heavily top-down approach to facilitation in a workshop intended to promote collaborative problem-solving might leave attendees feeling disempowered and disengaged. Similarly, a lack of attention to accessibility or inclusivity in the

event's design could unintentionally marginalize participants, potentially eroding the sense of shared purpose needed for transformative work.

I'm interested in understanding more about the extent to which aesthetic mismatches may subtly but powerfully influence the atmosphere. Disjointed aesthetics—where visual or sensory elements conflict with the event's core themes—might send unintended messages. Imagine an event on regenerative sustainability serving drinks in disposable Styrofoam cups or hosting discussions in a sterile, fluorescent-lit conference room devoid of natural elements. These choices could inadvertently signal, “We don't truly care about walking our talk,” making it harder for participants to connect with the values being promoted. Exploring how such forms of dissonance influence participant engagement and creativity could provide valuable insights for designing spaces that genuinely nurture transformative imagination.

Exploring these dynamics further would deepen our understanding of how coherence between values, practices, and environments shapes the success of generative engagements, helping refine event design to better support transformative goals.

(4) The psychological chaos of multiple conflicting frames

In any given situation, multiple conflicting frames, primes, and norms interact, influencing how individuals interpret and respond to their environment. Frames, as cognitive structures, shape the way information is perceived and understood, while primes and norms subtly guide behavior by activating certain associations or expectations. The complexity lies in the dynamic interplay between these elements, as they compete for dominance in shaping thought and action. The question of which frames “win” or gain precedence in a particular context is far from straightforward and depends on factors such as individual predispositions, contextual cues, and the broader social or cultural environment. This intricate process has been explored in depth by scholars such as Bargh (2006), Molden (2014), and Nijland (2016), who investigate the mechanisms by which frames influence cognition and behavior in various domains.

However, while this complexity is undeniably relevant to understanding how individuals engage with transformative practices, it was outside the immediate scope of this research. The focus here was not on dissecting the detailed mechanisms of frame competition but rather on examining how generative, arts-based methods and thoughtfully designed environments can activate frames aligned with transformative imagination and sustainability. Future research could delve into the nuanced ways that conflicting frames and primes interact within these contexts, exploring how certain frames are reinforced while others are diminished. Such an inquiry would provide deeper insights into the cognitive and cultural dynamics at play, potentially informing more effective strategies for fostering transformative engagement.

7.3 Generative Engagements: Bridging Creativity and Transformation

The idea of *generative engagements* for regenerative futures emerged from reflections on the overwhelmingly positive participant feedback from both cases. Across subevents, participants consistently described feeling enlivened, stimulated, and deeply engaged—responses that underscored the energizing and transformative potential of these experiences, particularly in contrast to more conventional sustainability events, which can often feel heavy and disempowering. At the same time, in both cases, collaborators observed that the context and relationality were essential for enabling participating individuals to feel comfortable and guided as they experimented with creative methods outside of their comfort zones. Supporting people to enrich their imaginative leadership capacity would include ongoing use of methods for stimulating transformative mindsets. In this sense, it also a process of shifting practices embedded in social, material, and cultural contexts, as described by Social Practice Theory (Hargreaves, 2011).

As defined here, generative engagements invite participants to reflect on their values, ethics, and motivations—what matters most and why it's worth taking action (Eernstman & Wals, 2013). While addressing complex and often overwhelming topics, this type of engagement would incorporate affective elements such as humor, light-heartedness, pleasure (Hammond et al., 2018), and joy (Moriggi, 2022), which serve as important counterweights to the gravity of the challenges at hand. Generative engagements could span a range of forms, including workshops, collective artist residencies, immersive or interactive art installations (Weintraub, 2012), festivals, maker events for regenerative sustainability, and ecological restoration projects. Unlike other arts-based events, a generative engagement would be explicitly grounded in a normative stance of regenerative sustainability and intentionally activate specific mental models and mindsets. These experiences offer opportunities for shared understanding, meaningful reflection, and motivation towards action.

Importantly, generative engagements would employ a range of creative methods and evoke multiple forms of intelligence (Gardner, 2011), enabling emotional, aesthetic, cognitive, somatic, and social processing (Eisner, 2002; Gardner, 2011). The physical act of creating practical-aesthetic artifacts—such as through “thinking with our hands” (Groth, 2017; Sheridan et al., 2014)—allows for multimodal experiences that support meaning-making on both individual and social levels (Gulliksen, 2017). These engagements could facilitate knowledge co-creation and exchange through making and sharing artifacts (Groth, 2017), by bridging diverse knowledge systems (Rathwell & Armitage, 2015), through embodied learning (Gulliksen, 2017), and via playful experimentation (Nørgård & Toft-Nielsen, 2017). By consciously linking creative

practices to transformative mindsets, generative engagements become more than participatory exercises—they offer spaces where participants can explore new ways of thinking, feeling, and acting that align with regenerative futures.

Essentially, generative engagements can function as liminal spaces, as articulated by Victor Turner, where participants enter a threshold state that temporarily suspends conventional structures and opens up possibilities for transformation. These spaces hold room for exploration and experimentation, inviting participants to step outside fixed roles and routines, catalyzing shifts in both mindsets and practices. Seen this way, generative engagements embody imaginative leadership by drawing on the cultural and symbolic power of shared practices and creative processes. They resonate with Geertz's concept of culture as a web of shared meaning and Bourdieu's notion of symbolic power as a way to challenge and reshape dominant narratives. Archer's theory of cultural morphogenesis further clarifies how these engagements contribute to long-term transformation, emphasizing that cultural structures are not static but evolve as individuals reflexively engage with them, iterating between constraint and possibility. These engagements weave together reflection, dialogue, and action, blending the abstract with the tangible—through artifacts, storytelling, and even systemic outputs, when possible. A systemic output could be something that influences larger systems—such as organizations, communities, or policies—by embedding the ideas, insights, or artifacts created during the engagement into broader frameworks or practices. For example, a policy recommendation or strategic plan developed during a collaborative workshop, a community initiative or program sparked by ideas co-created in the engagement, or a framework or set of practices that can be applied across disciplines or institutions. In doing so, they allow individuals and groups to envision and begin embodying regenerative futures, transforming liminal spaces into arenas for imagination and action.

7.3.1 The 4Q of generative engagements

Mapping the concept of generative engagements onto Wilber's Four Quadrant Model (introduced in Chapter 2) provides a structured way to explore their role in supporting transformations toward regenerative societies while also serving as a space for nurturing and practicing imaginative leadership. Generative engagements operate at the intersection of personal reflection, cultural connection, and systemic change, allowing participants to explore and embody the values and practices essential for regenerative futures. The 4Q framework helps clarify how these engagements function across individual and collective scales, as well as internal and external dimensions, offering practical insights for their intentional design and application. The key elements are described in more detail below and summarized in Figure 37.

7.3.2 Individual interior (subjective)

The individual interior dimension highlights the emotional, reflective, and cognitive aspects of generative engagements, focusing on how participants connect with their inner values, motivations, and beliefs. Through activities such as journaling, storytelling, or embodied practices, participants are invited to explore what matters most to them, fostering a sense of clarity and purpose. These reflective processes enable meaning-making by aligning personal values with visions for the future, encouraging participants to consider how their individual actions contribute to larger systems of change. Additionally, generative engagements incorporate elements of joy, humor, and light-heartedness, offering emotional resilience and helping individuals navigate the weight of complex challenges with renewed energy and optimism.

In relation to imaginative leadership, this dimension emphasizes the role of personal reflection in fostering transformative mindsets. By engaging participants at an emotional and cognitive level, generative engagements help build self-awareness and psychological well-being, which are essential for sustained engagement with sustainability challenges. The integration of joy and light-heartedness not only balances the gravity of these issues but also creates a safe space for experimentation and growth. This approach equips participants with tools to process emotions and develop resilience, enabling them to better contribute to collective and systemic transformation. Together, these elements illustrate how imaginative leadership operates through the subjective dimension, catalyzing change by empowering individuals to align their inner values with outward action.

7.3.3 Individual exterior (objective)

The individual exterior dimension highlights the physical and observable aspects of generative engagements, such as how participants embody and enact their ideas. This includes sensory engagement and somatic experiences that connect thought to action. Participants might externalize their reflections through tangible media, such as artmaking, prototyping, or other hands-on practices. Observable dynamics, such as shifts in body language or expressions of excitement, provide insights into how participants engage with creative problem-solving and turn abstract ideas into visible forms.

In relation to imaginative leadership, this dimension emphasizes the role of physical expression in fostering creativity and collaboration. By highlighting the tangible outputs of creative processes, it demonstrates how imaginative leadership can help participants move from internal reflection to outward action. The focus on embodiment and visible practices allows for the bridging

of personal and collective contributions, grounding the abstract potential of generative engagements in concrete and shareable outcomes.

7.3.4 Collective interior (intersubjective)

The collective interior dimension highlights the shared meaning-making and cultural connections that emerge in generative engagements. By fostering dialogue, storytelling, and co-creation, participants can explore collective values, ethics, and aspirations in a safe and inclusive environment. These engagements deepen trust, empathy, and understanding within the group, allowing participants to align on shared goals and values. Collaborative activities, such as group narrative-building or artistic expressions, help participants uncover cultural narratives and envision collective futures.

In terms of imaginative leadership, this dimension underscores the importance of relational and cultural dynamics in fostering group cohesion and purpose. By enabling participants to connect deeply with one another, generative engagements create a foundation for collective action rooted in mutual understanding. Transparent communication and shared experiences of humor and light-heartedness further enhance group dynamics, illustrating how imaginative leadership thrives in environments where collaboration and cultural connection are prioritized.

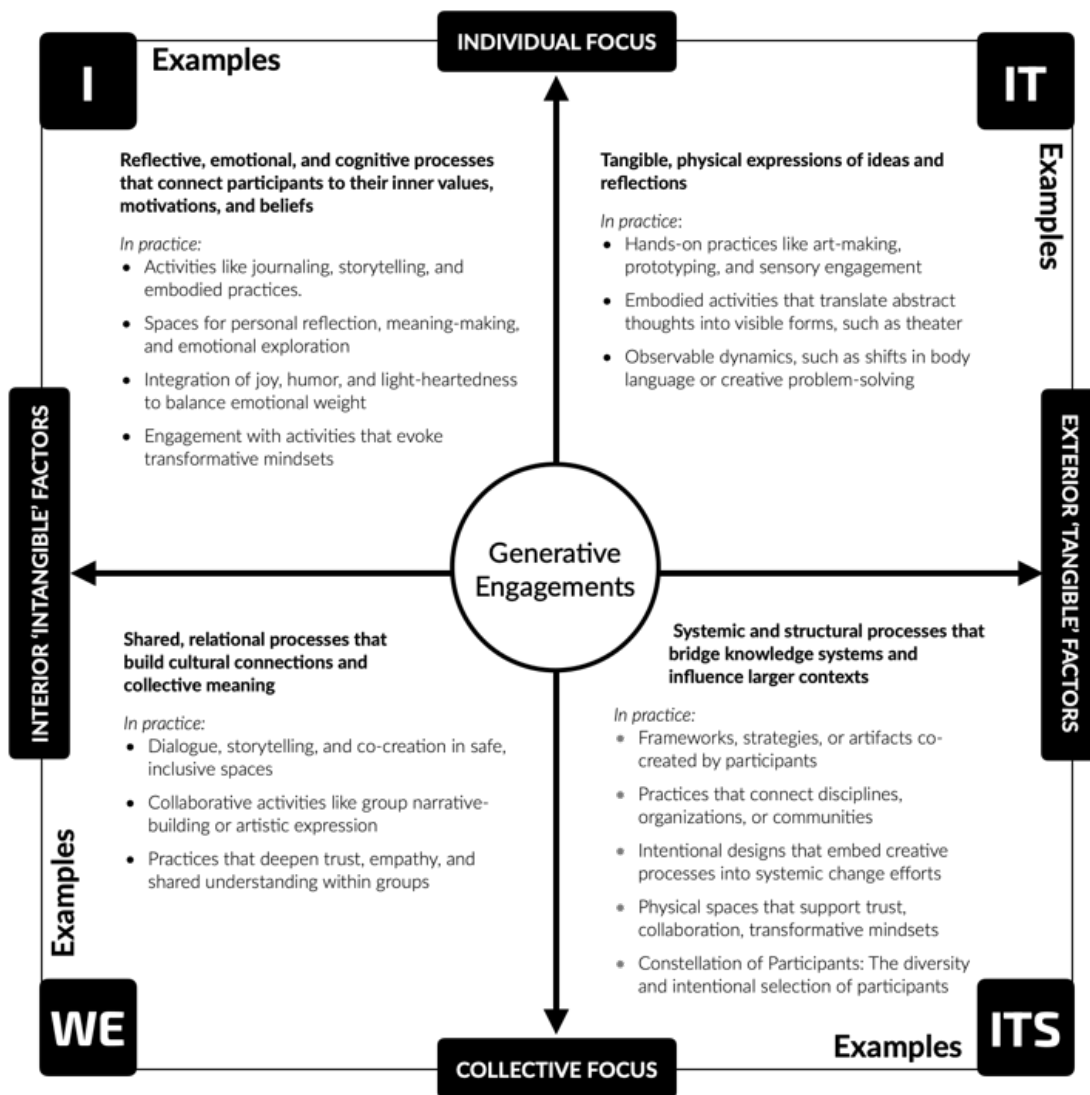


Figure 37. 4Qs of Generative Engagements

Source: Own Conceptualization

7.3.5 Collective exterior (interobjective)

The collective exterior dimension focuses on how generative engagements interact with larger systems and structures, producing outputs that contribute to systemic change. This dimension emphasizes the role of generative engagements in bridging knowledge systems, connecting disciplines, and creating frameworks or artifacts that influence organizational, community, or policy contexts. Outputs, such as sustainability strategies or collaborative frameworks, serve as tangible manifestations of how creative processes can be embedded into broader structural change.

Imaginative leadership within this dimension highlights the importance of designing engagements that address systemic needs while fostering participation and creativity. By utilizing intentional spaces and thoughtfully curated designs, generative engagements ensure that outputs are both collaborative and actionable. This approach aligns personal and collective insights with larger systemic challenges, demonstrating how imaginative leadership can catalyze real-world impact through generative engagements that resonate beyond individual participants and groups.

7.3.6 4Q of Generative inquiry, in sum

To summarize, the concept of a generative engagement is an event or ongoing engagement that combines creativity, reflection, and collaboration to address complex sustainability challenges. It operates across individual and collective levels, integrating inner values and emotions with clear systems, artifacts, and practical actions with potential to contribute to systemic change. The 4Q model provides a helpful framework for understanding how these engagements link individual experiences, shared cultural meaning, and structural outcomes. It highlights the interplay of inner and outer dimensions at both individual and collective scales, creating a “tetra-mesh” where change resonates across personal reflections, shared cultural meanings, tangible actions, and systemic structures. This multidimensional approach integrates emotional and cognitive processes, collaborative meaning-making, and actionable outputs, hopefully creating a dynamic interconnection between subjective experiences, intersubjective values, objective practices, and interobjective systems.

7.4 Reconceptualizing Imaginative Leadership

Returning to the empirical cases with fresh eyes, I step back to reexamine the theoretical framework—what held up, what needs sharpening, and what surfaced that I hadn't previously seen or described with full clarity. One of the clearest takeaways is just how messy and intertwined meaning-making, cultural transformation, and action really are. I had already framed imaginative leadership as an engagement with complexity, drawing on many references and theories to support this. But as all practitioners realize, the cases underscored just how fluid and entangled these processes are in practice, and how they interact in unpredictable ways.

7.4.1 A fresh look at categories and modes

In Chapter 2, Section 4.3, I outlined four categories of inner dimensions that shape how meaning is structured and experienced: deep structures, cultural transmission, cognitive and personal frameworks, and emotional and embodied experience. At the macro level, deep structures—including social imaginaries, worldviews, and cultural narratives—define broad constraints on what societies perceive as possible or inevitable. The meso-level of cultural transmission encompasses discourses, social norms, and conceptual frames, which reinforce and circulate meaning within societies, shaping dominant ways of thinking and regulating behavior. At the level of individual cognition, cognitive and personal structures such as mental models, mindsets, and identity shape how individuals interpret the world, make decisions, and understand their roles. Finally, embodied meaning operates through values, emotions, and metaphors, influencing personal decision-making and transformation potential by shaping ethical orientations and structuring how abstract concepts are understood and communicated (Figure 4).

These dimensions were never meant to be seen as isolated or sequential stages but as inherently intertwined, continuously shaping and reshaping one another in unpredictable ways. From the outset, they were conceptualized as an evolving web of interaction, where meaning-making, cultural transformation, and action emerge through entanglement, feedback loops, and relational exchanges rather than clear-cut steps. The empirical cases reinforced this understanding, showing that these categories and modes are fluid and dynamic, shifting in response to context, engagement, and external pressures. Their interactions are not linear but iterative—constantly reinforcing, disrupting, and transforming one another in ways that resist tidy classification or fixed models.

In Chapter 3, Section 3.1, I introduced four modes of engagement that interact with these inner dimensions, shaping how meaning is formed, reinforced, and reimagined. Framing structures perception by shaping how information is organized and understood. Priming establishes underlying assumptions that condition thought before conscious awareness. Reflecting allows for critical examination of ingrained patterns, creating openings for transformation. Imagining expands possibilities, enabling new narratives, metaphors, and perspectives that can reshape both personal and collective understandings of the world.

Out of these modes, reflecting emerged as the most persistent and foundational mode of engagement across the cases—threading through framing, priming, and imagining as a constant undercurrent. Tying back to Archer's work on reflexivity, it became clear that the ability to pause, reassess, and reconsider one's assumptions is not merely an individual cognitive act but a key process in navigating and contributing to social transformation. Reflexivity enables individuals to engage with shifting conditions in ways that contribute to what Archer refers to as morphogenesis—the emergence of new social structures and relationships—rather than merely reproducing existing patterns. Yet, in the frenetic pace of modern life, structured spaces for reflection are increasingly rare. Rather than being seen as a passive or secondary step, reflection itself can be a deliberate and strategic intervention—one that counteracts reactivity, fosters deeper engagement, and allows new possibilities to take root.

Based on insights emerging from the empirical cases, I propose a fifth mode: convening. Convening is the practice of intentionally bringing people together in structured or emergent ways to foster dialogue, exchange perspectives, and co-create meaning. Unlike the other modes, which primarily describe cognitive or interpretive processes, convening highlights the relational and contextual dimensions of transformation—how the spaces we create influence the emergence of new possibilities and how encounters across boundaries can spark imagination.

This insight connects directly to the importance of generative engagements. Processes supporting imaginative leadership don't happen in a vacuum. Both cases took place in generative social (and physical) contexts. Obviously, transformation doesn't occur solely through individual mindset shifts; it takes root in exchanges with others and within environments that encourage exploration, co-creation, and challenge. Anthropologist Clifford Geertz emphasized that meaningful understanding arises from immersive, prolonged engagement—a method he referred to as “deep hanging out” (Geertz, 1998). This approach involves spending extensive time within a community, allowing for the emergence of new perspectives through informal interactions and participant observation. Sometimes, change isn't immediately apparent but surfaces later in subtle, embodied shifts that only become visible over time.

These transformations often emerge through patterns of action and interaction rather than through a single, explicit moment of change.⁵⁶

7.4.2 A Mycelial Model of Meaning-Making

These reflections on the theoretical framework have led me to a reconceptualization of imaginative leadership using a generative metaphor: A *Mycelial Model of Meaning-Making*

Rather than a rigid set of concentric circles, this model draws inspiration from fungal networks—dynamic, relational, and adaptive. In a mycelial system, meaning-making, cultural transformation, and action do not progress in a straight line or remain neatly contained. Instead, they spread, dissolve, and re-emerge in response to shifting conditions. Just as mycorrhizal fungi connect trees, transferring nutrients and information across a decentralized web, engagement with inner dimensions is not an isolated process but an ongoing exchange shaped by context, relationships, and environment.

In this model, meaning does not simply accumulate or transition in a fixed sequence. It moves through a network of interactions, reinforced, disrupted, and regenerated through feedback loops. Frames and primes are not detached structures but are embedded in experience, interwoven with cultural symbols and embodied knowledge (e.g., Geertz). Change does not unfold predictably but emerges through shifting points of connection—some flourishing, others fading, like fungal spores waiting for the right conditions to activate.

One element of this model is its recognition of decay as part of transformation. In a forest, fungi break down fallen trees, returning nutrients to the soil and making space for new growth. Similarly, worldviews, narratives, and ways of knowing are not simply replaced but decompose over time, providing fertile ground for new possibilities. Some ideas may persist in dormant form, like spores, waiting for the right conditions to re-emerge, while others disintegrate entirely. As in Gunderson & Holling's (2002) Panarchy model to describe complex adaptive systems, meaning-making can be seen as an ongoing cycle of breakdown and renewal. What may seem like collapse or

⁵⁶ see Hargreaves, 2011 for a case study that shares an example using a modified version of social practice theory.

confusion could be the necessary decomposition of outdated structures, creating conditions for deeper shifts to take root.⁵⁷

Fungal systems do not operate in isolation; they thrive through relationships with soil, trees, and microbial life, forming intricate exchanges that sustain entire ecosystems. Similarly, meaning-making does not happen in a vacuum. The cases explored in this research reinforce the idea that engagement with landscapes, ecological metaphors, and sensory experience expands both conceptual and emotional understanding. Practices such as “Inviting more-than-human stakeholders” and adopting more-than-human perspectives during the reflective phase of the U (Pearson et al., 2018) show that stepping beyond human-centered frames broadens participants’ sense of agency and responsibility.

Instead of a predetermined process, this model embraces stochastic branching—mirroring how fungi grow in unpredictable yet intelligent ways, adapting to shifting conditions while seeking optimal pathways. Transformation happens not in fixed steps but through improvisation, co-creation, and relational entanglement with both human and more-than-human worlds. A mycelial perspective resists the urge to impose order on complexity, instead making visible the hidden, underground networks of change that sustain and reshape meaning over time.

7.4.3 Reconceptualizing Imaginative leadership

Imaginative leadership in this model is a deliberate and strategic process—a way of creating generative spaces where agency can take root and expand. Metaphorically, I imagine a forest ecologist who listens as much as they tend, who is steeped in both Indigenous knowledges and scientific understanding (e.g., Kimmerer, 2013), who works *with* mycorrhizal networks rather than controlling them. Through this metaphor, imaginative leadership can be seen as a capacity to shape the conditions where transformation can take root. It does not force change but cultivates spaces where new possibilities can emerge, introducing fresh narratives, fostering deep connection, and allowing ideas to

⁵⁷ The Two Loops Model (Frieze & Wheatley, 2011) developed by the Berkana Institute, illustrates how old systems decline while new ones emerge. It identifies key roles in this transition, including hospice workers (who care for the old system), pioneers (who experiment with alternatives), and bridge builders (who connect the two). The model highlights the importance of compassionate transitions and the need to support emerging paradigms without prematurely discarding the old.

intertwine, strengthen, and regenerate. Like the fungal networks that pass nutrients unseen beneath the forest floor, their work is often subtle—priming the ground, weaving relationships, and tending to the unseen forces that sustain collective growth.

This process involves:

- Strategically designing contexts that invite creative engagement.
- Expanding the capacity for self-efficacy through imaginative practices.
- Creating conditions where people can see, experience, and experiment with alternative ways of thinking and acting.

Imaginative leadership is a methodical practice of working with uncertainty, tending to the conditions where new possibilities can take root. It involves cultivating spaces where meaning-making remains dynamic, where ideas can evolve, and where individuals and groups can expand their capacity to act with intention. This is not a passive stance but an active form of stewardship—curating, scaffolding, and holding space in ways that invite deeper engagement and creative agency.

Just as mycelial networks weave unseen pathways beneath the forest floor—facilitating exchange, strengthening relationships between trees, and adapting in response to environmental shifts—imaginative leadership fosters the flow of ideas, deepens collective learning, and supports the conditions that allow transformation to emerge and take hold.

7.5 Speculating Future Inquiry

The open-ended, experimental approach described in both case studies creates plenty of space for future exploration and discovery. For instance, the updated list of transformative mindsets draws directly from the co-designers' experiences and is meant to be a jumping-off point for further experimentation with creative methods, transformative imagination, and imaginative leadership. Future research could dive deeper into:

- the quality and typologies of participation during the design process and during the event;
- the role of the 'container' and how it connects to a *holistic approach* and a deep commitment to caring as practice;
- the validity, interpretation, and range of *transformative mindsets* could be co-explored and contextualized with participants or compared with other aligned frameworks.

It could be interesting to design a research experiment that examines how specific mindsets shape tangible design outcomes, whether in planning

processes or the creation of specific initiatives. At the same time, it's worth digging into the limitations of creative approaches—questioning their instrumental use and focus on solution-driven strategies versus more open-ended, exploratory (and ontologically-focused) processes. Creative methods aren't a cure-all; they can be applied skillfully or poorly, appropriately or not, depending on the context and goals. Taking a closer look at when and why creative methods fail—or even backfire by increasing resistance or conflict (see van der Vaart et al., 2019)—would be a valuable contribution to the field.

Future research could include follow-up studies about how such residencies influence people's mindsets and future actions, as well as more specific inquiries into values, attitudes, and motivations before and after the event. Further inquiry could also explore the impact and details of creating a 'caring environment' during the application of creative methods and the role that this might have in participants' experience and valuation of the event.

More work is needed to understand how the collective residencies we propose can be made accessible to a wide subset of society, e.g., how they can happen in geographical communities and be made attractive to diverse groups. The groups taking part in this project were all relatively homogenous. Although we didn't ask participants to define their socio-economic background, we would describe them all as fairly well-informed about climate change and aware of its impacts. Having understood what the important design elements are, a next step could be to consider how to engage a wider more diverse audience, potentially including people that are less aware of the impacts of climate change.

There is a great scope for implementing various interpretations of collective artist residencies and studying their potential, such as in processes of contributing to the transformative agency of individuals (Westly et al., 2013) and the transformative capacity of systems (Wolfram, 2016). Perhaps even more critical in today's world of rising eco-anxiety, nowadays coupled with a fear of pandemics, is the question whether collective artist residencies can provide an effective way of countering feelings of helplessness, powerlessness, and apathy, instead becoming breeding grounds of active hope (Macy, 2012) and concrete utopias (Jakobson, 2018).

From a methodological perspective, in future research, I would love to see studies of one or more generative engagements using a methodology grounded in a "warm data" approach applied more deliberately and

methodically.⁵⁸ Warm data is a term Nora Bateson (2016) uses to describe a way of understanding the relationships and contexts that shape complex systems. While many approaches focus on isolated facts or singular relationships, warm data zooms out to explore how multiple contexts—like cultural values, ecological systems, and social structures—interact and influence each other. What sets it apart is its focus on transcontextuality, or how overlapping contexts shape the dynamics of a system. It looks at connections and also at understanding the ongoing processes that make those connections meaningful and alive.

Imagine you're planning a community garden to help address climate change locally. A typical approach might focus on measurable goals: the number of trees planted, carbon sequestered, or participants involved. Warm data, on the other hand, would ask: How do people's cultural traditions influence what they plant? How do the garden's location and layout affect who feels welcome? What ripple effects might the garden have—like inspiring neighbors to start composting or sparking debates about land use in the community? It's not just about the garden itself, but how it exists within overlapping systems of relationships, values, and histories.

This kind of thinking helps avoid oversimplifying complex challenges. Instead of assuming the garden will “fix” the problem, warm data shows how it can contribute to a web of positive change—while also revealing potential blind spots, like whose voices might be missing in the planning process.

7.6 Seeds of Possibility

When I embarked on this research project, my primary goal was to create a framework that would allow researchers to communicate more clearly and effectively about the human dimensions of climate change through arts-based approaches. At the time, there was very little structured, elaborated information available on the topic. Since then, the field has grown significantly, with an explosion of interest and research (Wright & Liang, 2019). This progress is encouraging, but it also means that some aspects of this dissertation may now feel a step behind the current discourse. Still, I hope that its contribution

⁵⁸ More information on her methodology can be found at the Bateson Institute website. Bateson Institute. (n.d.). Warm Data. Retrieved December 28, 2024, from <https://batesoninstitute.org/warm-data/>

will serve as a foundation for deeper exploration and more nuanced conversations in the years to come.

One of my hopes is that this work will create more opportunities for researchers, artists, and practitioners to investigate the human dimensions of climate change through creative methods. By doing so, they can better understand and respond to the emotional, imaginative, and cultural challenges of our time. These approaches offer something unique: they invite us not just to think critically but to feel, dream, and experiment with new ways of being and relating to the world. They open doors to deeper conversations about what it means to be human in the face of unprecedented ecological change and help to cultivate the imaginative capacities that we will need to navigate an uncertain future.

Even when hope for the future feels elusive, imaginative leadership offers a way to contribute to what Margaret Wheatley (2017) calls “Islands of Sanity”—places where people can resist despair, reconnect with their values, and focus on what matters most, even when they cannot control larger societal or systemic forces. As Joanna Macy has said, this work is “the adventure of our time”—not because it guarantees success but because it is intrinsically worth doing. It reminds us that even in the face of overwhelming odds, probability does not exclude possibility. Imaginative leadership plants seeds for possibilities to emerge, and even if we cannot predict the outcomes, those seeds have the potential to grow into transformative change.

This requires a kind of faith—not in predetermined outcomes, but in the stochastic processes that spark creativity and serendipity. When we engage in these processes, we may not always see immediate, tangible results. However, they sow ideas, expand imaginaries, and strengthen transformative mindsets within those imaginaries. These are the quiet, foundational shifts that can eventually ripple out into broader systems of change. By creating spaces for reflection, imagination, and connection, we set the stage for futures that may not yet be visible but remain entirely possible.

As I conclude this work, I am filled with gratitude for the growing community of thinkers, creators, and leaders who are embracing this adventure. Together, we are weaving a tapestry of ideas and actions that, while incomplete and imperfect, holds the promise of something new. It is a reminder that even amidst uncertainty, we can choose to engage with the world creatively and courageously, leaving behind seeds of possibility for those who come next.

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APPENDICES

ANNEX A: ACTION HUB EVENT DESCRIPTION

Source: Transformations 2017 official conference programme

Action hub: Arts-based methods for transformative design

How can creativity be evoked and applied in designing transformative sustainability initiatives?

In this action hub we explore the value of arts-based approaches and techniques through experiencing and experimenting. Participants will learn pragmatic tools for enhancing the transformative potential of sustainability initiatives via creative practices.

Locally-rooted and initiated transformations of social ecological systems are seen as a vital path towards sustainability. The design and communication of effective place-based strategies often require imagination, creativity, and innovation. Creative thinking and acting, however, can be limited by group think, culturally habituated ways of thinking and perceiving, and constraining thoughts and emotions such as fear, anxiety, and self-criticism. This workshop is about experiencing how arts-based approaches can open spaces of possibility in the social imaginary, evoking 'transformative' mindsets and creating the conditions for lateral thinking and synchronicity.

We welcome researchers, engaged citizens, artists, policy-makers, or anyone who is interested in reflecting on and contributing to the development of experimental arts-based methods. A team of researchers from SUSPLACE will facilitate the process, drawing from Theory U and Appreciative Inquiry methodologies. The content will be inspired by themes of imaginative leadership, sensitization to complexity, capacities for caring, social learning, and sense of place. Participants will move between small group work, paired reflections, and collective contributions as they work on design challenges taken from existing initiatives. Be prepared for an energetic, fast-paced, interactive session focused on evoking and applying creativity and metaphorical thinking.

ANNEX B: ACTION HUB SURVEY FORM

Participant Feedback & Reflections Questionnaire (Shared via Survey Monkey)

Thank you for participating and being such willing and enthusiastic collaborators in this experiment. On behalf of all of us, it was a pleasure for us to host this practice session. We left inspired and energized. Your ideas, perspectives, and contributions will be integrated into a final toolkit that will be shared by the end of the year. The data collected here will be anonymous, but of course we welcome any ongoing conversations with you as individuals. We invite you to answer the following questions in spirit of reflection, exploration, and collaborative learning.

I. Objectives, Content

1. Were the objectives clear and appropriate? (e.g., appropriate for the allotted time, context, and intended audience?) (1-5 scale) Would you add any objectives? *[Include Objectives: 1) Experience a mindset shift that will result in a new way of approaching a design/ planning challenge 2) Experience and practice with creative techniques that you can use in your own work.]*
2. How did you experience the room upon entering (any specific impressions or elements you noticed, either tangible or intangible)?
3. What were some highlights of the workshop for you? Specific exercises that you enjoyed?
4. Was there anything that you were uncomfortable with or unclear about? Could you elaborate? (Note - being uncomfortable is not necessarily a bad thing)

II. Perspective/Mindset Shift

1. During the session, did you feel that you were able to see the case from a different perspective or mindset? (1-5 scale) Additional reflections?
2. During the session, did you feel an increased sense of empathy for the other inhabitants of the place (e.g., humans and more-than-humans, past, present, and future?) (1-5 scale) Additional reflections?
3. If you experienced a mindset shift, do you think that you will be able to recall it in the future? (1-5 scale, and reflection)

III. Approach

1. In terms of leadership competency for sustainability, how would you rate the ability to identify and switch one's own perspective? (1-5 scale, and reflection)
2. How do you value the role of arts and creative practices in changing mindsets towards sustainability? (1-5 scale, and reflection)

3. Do you believe that engaging your emotions can support your ability to experience a new mindset? (1-5 scale, reflections in general, and based on your experience during the session)
4. What kinds of “perspectives”, mindsets, or emotional explorations do you think are important to supporting your work in social-ecological transformations?

IV. Dissemination Outputs (Toolkit)

1. Do you think that the exercises and/or insights from the session can be usefully adapted to or translated to your own work? (1-5 scale, and reflection) Please add specific examples, if relevant.
2. Is there anything that you would like to contribute to the tool kit? Do you have any resources or suggestions for specific exercises that you would like to add?

V. Final Thoughts

1. Any final/additional thoughts, comments, or lingering questions related to the practice session?
2. How could the session be improved to better meet the objectives and support a positive experience?

VI. Participant Information

Working Group Table: (multiple choice)

- a) Kiruna City Center b) House of Common Goods with Angela c) House of Common Goods with Marta d) Farm in Netherlands with Siri e) Farm in Netherlands with Anke

Nationality:

Current place of residence:

Field of research or work:

Institution & Position:

Educational Background:

Arts Background (if applicable):

Age range: (15-24, 25-34, 35-44, 55-64, 65-74, 75+)

ANNEX C: ACTION HUB PARTICIPANT-OBSERVER GUIDE

Guiding questions for designated participant-observers (for the Action Hub and Imaginative Leadership workshops)

I. Observations of workshop organisers:

1. How did you experience the facilitation at your table? Was there something you would have liked to be different? Something in particular that you appreciated in the facilitation style?
2. Did you get a sense of the Practice Session as a collaborative effort among the organizers or rather as 5 different Practice Sessions taking place in the same room?
3. Did the video-recording and photographing interfere with your creative process?

II. Observations of other Participants:

1. Did you perceive the other participants as experiencing a mindset shift? In what ways?
2. What elements did people respond positively to?
3. Do you think others felt uncomfortable at any time? If so, when? (note: being uncomfortable is not necessarily a bad thing).
4. General observations and reflections (if possible and relevant, please include specific basis for your observation/ reflection - what led you to these reflections - was it content/ artifact produced, conversation, observation of body language, hunch, etc.).
5. Based on your conversations with the other participants, do you think these exercises could be adapted to or translated to their work in any way? How do you think they might use insights from the Practice Session in the future? (just put n/a if you didn't have any conversations that would give you insight here)

III. Dissemination Outputs (Toolkit & Journal Publication)

1. What would you recommend as good 'observations points' for data collection in terms of understanding how creative processes can 1) help open spaces of possibility. I think it is useful to try to break out the temporal dimension in particular. 2) increase competency and self-efficacy in order to evoke mindsets to support regenerative design?
2. What would you like to see in the toolkit (in addition to resources and descriptions of exercises and reasoning)?
3. Do you have any resources or suggestions for specific exercises could you contribute to the tool kit? How do you think that participants could contribute? (especially creative methods or ways of participatory engagement).

ANNEX D: SAMPLE METHOD FROM TOOLKIT



Arts-Based Methods for Transformative Engagement

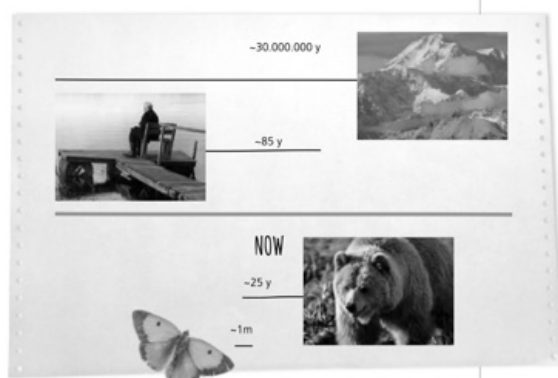
A TOOLKIT

By Kelli Rose Pearson, Malin Bäckman, Sara Grennl,
Angela Moriggi, Siri Pisters, Anke de Vrieze

Method 13 Expanding Time

REFLECTING

- Tips & Experience Using**
- If you are using a visual timeline, place the "now" in the middle, to give a sense of past and future;
 - Choose characters that have dramatically different life-spans.
- Relevant References & Resources**
- How perceptions of time affect our approach to sustainability: Fofu (2015). Perceptions of Time in the Sustainability Movement: The Value of Slow for Sustainable Futures.



"IN OUR EVERY DELIBERATION, WE MUST
CONSIDER THE IMPACT OF OUR DECISIONS ON
THE NEXT SEVEN GENERATIONS."

IROQUOIS MAXIM

WHEN TO USE	WHAT TYPE
Warm-Up	Experiential
Connecting	Sensory
Inquiry	Somatic
Disruptive Thinking	Narrative
Ideation	Intuitive
Decision Making	

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Method 13 Expanding Time


REFLECTING

PURPOSE

This method is used to disrupt participants' default experience of time, supporting them to look at a case study or a specific issue from multiple perspectives.

 **Place on U** Observe, Reflect

 **Time** 10 - 30 minutes

 **Description** Too often, our modern perception of time is limited to a very short horizon, and our choices and actions are motivated by near term goals. By taking a different and even surrealistic time frame as reference, we are forced to think in totally new ways. In this method, participants focus on the lifespans of various non-human beings or entities, imaginatively relating to their different experiences of time. Elements or 'characters' that represent different time horizons can be linked to a specific case or the issue at hand. The empathetic experience of this exercise can be emphasized by combining it with 15. *Inviting Non-Human Stakeholders*, p. 38.



Instructions

1. Introduce the exercise and give examples of different time horizons (sample script):
 - This exercise is intended to help us think in multiple time scales when we are considering a case or a project. As humans we inhabit the Earth for a maximum 100 years, and our modern world emphasizes short term goals and quarterly returns. This can limit our ability to prioritize actions that could have positive impacts beyond our lifetime. What if we tried to disrupt this perception completely?
 - The length of our lifespan acquires a different significance when we see it in relation to the lifespan of non-human elements. Some exist for far longer than we do. For instance, a mountain (more than 30 million years) or a building (2-300 years); conversely, some have a much shorter life, like a wolf (7 years), or a butterfly, that only lives for a month.
2. Ask participants to focus on one character that they feel connected to and to spend 5 minutes reflecting on what can be learned from both the character and their alternate time horizon (sample script):
 - Choose the time horizon of one specific character that is related to your project or the issue at hand. It can be one from the examples given or another that you feel connected to;
 - Close your eyes for a minute, imagine that your character is in front of you, and ask them what advice they want to give you or what insights they can offer to your project. Also, think of what they might request from you. Take 5 minutes and silently write down thoughts, images, and ideas that occur to you. It doesn't have to make rational sense, just jot down whatever comes to mind;
3. Participants share reflections in pairs first, and then, if time allows, in the table group.



Materials Needed

Paper and pens; (optional, but recommended) powerpoint or hand-made timeline with different non-human elements and their respective time frames.



ANNEX E: DISMISSED MILITARY CASE EXAMPLE

Case 1 Dismissed Military Area: Imagining the future



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Case 1 Dismissed Military Area

Bottom-up regeneration of a dismissed military area in Northern Italy: How can we imagine the distant future?

Case Summary

In the Dolomites foothills, in the city of Belluno, several civil society organizations are working, in partnership with the local municipality, to regenerate a dismissed military area. Originally used as army barracks, the "Ex Caserma Pieve" covers an area of 30,000 m² of land and 20,000 m² of buildings. After 15 years of abandonment, it is now turning into a place where different groups can experiment with community life and forms of mutual help and support, through cultural activities and eco-friendly practices.

Design Dilemma

How can the regenerated area become a truly transformative space? More specifically, how can it become a space that generates new stories and mindsets aligned with, and supporting just ecological civilizations, realizing social inclusion and cultural regeneration in harmony with nature?

Story (as read to participants)

This is the story of a dismissed military area in Northern Italy that local municipality and civil society organizations are trying to regenerate. Our story starts between 20 and 30 million years ago. Where earlier had laid a tropical sea, the African and the Euro-Asiatic plate collided, giving rise to a vast belt of mountains, once and forever separating Italy from the rest of continental Europe. Their shape constantly mutated over time, until 2 million years ago a period of glaciation imprinted them with the final mark. It was the magical crisp landscape made of steeples, pinnacles, rock walls, glacial landforms and karst systems, that will inspire mythological tales, sacred rituals and dangerous explorations. Hailed as one of the most beautiful natural architectures in the world, a UNESCO World Heritage Site since 2009, humans will refer to them as the Dolomites, or "Palid Mountains".



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Case 1 Dismissed Military Area

12.000 years before Christ, the first humans arrived. For millennia, people of all races and beliefs ventured into these isolated and mysterious forests and rocks, seen as a frontier land delimiting the rest of the surrounding world. The Celts created the first big settlement and called it "belo-dunum", meaning "shining city" – today Belluno. For centuries folks will inhabit the valley, adapting to the scarce resources and rigid weather. The valley's strategic position made it a favourite spot for all sorts of fortifications, and a refuge for those departing for battles in all directions.

Yet humans were just one part of this rich ecosystem. Legends narrate of bears, wolves, lynx, foxes, deer, chamois, eagles, mules, ravens, cows, owls. They thrived for centuries, along with ghosts, demons, witches, gnomes, medicinal and magic plants, mushrooms and trees. They won't thrive forever though. Aggressively hunted and drawn away by anthropogenic presence, between 1700 and 1900, both wolves and bears disappeared completely.

In 1900, two catastrophic wars completely changed the history of mankind. The Pallid Mountains were again a field for battle. At its base, a vast piece of land was donated to the army by the local municipality. The army barracks became home to several brigades, occupying 20.000 m² of buildings.

At the turn of the 21st century, the brigades abandoned the army barracks. The place was classified as "urban void". Its historical value and its strategic position made it the perfect experimental site for regenerative practices.

Several organizations decided to apply to work towards that aim. Among others, the so-called "House of Common Goods", a bottom-up citizen's initiative shaping the place both physically and symbolically through cultural activities and eco-friendly practices. A way of imagining and initiating change at the local level in partnerships with different civil society actors, based on mutual help and support.

Life slowly came back under the barracks, after almost 15 years of abandonment.

Meanwhile, after one century of silence, a wolf howl resounded in the valley again. He was not alone. The bear had also returned, leaving his silent traces in the heart of the forest.

HOW CAN THE REGENERATED
AREA BECOME A TRULY
TRANSFORMATIVE SPACE?



Credits: Corriere delle Alpi

ANNEX F: SUMMARY TEXT OF IMAGINATIVE DISRUPTIONS EVENTS

Source: *Imaginative Disruptions Project Website* –
<https://neernstman.wixsite.com/imaginedisrupt>

RETREAT

In July 2018 seven families engaged in a hands-on creative residency to discover, imagine and design how to live when their homes and lives would be affected by climate change.

They came together as climate refugees fleeing from their flooded homes to a holding camp, where they were set the mandate to reinvent and reinstate the needs they had taken for granted and had now lost.

Through a carefully planned journey of creative activities, adults and children together explored each of the five levels of the Hierarchy of Maslow. This model explains how people are motivated to achieve certain needs and that some needs take precedence over others.

We started at the bottom of the pyramid (warmth / shelter) and over 4 days worked our way up. Through making, music and performance participants explored questions like "what does it mean to have this need seen to? What does it mean to lose it? And how can you reinstate it?" This resulted in art pieces that reflected their answers to these questions.

Alongside these activities a changing team of constructors created a sculpture that would home the participants' expressions.

Through a junk modelling exercise on the first day adults and children collectively came up with a list of design principles for a shelter that would be able to weather rising sea levels.

Over the course of the weekend different people contributed to the creation of Barrowboat: a self-sufficient amphibious igloo, that serves as a mobile exhibition space to host and inspire creative explorations around climate change for young and old.

Throughout the residency two 'witnesses' from the project team documented what happened. They participated, reflected, recorded sound, took pictures and conducted interviews. Every day they were joined by others –kids and adults– who documented for a while. This resulted in a wonderfully diverse collection of images, video and sound recordings.

Another method of 'data collection' was hidden in a curated caravan, where participants could reflect and document their thoughts, whilst prompted by different media and questions.

Everyone participated in the running of the camp by cooking, tidying and –as the weather turned more wet and windy– strengthening our camp.

Participants' reflections on the residency: "Highly memorable and intuitively informative, this is something that sits alongside the finest books on climate change narrative and shines a light on the priority of community engagement as we look strategically to a changing world."

"Retreat completely exceeded our expectations and my son said afterwards that it has helped prepare him if he ever had to leave his home suddenly. The wonderful range of inspiring people (adults and kids) were what most surprised us. It was really encouraging to meet such a diverse group with diverse skills and experiences"

"Intriguing, initiative, progressive and personal. Throughout the weekend delivered innovation and progression pushing us to delve into that intimate space of fear, friend and foe"

In November/December 2018 Barrowboat will be exhibited at the University of Exeter. It will be an immersive exhibition of everything generated during the residency that invites viewers to engage in their own creative reflection on theme 'how to live when sea levels rise'.

The research team is distilling themes and patterns from the documentation, to take them forward into the two subsequent residencies (in The Netherlands and Sweden)

VONK

In a neighbourhood in the east of the Netherlands residents are generating a revolutionary energy transition. The aim is to move the entire community from natural gas to a collective heating grid that provides more sustainable energy. The transition in the Benedenbuurt is unique as it is entirely community-driven, with the initiative coming from the residents themselves and authorities supporting the process by acknowledging the necessity and providing funding. The project is seen as exemplary for energy transitions that will have to take place across the entire country. The residents have united in the Cooperative Warmtenet Oost Wageningen (WOW) so that their interests can be effectively represented and solutions are designed that suit the neighbourhood. The project is a pilot and emergent, with the design process being invented as it happens and the coop learning how to proceed whilst moving forward.

A growing group of local residents invests time, knowledge and experience to make this initiative a success. In November 2017 and June 2018, general meetings were organized to which all residents were invited. Since November 2017, door-to-door and email newsletters have been distributed to keep interested parties informed. In June 2018 no less 44% of residents signed a support statement, indicating that the initiative is widely supported in the neighbourhood. There are various working groups active in specific subjects and a weekly consultation with a

core group of residents. Last December the Dutch King turned up unexpectedly to hear about the project and talk to residents.

The cooperative recognised that apart from the formal meetings in which they discuss practical matters, there is a need for a space that addresses the more emotive aspects of the proposed transition. Despite the support, there is also a sense of confusion, uncertainty and vulnerability amongst residents about what the transition entails exactly on a personal level. The transition will generate a certain degree of disruption in terms of how people live, i.e., they will have to change routines around cooking and heating their homes. People are worried that they will be worse off after the transition. And they potentially feel vulnerable as the transition involves disruptive measures to their homes. The process itself is fraught with potential for conflict, miscommunication, confusion and burn-out as increasing demands are made on people who are giving their –often precious– free time voluntarily.

Between the cooperative, the Imaginative Disruptions research team and the local theatre collective ‘De Waterlanders’, we have designed an Art Intervention called Vonk (Spark in Dutch). The Art is proposed as an essential part of the community-led process. It is explicitly not a cooperative-driven event that serves as a PR instrument for the transition, nor is it just a ‘fun’ way to engage the community. Instead, it is designed to generate a non-directed space for encounter and conversation between residents. Away from the formal meetings and processes, De Waterlanders will create a set of curated performative experiences that connect people in a collective exploration of the emotions attached to the Transition. They will make palpable some of the doubts and question that people might have, create space for people to express what they think, and exchange experiences and knowledge.

Like the first residency in the UK (Deep Water) this event has a strong intergenerational aspect. The neighbourhood is inhabited by families so children will be actively involved through the performative means. But, where the Deep Water was more reactive and this project is more proactive in addressing climate change, both revolve around people expressing their vulnerabilities (“what am I afraid to lose?”) and possibly finding inner and outer resources that allow them to overcome their (experienced) fragility.

COMPOSE

Climate scientists regularly emit dire warnings illustrating dangerous changes to the oceans and atmosphere. Considering how little is done to mitigate these changes, they profoundly fail to inspire widespread preventative action. There’s a lack of connection between the facts drawn from climate science and the immediate motivations required to drive active prioritisation of climate action.

This gap between fact and action is possibly most staggering at universities. As their academics publish one distressing fact after, universities largely continue with business as usual. This is arguably because climate science primarily originates from epistemologies that prioritise measurability and predictability of climate

change rather than interpretative, subjective approaches that deal with people's perceptions of change and their ability to respond. To do their work well researchers have to retain a degree of distance; and from a positivist position, scientists are expected to separate themselves entirely from their subject. In the case of climate change, where the researcher is inherently part of the social and climatological system that they are researching, such assumed separation and exemption of action is proving to become fatal.

We invited academics of all stripes --natural and exact sciences, social sciences and the arts & humanities-- to reinvent the role of the researcher to be reliable authors of facts, as well as pioneers in acting upon those facts. We explored what it means to be impacted by and embedded in our research whilst retaining a degree of scientific distance and composure. How can we be a researcher/scientist, as well as a parent, community member and essentially human living in these increasingly complex times? What are the unique attributes that a researcher brings to this matter and what (new) epistemologies fit this reimagined position?

ANNEX G: TEXT INVITING ATTENDEES FOR RETREAT

Retreat Cornwall: How will we live when sea levels rise?

With climate change a current hot topic in the news – this week UK and US scientists launched a £20million Antarctic research expedition to investigate the precarious state of the Thwaites glacier – Retreat Cornwall is a creative residency that will explore what life might look like when sea levels rise, and organisers are now looking for families to participate in the retreat.

A partnership between The University of Gothenburg, The University of Wageningen, The Seed Box and Plymouth College of Art, Retreat Cornwall is part of a creative research project titled ‘Imaginative Disruption’ which seeks to explore the transgressive potential of art and making to engage a group of citizens and experts in an imaginative conception of alternative environmental narratives.

Retreat Cornwall will take a look at a fictional (but potentially very real) world 70 years from now, where coastal homes have become uninhabitable, sea levels have flooded harbours and eaten away land, and parts of the coastline have collapsed, causing houses to fall into the sea. The project imagines families as climate refugees, who have been evacuated to higher ground.

Taking place in three countries (Sweden, United Kingdom and The Netherlands) these three “collective residencies” will bring together an intergenerational group of people who will play, make, eat, re- imagine and learn together, to design alternative futures around a selected “glocal” issue, and explore what needs to be disrupted to realise these new realities.

All learnings, reflections and products from the different creative making-activities will become part of a collectively curated exhibition in an art venue in Cornwall.

Organisers of the project are now looking for families to take part in this creative residency. The deadline for registrations is 15 May 2018, and anyone is welcome, but places are limited. There will be a fee of £12 per person (covers 4 days of accommodation and subsistence; under 2s join for free).

Find out more on the project website, on their Facebook page or by emailing [redacted]. To follow the rest of the project, go to the Imaginative Disruption website.

ANNEX H: FINAL LIST OF CREATIVE ACTIVITIES AT RETREAT

Table of activities as designed for Retreat | Source: Shared Project Documents

Day	Activity	Short Description	Rationale
Day 1	Ceramics (location: main camp)	Participants create a ceramic image of something that they are sad to leave behind (as they imagine they are in a climate refugee camp). The object was then fired and returned to the camp on the last day. Artifact: Ceramic Object.	This activity related to the bottom of Maslow's pyramid (basic biological needs) and also the first part of theory U—observing the situation. Working with Clay was an easy and fun way for people of all ages and artistic abilities to start working with arts-based practices. This activity also included meditation and visualization which are linked to the second phase of the U: reflection and connection with inner feelings and values.
	Junk Modeling (location: upper field)	Participants use various second-hand materials to create a creative model of a "climate proof home." Artifact: Junk models and key principles of a climate proof home as derived from models	This activity also related to the bottom of Maslow's pyramid (imagining new forms shelter), and also with the third phase of theory U: action. This activity allowed people catalyze ideas and principles related to envisioning new climate proof shelters through prototyping.
Day 2	Theater of the Oppressed (location: main camp)	Participants engage in various physical activities that tied to the experience of climate change, including performing a tableau of a scene representing a stage in a climate refugees' journey. Next, participants make an outline of their hand and inside write words - ideas, concepts, things - that give them strength. Artifact: Drawings of hands, including things that give people strength.	This activity was related to the second two levels of Maslow's pyramid—safety and relationships. It gave people a opportunity to deeply and imaginatively reflect on how it would actually feel to be a climate refugee. It was also intended to take participants through all three phases of the U—observation (what tangible realities do climate refugees face), reflection (how it feels to be a refugee), and action (drawing hands).

Day	Activity	Short Description	Rationale
	Copper Talismans (location: upper field)	Using thin sheet copper, participants create a representation of something to give them strength on their journey as a climate refugee. Artifact: Copper talismans	This activity was related to the second level of Maslow's pyramid (safety) and also to the action phase of Theory U.
	Cards for Humanity (main camp)	A card game in which participants fill in the blank with phrases or words that make funny juxtapositions or meanings.	Humor is an important element in developing personal connections and community and in exploring difficult topics. The game was also intended to stimulate non-lateral thinking and anchor/stimulate images related to being a climate refugee in Cornwall.
Day 3	Plaster Stick Families (main camp)	Each person gathered sticks from the area and using plaster and gauze, formed them into small sculptures that represented family members and pets. Artifact: Plaster stick figure families	This activity was intended to engage people intergenerationally and at the level of family and relationships in Maslow's hierarchy. It was also a form of action/ expression in the third phase of theory U. https://allthatweare.org.au/2017/05/11/all-that-we-are-in-physical-form/
	Cards for Humanity	Same as above	Same as above
Day 4	Celebration Crowns (main camp)	Out of a hat, participants chose a name of another person and created a crown for that person using various craft and natural materials. Artifact: Celebration Crowns	This activity was about supporting both relationships and esteem needs in Maslow's hierarchy and about moving symbolically into action (third phase of Theory U).
	Village Fete & Naming of Mobile Gallery (upper field)	Wearing their celebration crowns, participants form into a parade and, accompanied by music, proceed to the upper camp for the final gallery walk of artifacts. The mobile gallery was named, (Boat Barrow) and it was decided by dot voting which artifacts would be included in the gallery.	Similar to the celebration crowns, this activity was designed to support esteem needs in Maslow's hierarchy by appreciating and celebrating all the work that had been done over the weekend and also about moving into action by taking artifacts and lessons learned during Retreat out into the wider community (third phase of Theory U).

Day	Activity	Short Description	Rationale
On-going	Doors of Perception (main camp)	Old doors with questions (prompts) were placed near the bathrooms at the main camp. Participants were invited to write on or graffiti the doors. New prompts were added each day. Artifacts: Graffiti covered doors	The doors were intended to prompt people to reflect and spontaneously respond to questions about people's experience during Retreat in a way that was fun and accessible to participants of all ages.
	Creative Caravan (far field)	A quiet reflective space to which people can withdraw and contemplate, write, draw, paint, make collages. There was supply of art materials, magazines, paper. Participants were invited to create whatever they wanted or to respond to specific prompts. Artifacts: [None]	The creative caravan was meant to encourage general reflections on the residency using arts-based approaches to encourage non-linear approach that encourages different ways of knowing.
	Building the "Vessel"/ Mobile Gallery (upper field)	Based on the inputs from the junk modeling exercise, some participants built functioning mobile art gallery that could display artifacts created in other locations around Cornwall. Artifact: Mobile Gallery	"As we aim that the outcome of the residency will be exhibited to a larger audience, we set that central 'thing' to be the build of a vessel / exhibition space that accommodates the various products that the participants will create over the 4 days. 'The build' is the practical task of building something that is mobile and can hold things, as well as being a metaphor for 'home'. It becomes the home for the various expressions of the participants; and in collectively designing it, it is also an exploration of how a climate-resilient home might like - a mobile changeable vessel that is less permanent than the structures we reside in now." Planning Document
	Co-creation of Climate Camp Song (main camp)	Some participants engaged in composing music and writing a song that addressed the issue of Climate Change. Artifact: Recording of Final song (Sea Level Rising)	This activity was intended to engage people in reflection about climate change and Retreat through different, non-linear ways of knowing.

ANNEX I: LIST OF INTERVIEWEES [RETREAT]

1. Activity facilitator, participant
2. Mother, attendee-participant
3. Activity facilitator, attendee-participant
4. Primary organizer/collaborator, artist
5. 2 pre-teen attendee-participants
6. 2 sisters (in one interview) attendee-participants – 1 university age & 1 teen
7. Mother, attendee-participant
8. Father, participant
9. Primary organizer, builder, outdoor educator

ANNEX J: SURVEY QUESTIONS RETREAT

1. The things I liked best about Retreat were...
 2. What did you think of the logistics of Retreat (location, length, food, all other practicalities)? What do you think could have been better?
 3. What did you think of the program?
 4. What activity did you like best and which one didn't work so well?
 5. How was the event different from what you expected it would be?
 6. What did you expect and what was your actual experience like?
 7. If you had to tell somebody what Retreat was, then what would you say?
 8. Please summarise Retreat in a few sentences.
 9. Retreat was fully funded, which allowed us to offer it to you affordably.
 10. If you were to pay for a 4-day experience like this then what would you be willing to pay (per head)?
 11. Please leave any other suggestions, ideas, comments and feedback below!
- Thank you!

ANNEX K: INVITATION FOR COMPOSE



Climate scientists regularly emit dire warnings illustrating dangerous changes to the oceans and atmosphere. At the same time, there's a lack of connection between the facts drawn from climate science and the immediate motivations required to drive active prioritisation of climate action

This gap between fact and action is possibly most staggering at universities. As their academics publish one distressing fact after, universities largely continue with business as usual. This is arguably because climate science primarily originates from epistemologies that prioritise measurability and predictability of climate change rather than interpretative, subjective approaches that deal with people's perceptions of change and their ability to respond. From a positivist position, scientists are expected to separate themselves from their subject. In the case of climate change, where the researcher is inherently part of the social and climatological system that they are researching, such assumed separation and exemption of action is proving to become fatal.

We invite academics of all stripes and disciplines to reinvent the role of the researcher to be reliable authors of facts, as well as pioneers in acting upon those facts. We will explore what it means to be impacted by and embedded in our research whilst retaining a degree of scientific distance and composure. How can we be a researcher/scientist, as well as a parent, community member and essentially *human* living in these increasingly complex and confusing times? What are the unique attributes that a researcher brings to this matter and what (new) epistemologies fit this reimagined position?

Hosted by former Carl Bennet Guest Professor in Education for Sustainable Development Arjen Wals and his international colleagues, the day aims to radically shift our perspectives and research practice. The session will draw from the results of the international research project Imaginative Disruptions, funded by The Seed Box.

The Masterclass is free and lunch will be provided, but places are limited and must be booked in advance [here](#). We will take bookings until the 23rd of May.

ANNEX L: SURVEY QUESTIONS—COMPOSE

1. If you had to tell somebody what Compose was, then what would you say?
2. Please summarise Compose in a few sentences.
3. It has been a month since Compose, how do you look back at it? What has stayed with you? Has it sparked any ideas, practices or conversations?
4. The thing I liked best about Compose was...
5. What did you think of the program?
6. What activity did you like best and which one didn't work so well?
7. Please leave any other suggestions, ideas, comments and feedback below!

ANNEX M: IMAGINATIVE DISRUPTIONS VIDEO QRS



Imaginative Disruptions—<https://vimeo.com/378882648>

ANNEX N: VONK VIDEO QRS



Vonk—<https://youtu.be/sOjGa2HVDSI>

TRAINING AND SUPERVISION PLAN (TSP)

Kelli Rose Pearson
Wageningen School of Social Sciences (WASS)
Completed Training and Supervision Plan



Name of the learning activity	Department/Institute	Year	ECTS*
Project related competences			
A1 Managing a research project			
SUSPLACE Introduction Course	SUSPLACE	2016	0.5
Writing Techniques Course	SUSPLACE	2016	1
Writing research proposal	RSO, WUR	2017	6
SUSPLACE Secondment	Sustainable Places Research Institute, Cardiff University	2017	3
A2 Integrating research in the corresponding discipline			
Sustainability Project Skills	Except	2016	1.5
Spatial Thinking in the Social Sciences: on the local, the rural and nature	WASS	2016	4
Research Skills	SUSPLACE, WUR	2016	1
Facilitation of Place-based Development	SUSPLACE, WUR	2016	1.5
Sustainable Place-Shaping	SUSPLACE, KU Leuven	2017	2
Communication & Dissemination	SUSPLACE, KU Leuven	2017	1
Spatial Development in Science, Policy and Society	Cardiff University	2018	1
Sustainability Science and Place Shaping	Cardiff University	2018	1
SUSPLACE secondment at the Welsh Government in Wales, UK	Welsh Government	2017	3
General research related competences			
B1 Placing research in a broader scientific context			
SUSPLACE Summer School	University of Aveiro, Portugal	2017	2
CES Summer School: Artistic and other Creative Practices as Drivers for Urban Resilience	Centre for Social Studies University of Coimbra, Portugal	2017	1
Facing the Future Summer School	The University of Dundee/ Centre for Environmental Change and Human Resilience	2017	0.5
Serious Gaming for participatory research	WASS, PE&RC, SENSE	2019	0.8
"Imaginative leadership: Exploring Art, spaces of possibility & Transformative Agency"	Transformations Conference, University of Dundee	2017	0.5
Valorisation of Research	SUSPLACE, WUR, KU Leuven	2017	1

Career related competences/personal development				
C1 Employing transferable skills in different domains/careers				
Coaching of Group	Educational Staff Development, WUR	2017		.5
Personal Leadership	SUSPLACE, Latvia University	2018		1.5
Tailor-made Career Development	SUSPLACE	2016-2018		2
Basic Story Training, Writing Sustainability Stories for Children	SUSPLACE	2018		2
Development of Action Hub + Toolkit: Writing, editing, & production of Toolkit	SUSPLACE	2017-2018		3
Writing and producing a book of children's stories: Once Upon the Future: Everyday Stories that Change the World.	SUSPLACE	2018-2019		2
Total				43.3

*One credit according to ECTS is on average equivalent to 28 hours of study load

RESEARCH SUMMARY

How can societies ground themselves in cultures that sustain and enrich planetary life systems? Beyond efforts to minimize harm, the goal of regenerative sustainability is to support the well-being of people, other species, and entire ecosystems (Buckton et al., 2023; Mang & Reed, 2020; Ziervogel et al., 2016). To move toward this goal, recent research highlights how the inner dimensions—such as emotions, values, and ways of perceiving and making sense of the world—can contribute to cultural shifts and ultimately influence behavior (Hedlund-de Witt, 2012, 2014; Horlings, 2015; Ives et al., 2023; Kagan, 2011; O'Brien, 2009; Schein, 2015).

Within sustainability studies, the growing appreciation for the role of imagination, meaning-making, and culture comes with calls for a 'humanistic' (Hulme, 2011) or 'artistic' (Kagan, 2017) turn. It also points to the need for tangible ways to access and influence these inner dimensions. Creative and arts-based practices are one path: they can help individuals and groups imagine alternative futures, surface assumptions, and engage transformation through emotional, symbolic, and experiential modes (Daniels, 1993; Galafassi, 2018; Kagan, 2011; Hawkins et al., 2015; Rathwell, 2016). I use the term *imaginative leadership* to describe the capacity to work with the metaphors, ideas, stories, and beliefs that shape perception, orientation, and action.

In this context, this dissertation focuses on two areas: first, I theorize imaginative leadership as a capacity for shaping culture toward regenerative sustainability; second, I explore how art-based and creative practices can strengthen imaginative leadership by shifting perspectives and expanding spaces of possibility. Animating the process of discovery is the research question: **How can arts-based practices contribute to imaginative leadership in transformations toward regenerative sustainability?**

To engage this question, I developed a conceptual framework for imaginative leadership that informed both the research design and the analysis of two empirical cases. The framework integrates insights from neurocognitive linguistics, cultural semiotics, and arts-based approaches to social change. It begins by positioning culture as central to meaningful transformation, recognizing that all change is shaped through shared symbols, stories, and systems of meaning. It then offers a structured lexicon of inner dimensions to provide consistent and accessible terminology. Finally, it explores how arts-based methods can introduce fresh metaphors, images, and narratives that help activate regenerative imaginaries.

From here, I connect the research methodology to the topic of imaginative leadership, which I approach as a form of stochastic sustainability—a perspective that acknowledges the unpredictable, emergent, and path-dependent nature of

transformation. The methodology is grounded in an enactivist and interpretive stance, where knowledge arises through participation, embodied experience, and reflective engagement. This orientation made it possible to attend to the kinds of insights that imaginative leadership requires, which are often subtle, relational, and nonlinear.

The first case, *Activating Transformative Mindsets*, focused on cultivating imaginative leadership within professional and design-oriented contexts. It involved a practice-led inquiry into the design and facilitation of two workshops that used arts-based methods to engage with the inner dimensions of sustainability—such as metaphorical thinking, mental models, and experiential ways of sensemaking. The aim was to create conditions that support practitioners in exploring and embodying mindsets aligned with their own values, while increasing their sense of agency and confidence in applying those mindsets in practice. Rather than offering fixed solutions, the workshops served as experiments in designing methods that invite reflection, imagination, and new forms of connection. From this process, the research generated a working list of transformative mindsets for regenerative sustainability. Transformative mindsets refer to cognitive and perceptual orientations that disrupt familiar patterns, open up fresh understandings, and expand the range of possible responses and actions. The case also produced a practical framework for crafting arts-based methods that are responsive to context, purpose, and the people involved.

The second case, *Imaginative Disruptions*, examined three open-ended, collective creative engagements held in different locations. Described as ‘collective artist residencies,’ these events took diverse forms—a retreat on climate displacement, a site-specific performance on energy transitions, and a reimaged university masterclass. Despite their differences, each created conditions for connection rarely found in typical planning processes, workshops, or lectures. Rather than seeking resolution, they allowed ecological issues to be more fully felt and held in relationship. Insights from across the events contributed to a set of design principles for future residencies: they should be deeply participatory, balance comfort with discomfort, emphasize experiential engagement, and involve cross-sectoral, intergenerational, and place-based elements.

Together, the conceptual framing and two cases suggest how arts-based practices, when thoughtfully designed, can support imaginative leadership by creating what this study terms *generative engagements*. These are spaces where creativity, reflection, and collaboration come together in the exploration of complex sustainability challenges. The cases demonstrate how such engagements can link inner experiences and shared meaning-making with visible action and practical systems. In this framing, imaginative leadership cultivates the conditions where transformation can take root, supporting agency, connection, and renewal—much like a forest ecologist who listens and tends, working with the living dynamics of a system rather than trying to control them.

ACKNOWLEDGEMENTS

This dissertation would not exist without the support, insight, care, and companionship of many people who accompanied me along the way. Hearty thanks are due to more people than I can name here, but a few must be mentioned.

To Mario, for your endless patience (*Santa Pazienza!*) and grounded presence, which supported me through this long and winding road. To my parents, who nurtured my early curiosity and taught me to care deeply about the world—thank you for encouraging me to follow strange and hopeful questions wherever they led. And to my friends, for endless adventures of *bon vivance*, for making me laugh, and for sustaining conversations that stretch across years.

I'm grateful to have been part of the SUSPLACE cohort, a rare and wholehearted group of research fellows whose creativity, care, collaboration, and camaraderie shaped this work in many different ways. And it still ripples through everything. My early supervisors during that time, Ina Horlings and Alex Franklin, helped me launch into this research with thoughtful and unwavering support—thank you both.

In Wales, Usha Ladwa-Thomas's warmth and deep commitment to public service brought our workshops to life in ways I hadn't dreamed possible—who else could have invited front-line employees to write poetry from the perspective of a tree? Chris Blake joined the work with a sharp mind and open heart, making space for ideas just beginning to take root. Fern Smith brought inspiration and artistry into the workshops with extraordinary depth and care, holding space with a grace that made real transformation feel within reach.

Thank you to Natalia Ernstman, who welcomed me into her collaborative spaces with such intelligence, lightness, and openness—it was a joy to work together. And to Anke de Vrieze, SUSPLACE coordinator and co-conspirator on many projects: thank you for your curiosity, creativity, and quiet power in making things happen.

To Ariel Janzen—dear friend, first reader, designer of the stunning cover of this work, and creative co-traveler—thank you for helping shape this project both inside and out. I'm also grateful to you, Rigel Crocket, and your daughter Zella, my fairy goddaughter, for hosting me in Japan during the final writing push. Your warmth, hospitality, and our journeys to magical *onsens* created the perfect landing place to finish.

And finally, to Arjen Wals, my kind and unflappable promotor (and, at times, PhD therapist). Thank you for your genuine appreciation of this topic, and for your trust, encouragement, and steady hand throughout the process. Your persistent yet light-touch support was exactly what I needed to carry this work through to completion.

ABOUT THE AUTHOR

Kelli's work is shaped by a lifelong sense of care for the natural world, an interest in why people and societies are so nuts (and sometimes amazing), and a love of literature and all kinds of speculative fiction.

She came of age in Eugene, Oregon in the early 1990s, surrounded by old-growth forests, cascading waterfalls, oversized flannel shirts, and an overall grunge sarcasm-meets-eco-Pollyanna vibe. She then moved to a postage-stamp-sized town in Minnesota with the motto "Cows, Colleges, and Contentment." There, at Carleton College, she studied comparative religion, which fed her fascination with stories, metaphor, and imagination as ways of understanding and shaping the world.

After romping around for a bit, she and her college roommate settled in Savannah, Georgia, and started a fairtrade organic café called The Sentient Bean (tagline: Brewing Coffee and Community). Though she's no longer involved, she's happy that the café continues to thrive as a community hub (since 2001!).

Following her wanderlust and curiosity, Kelli moved to Freiburg, Germany, where she earned her MSc in Environmental Governance. Her research focused on the surprising collaborations that can emerge through ecological restoration art—creative projects that also help restore damaged ecosystems. During that time (and as an ongoing side hustle), her role as Director of Sustainability for a regional development consultancy has taken her around the world, with project work spanning food systems, regional tourism, urban planning, and green supply chains.

Today, Kelli is co-founder of the Re.imaginary Group, which supports leadership towards regenerative sustainability through creative methods, storytelling, and participatory facilitation. Together with her esteemed collaborators, she is the co-author of two practice-focused toolkits of methods for engaging people and expanding spaces of possibility for action.

She also writes speculative fiction that blends science, imagination, and everyday life. Her project *Once Upon the Future: Everyday Adventures that Change the World* is an anthology of middle-grade fiction that weaves magical realism with sustainability themes and includes classroom-ready materials for educators. She has also taught courses on speculative fiction and speculative methods, helping others imagine futures that move toward regeneration and care.

These days, Kelli lives in Sorrento, Italy, with her husband, a vegetable garden, and an olive orchard. She spends her free time writing, fighting beetles off her roses, and making marmalade and limoncello. Whenever possible, she heads for the water or wanders through the hills.

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MENS AGITAT MOLEM,
ET MAGNO SE CORPORE MISCET.

VIRGIL, C.19 BCE

...

IMAGINATION RULES THE WORLD.

NAPOLEON BONAPARTE, 1816

...

WE ARE IN AN IMAGINATION BATTLE.
I OFTEN FEEL I AM TRAPPED INSIDE
SOMEONE ELSE'S IMAGINATION, AND I MUST
ENGAGE MY OWN TO BREAK FREE.

ADRIENNE MAREE BROWN, 2017

