

‘Living-with’ Transformative Change: Exploring Affective Entanglements When Working Towards More Just and Sustainable Futures

Femke Coops^{*a,b}, Kristina Bogner^c, Dan Lockton^b, Timo von Wirth^{d,e}, Jonas Torrens^c, Barbara Kump^f, Julia Wittmayer^{e,g}, Caroline Hummels^a, Flor Avelino^c

*Corresponding author. Femke Coops, f.coops@tue.nl

^A Eindhoven University of Technology

^b Institute of Sustainable Worlds, Norwich University of the Arts

^c Copernicus Institute of Sustainable Development, Utrecht University

^d Planetary Futures Studio, Frankfurt University of Applied Sciences, Frankfurt a.M., Germany

^e Dutch Research Institute for Transitions, Erasmus University Rotterdam, The Netherlands

^f Faculty of Behavioural, Management and Social Sciences (BMS), University of Twente, The Netherlands.

^g Erasmus School of Philosophy, Erasmus University Rotterdam, The Netherlands

ABSTRACT

As the multiple challenges of our times become more tangible, so do the affective entanglements with them. Emotions shape how transformative changes are perceived, experienced, and acted upon, yet many of us have been conditioned to avoid, escape, or seek rescue, especially from emotions of discomfort or darkness. While affective entanglements in relation to transformative change are increasingly acknowledged, we often still lack concrete and tangible 'how to' practices to live with them. In this paper, we explore how design research can offer tangible invitations for reflective-affective practices through developing and engaging with a 'cultural probe'. Using an autoethnographic approach that positions all authors as co-researchers, we examine how cultural probes can support engagements with affective entanglements in transformative changes. Our engagement with the cultural probe revealed a fundamental paradox: we need practices that help us live-with, stay with and work with discomfort and darkness, yet the very act of creating and engaging with such practices can reproduce the conditions that prevent us from doing so. The cultural probe is offered not as a model to be standardised and replicated, but as an imperfect tool to be critically played with, adapted, refused, and transformed – an invitation to cultivate the emotional capacities transformations require, while remaining attentive to how affective conditioning shapes our attempts to do this work.

CONTEXT

As authors, we developed this article and cultural probe out of a desire to create space for acknowledging (our) affective entanglements with transformative change. By engaging with the probe ourselves, we explore how tending to these entanglements can deepen and sustain our work toward more just and sustainable futures, while also reflecting critically on dominant (affective) patterns in research and practice.

ARTICLE HISTORY

Received 21 November 2025

Revised and resubmitted 21 May 2026

Language check 30 July 2026

Accepted 20 August 2026

KEYWORDS

Transformative Change, Just and Sustainable Futures, Emotions, Affective Entanglements, Cultural Probe, Living-With.

INTRODUCTION

“[L]earning to live-with (transformation) acknowledges that ‘the’ world is not ending, but ‘a’ world is, and that some worlds need to end in order to allow others room to breathe.” (Verlie 2022, p. 12)

As the multiple challenges of our times become more tangible – droughts and floods, biodiversity loss, ecological collapse, poverty, political radicalisation – so too do our affective entanglements with them. Emotions, feelings and affects¹ shape how current times are perceived, experienced, and acted upon. Many societies are slowly starting to feel not only the effects, but also the affects of our times. These *affective entanglements* – how our emotions, bodies, and identities are co-constituted through relational interactions with our worlds, rather than existing as separate or purely individual states – are not merely byproducts of the changes unfolding around us (Verlie, 2022). They shape transformative changes, that is both changes that “improve the quality of life of current and future generations, both human and non-human, within ecological boundaries, while eliminating injustices that are triggered or exacerbated by unsustainability and its underlying causes” (Avelino et al. 2024), but also changes that radically alter our ability to survive and thrive on this planet (e.g., climate change). How we feel shapes how we experience, interpret, and act towards or within unfolding changes. We shape transformations as much as they shape us (Koistinen & Teerikangas, 2021). The affects we carry are part of the very fabric of change itself.

Yet, these affective entanglements do not emerge in a vacuum. How and what we feel, desire and fear is always conditioned by cultural norms, for instance by *orders of feelings* (Stodulka, 2019): socially and historically produced norms prescribing which emotions can be felt and expressed, by whom, and in what contexts. These “ensure that persons and collectives “fall inline” through more or less subtle societal, economic, legal, political, cultural, and affective arrangements.” (Stodulka, 2019, p. 310). Many societies in the Global North have been conditioned to avoid, escape, or seek rescue from emotions around discomfort or ‘darker’ emotional states, and to gravitate towards happiness that which validates our desires (Machado de Oliveira, 2021; Ahmed, 2010; Berlant, 2020). Ahmed (2010) refers to this as “the promise of happiness”, where happiness functions as a future-oriented reward that attaches itself to certain ways of living, being, and relating. Yet this very avoidance leaves us ill-equipped to sit with what is often perceived as ‘darkness’ – discomfort, hopelessness, loss, grief, rage, uncertainty, and the unknowns of the future – which is precisely the ‘unavoidable companion’ of transformative change (Coops et al. 2024a). This conditioning creates deep attachments to the comforts, securities, and identities these practices, cultures and structures provide, effectively working to perpetuate the status quo – e.g., exploitation of humans and more-than-humans, overconsumption, unsustainable production – despite their growing misfit with radically changing

¹ When discussing affect, emotions, or feeling, we follow the tradition of the critical thinkers this paper builds on, who understand emotions as more than internal individual states, ‘just’ reactions or appraisals, ‘inside-out’ or ‘outside-in’ (Ahmed, 2004). Emotions are socially and culturally conditioned, procedural, and political (Bogner et al. 2024).

We do not engage in definitional debates about the precise distinctions between emotions, feelings and affect. Following the tradition of critical feminist thinkers as Ahmed, Butler, Head, Verlie and hooks, we recognize and appreciate that each chose different words for different, well-thought-out reasons, even when talking about similar things (see, e.g., Ahmed on why she uses emotion over affect (Schmitz & Ahmed, 2014)). For us, this reflects not definitional imprecision but rather attention to the histories of words, traditions and political positioning. Second, like Ahmed (2004), we are less interested in defining what emotion (or feeling, affect) is and more in what it does. As Dixon (2023) notes “Psychologists have continued to complain, at regular intervals, right up to the present, that “emotion” is utterly resistant to definitional efforts (Izard, 2010a, 2010b). This is hardly surprising for a term that, from the outset, was defined as being indefinable.”. Following Dixon, we take the history of the different words seriously and keep the original wording of the authors when referring to them.

environments. We are entangled with the systems we built and inhabit and remain so even as we critique them. Those working towards more just and sustainable futures may thus find themselves simultaneously desiring, longing for, and grieving harmful practices even as they aspire to dismantle them, experiencing a multiplicity of seemingly contradictory affective entanglements (Machado de Oliveira, 2021).

As scholars working towards more just and sustainable futures, we too are confronted with these affective entanglements yet find little space for exploring or discussing their toll on ourselves and our work. Operating within the same orders of feelings, we work in institutions infused with these conditionings, trained to teach and research transformations as if we ourselves are not part of unfolding changes, risking what Haraway calls the God trick of “seeing everything from nowhere” (Haraway, 1988, p. 581). As a result, we risk interpreting transformative changes as changes towards ‘bright’ futures, as external phenomena, as technologically solvable innovation challenges rather than relational processes that require engaging with our own affective entanglements (Coops et al., 2024a). When we fail to recognise and acknowledge how orders of feelings shape these entanglements – and that we too are conditioned to avoid discomfort and darkness in imagining and working towards just and sustainable futures – we become ill-equipped to navigate them, whether our own or those of our students, colleagues or other stakeholders. This has consequences for both how we engage with the many ongoing transformative changes we have no choice but to face, and our ability to work towards what we aspire to bring about.

Awareness of the need to engage with our own entanglements is rising (Verlie, 2022; Machado de Oliveira, 2021; Wamsler et al., 2021; O’Brien, 2013), with approaches ranging from Inner Development Goals (Inner Development Goals, n.d.) to completely ‘hospicing’ our current entanglements (Machado de Oliveira, 2021). One important contribution to that conversation is Blanche Verlie’s (2022) work on ‘living-with’ – paying attention to the intimate ways we are affectively entangled with transformations, involving “the cultivation of appropriate ways of relating to and engaging with that world” (p. 114), “continuing to act for a future which is desirable despite being different” (p. 114), and developing “practices of bearing worlds: enduring the pain of the end of the world (we) have known, and labouring to generate promising alternatives” (p. 113). Relating to transformations as ‘living-with’ allows us to experience them as “patterns of affect; as flows of feeling; as repertoires of relating; as a sensational phenomenon” (Verlie 2022, p. 6). This understanding foregrounds the cultivation of capacities and practices that allow people to stay with discomfort without retreating into denial or paralysis.

Despite these noteworthy contributions, less attention has been given to concrete, tangible tools for affective-reflective practices. Many frameworks offer conceptual ideas and reflective questions but rarely provide tangible objects or spaces that help us afford these practices. However, engaging with our affective entanglements can never only be a conceptual call – it is an exercise that requires practice(s). As Machado de Oliveira (2021) explains, such practices are “like training for a marathon, this process requires us to use muscles that most of us have neglected – and in some cases, that we don’t even know we have”. Aiming to engage with Verlie’s work through an actionable and tangible practice, we developed what design scholars call a ‘cultural probe’: open-ended, participatory design tools consisting of a curated set of materials and prompts (Gaver et al., 1999), such as cards, objects, or questions, that invite participants to document and reflect on their own experiences, feelings, and contexts over time. Rather than extracting data, they create space for self-expression and meaning-making, generating rich insights that resist reduction to simple answers.

As authors, we see engaging with these practices ourselves as essential. Our affective entanglements directly shape how we as scholars imagine, desire and work towards futures; ignoring them risks inadvertently reproducing dominant (affective) patterns in research and practice. We see attending to our own affective entanglements as a form of epistemic responsibility, shaping the integrity and relationality of our research practices, emphasising the importance of experiencing something ourselves before asking others, e.g. students, research participants or stakeholders, to engage with it.

Therefore, in this paper, we ask:

How can we, as transformation scholars, learn to ‘live-with’ transformations? How can design (research) help us in practising to ‘live-with’ transformations?

THEORETICAL BACKGROUND

The growing attention to affective entanglements, emotions and ‘inner’ emotional work in research around societal transformations has sparked debates around how change unfolds within and through us, and how that supports ‘outer’ change² (see, e.g., Global Grassroots, n.d.; Inner Development Goals, n.d.; Ives et al., 2023; Wamsler et al., 2021; Bristow et al., 2024). Across scholarly, activist, professional coaching and educational contexts, there is recognition that cultivating affective-reflective practices around our affective entanglements is essential for facing, navigating and shaping transformative change. Simultaneously, there is a growing recognition that ignoring these entanglements may threaten the well-being and ability to work of those involved, as evident through growing research on eco-anxiety (Ojala et al. 2021; Verlie, 2022).

In this paper, we use the term ‘affective-reflective practices’ to describe the intentional, reflexive engagement with one’s affective entanglements with change. That entails becoming aware of, understanding, and engaging with one’s emotions to foster reflection and action, with the goal of being able to meaningfully contribute to change (Global Grassroots, n.d). Crucially, we understand such affective-reflective practices not as exclusively ‘individual’ or self-centred endeavours distant from the collective or societal, but as relational and political practices that enable individuals and collectives to remain present with discomfort and uncertainty, while acting with greater integrity and care towards more just and sustainable futures.

Within this growing field around affective-reflective practices, scholars and practitioners have developed diverse approaches. We identify three broad themes amongst these approaches that differ in their scholarly grounding and engagement with materiality.

First, there are contributions that engage deeply with the conceptual and political dimensions of affective-reflective practices as supportive and necessary for transformative changes, often rooted in critical pedagogies and feminist studies, see, e.g. Freire (2021) or Verlie (2022). More contemporary research on sustainability, climate change, or societal transformations increasingly acknowledges ‘darker’, often societally ‘tabooed’ or ‘outlaw’ emotions (Jaggar, 1989) such as pain, grief, fear, and anxiety. Blanche Verlie (2022), for instance, conceptualises ‘living-with’ as a necessary practice of “bearing worlds”, i.e. explicitly facing and enduring the pain of endings and learning to stay with grief, ambiguity, and hope. Servant-Miklos (2024) articulates

² We do not see inner and outer dimensions of emotional work as binary and separate but only use the wording in this paper to be able to refer to what we did and why. We recognise how the disciplinary splits, e.g. between psychology and sociology, have often overstated the separateness of these dimensions, while empirical efforts consistently challenge it (Wamsler et al. 2021).

pedagogies of collapse which invite students and educators to face systemic breakdown and uncertainty, fostering humility, care, and emotional endurance in educational practice. Vanessa Machado de Oliveira's *Hospicing Modernity* (2021) reframes affective-reflective practices as processes of self-unmaking, requiring people to face complicity and unlearn harmful desires. Rather than aiming to "fix" what is collapsing, she calls for letting die peacefully within and around us, an affective process that dismantles habits of control and reactivates capacities for humility, accountability, and care (Machado de Oliveira, 2021). Here, emotions such as grief, fear, and shame are not seen as obstacles but as guiding us toward deeper relationality and maturity. While these perspectives offer powerful conceptual frameworks and often include reflective exercises and practices, they typically do not engage with material components or tangible design interventions.

Second, more standardised and operationalised frameworks have emerged that seek to translate affective-reflective practices (often called 'inner work') into accessible tools and methods for broader application in professional and private spheres. Most prominently, the Inner Development Goals (IDGs) (Inner Development Goals, n.d.; Rhodes et al., 2023), which describe "inner skills" across five dimensions (Being, Thinking, Relating, Collaborating, and Acting) that bridge 'inner emotional work' and 'collective transformation'. These frameworks include standardised material components such as canvases, worksheets, and facilitation tools, though they tend to be less explicitly based in critical scholarship.

Third, there is an emerging movement in design research that bridges the critical with the tangible, connecting conceptual depth with material practice. For instance, Lindström et al. (2024) foreground grief and hope as orienting devices to navigate uncertain futures, while Lockton et al. (2023) emphasise the use of participatory and imaginative design tools that help researchers and practitioners 'play with the trouble', staying open to discomfort as a source of creativity and collective imagination. Coops et al. (2024a, b) design 'spaces for letting go' in sustainability transitions, which afford engaging with the emotional dynamics of letting go, phase-outs and transformations. These design-oriented approaches to affective-reflective practices offer a distinctive contribution: they are rooted in critical scholarship and combine these perspectives on transformation with the creation of material artefacts, spatial interventions, and embodied practices that make inner emotional work embodied and tangible.

Engaging with this literature highlights the need for approaches that support affective-reflective practices, despite orders of feeling that might hinder such engagements. Design-oriented approaches are promising here, since they can bring participants into contact with aspects of their experience and affective entanglements that are systematically sidelined. With this work, we aim to contribute to the growing body of scholarship that bridges critical theory with embodied and material practices.

Affective-reflective practices for 'living-with'

Building on 'living-with' (Verlie, 2022) as our conceptual foundation to affective-reflective practice illustrates that transformative change is lived, embodied, and relational. To live-with means recognising that we are not outside of transformation but within it, shaping and being shaped by its unfolding in every moment. Our entanglements bring a variety of emotions that we must engage with, especially since they always entail 'dying worlds' (Verlie, 2022). Importantly, living-with is not the same as "just live with it" or "deal with it." It is not about resignation, coping, or detachment, but an active and ongoing practice that calls for cultivating emotional and relational

capacities to stay present with what is difficult, uncertain, or painful, thus also allowing space for emotions often considered dark or heavy. It is an invitation to act, sense, and care within transformation, even (or especially) when futures feel fragile or unclear. As we work towards dismantling systems of oppression, we still benefit from them, are emotionally attached to them and may need to grieve them – which will inevitably create tensions.

Verlie's framing resonates with our own experiences as researchers and educators. We increasingly encounter the emotional weight of our affective entanglements in our daily work; be this in class, when students express eco-anxiety and how this freezes their ability to engage (Pihkala, 2020); emotions arising when researching climate change, up until traumatic experiences (Pihkala, 2020); or when confronted with emotions of the societal groups we are engaging with (Bogner et al., 2024). Feelings of discomfort, such as grief, frustration, or disorientation, are part of our shared experience, yet academia rarely offers space to engage with them. Living-with gives us not only a language but also a practice to do so, building on three interrelated affective-reflective practices introduced by Verlie (2022) that constitute living-with: **encountering**, **witnessing**, and **storying**.

Encountering refers to facing what is difficult, such as grief, anxiety, and disorientation, and allowing emotions to surface rather than suppressing or rationalising them. It unsettles dominant orders of feelings that demand positivity or composure and instead invites emotional honesty and curiosity as a starting point. In our practice, encountering is a first step for engaging with how we feel in relation to transformative changes and invites us to stay with anything that comes up, dark or light. Given that emotions are often explicitly uninvited from our professional practices and that certain emotions are especially difficult to access in our societies, we emphasise the need for 'encountering' our affective entanglements. The practice therefore begins by creating conditions for accessing or affording emotions – for encountering them.

Witnessing is the act of staying present to all that is happening, even when it is painful or uncomfortable. It asks us to face the realities of discomfort, be it loss, injustice, or transformation, without freezing or turning away. This practice requires openness to being affected and cultivates what Verlie (2022) calls "knowing-through-relation", an embodied and accountable way of understanding the world through connection rather than distance. In our practice, witnessing invites us to go deeper into our lived experiences and stay with and reflect on how it connects to the larger whole, be it in us, in our community or broader society.

Storying creates space for meaning-making. Stories connect (back) what is felt with what is 'known' (in how we traditionally understand it) and weave personal experiences with collective sense-making by sharing our stories. Through storying, the ambiguities of transformations can be articulated, contradictions can be held, sense can be made. In our practice, storying happens both when we ourselves (re-)story (e.g., by drawing, writing, journaling) and when we share our stories in interviews and reflect on them during conversations.

Together, these are not to be understood as fixed linear steps but as interwoven affective-reflective practices that help us engage with our affective entanglements.

CULTURAL PROBES FOR PRACTISING 'LIVING WITH'

Cultural probes, as introduced by Gaver et al. (1999), have developed in many directions in design and human-computer interaction research. Rather than intending to offer a method for 'objective' data collection, probes invite personal, ambiguous, and emotionally rich responses (Çerçi, 2024). While heterogeneous and diverse in form (Çerçi, 2024), cultural probes usually comprise a kit of materials and prompts, which support particular forms of reflection and response by participants. The kinds of prompts can be playful, intentionally open-ended, provocative, and speculative (e.g. Desjardins et al., 2019; Oogjes et al., 2018; Gaver et al., 1999), affording engagement with emotions and creating space for complex, entangled responses rather than clear-cut answers.

This openness makes cultural probes particularly suited to explore emotional entanglements with transformative changes. By inviting participants to engage through sensing and creating, e.g., by meditating, listening, drawing, writing, journaling or making, they can create room for experiential and emotional multiplicity, where darkness and lightness, feelings of grief, hope, confusion, and care can coexist without needing to be resolved. Probes' value in practice is often as much about how they enable participants to explore their own experiences and responses as they are a data collection method for researchers. Increasingly, first-person and autoethnographic probes (Desjardins et al., 2019; Lockton et al., 2020) blur boundaries between research tools and semi-structured creative methods for self-inquiry; equally, reflective practices such as bullet journalling have made their way into academic research (Ayobi et al., 2018).

The cultural probe we designed included the three affective-reflective practices from Verlie (2022) – encountering, witnessing, and storying – and allowed us to explore affective entanglements within our own transformative work contexts. The cultural probe aimed to hold space for the emotional, cognitive, imaginative, and relational dimensions of transformation – so that these could be felt, expressed, and reflected upon.

Drawing on multiple previous experiences in designing spaces and workshops (Coops et al., 2024b), the cultural probe evolved into a first version of a do-it-yourself workshop for affective-reflective practices. The materials included in the kit (fig. 1) were selected based on our own cultural embeddedness and familiarity with practices for engaging with affective entanglements, be it dark or bright. The candle and the shrine were chosen both as symbols of remembrance and celebration – as affordances for remembering the transformative moment each participant chose to engage with throughout the process. The fabric was inspired by burial shrouds, representing the act of letting go and burying with care, and the possibility of wanting to let go of, or hold on to. But it also speaks to fabric as a way of enveloping and keeping warm, like wrapping a gift. All aspects of transformative change. Seed paper served as the surface for drawing the transformative moment: paper that can be buried and planted in soil, from which flowers will eventually germinate and grow, showing the never-ending circle of change. This symbolised the transformative character of the moment itself, and the idea that after taking time to reflect and integrate an experience, new ideas and insights can begin to flourish. Flowers were chosen as a symbol of life but also for the sake of making the space feel sacred and important, and for their relation to being typical gifts both in celebratory and mournful contexts. All participants received a booklet for continuous journaling throughout the process, which was also used for data collection. In addition, the cultural probe explicitly invites all participants

to add materials they feel connected to, and that allow them to afford affective-reflective practice, e.g. tea, objects with certain meaning, a blanket. All materials were offered to the participants, including a booklet with the prepared probing process (fig. 2).

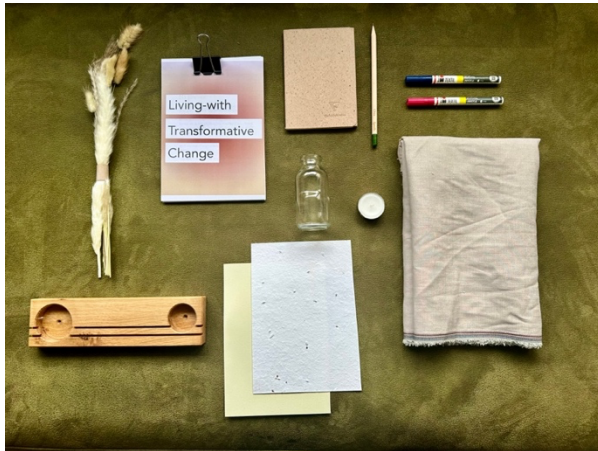


Figure 1. Materials used for the cultural probe

probing process

1. **Prepare your space** – setting up the shrine and materials, making the space feel like ‘your own’
2. **Guided meditation** – listening to a meditation about one’s inner space to foster presence and openness, explicitly designed for this experience.
3. **Encountering** – drawing a transformative moment as it was experienced.
4. **Witnessing** – adding contextual and emotional detail to the drawing.
5. **Storying** – using the fabric and textile pen to express what the transformative moment represented, what was felt, and what traces it left behind.
6. **Closing** – reflecting on the experience in the journal and symbolically closing the exercise.
7. **Evaluating** – documenting insights, photographing the space, and preparing for the follow-up interview.

Figure 2. Main steps of instructions from the probing booklet

Participants were invited to revisit their space over the following weeks (or for however long they needed), journaling freely about thoughts and emotions that surfaced and sharing photographs or journal excerpts if they felt comfortable.

USING THE CULTURAL PROBE AS RESEARCHERS

The research followed an autoethnographic approach (Chang et al., 2016), positioning all authors as co-researchers whose experiences became both the site and source of inquiry. Rather than distancing ourselves as observers, we engaged with the cultural probe ourselves as a form of situated, embodied, and relational research, in which our affective and reflective experiences are central to knowledge creation. The nine authors served as participants, interviewees, and autoethnographic reflectors. The two lead authors conducted the interviews and added additional reflection through memos, in relation to both the interviews and data coding. We acknowledge that our ability and way of engaging with the process and the cultural probe were influenced by who we are.

We are a group of scholars working across design and transition/transformation studies, with a focus on just and sustainable futures, e.g. around agri-food, energy, water, collaboration. All of us are based in Western European institutions, with one

author originating from Latin America. All but one hold fixed academic positions, with the freedom to choose our topics and methods. We are colleagues working on related questions, some of us also friends. During the research period, several of us navigated personal losses, severe illness, and burnout, which fundamentally shaped our engagement and timeline, with engagement periods varying from 3 weeks to one year. These circumstances, alongside our academic privileges and relationships, directly influenced how we engaged with the cultural probe. Through triangulation and thick description, we aimed to ensure credibility and reproducibility as much as possible in such interpretive qualitative research.

To start the process, each participant received the cultural probe in a physical package. As participants opened the package, they first received an informed consent form they had to sign, followed by an instruction on how to work with the probe, which guided them to the booklet that took them through the process (fig. 2).

After all participants completed their practices (fig. 3) and returned the reusable components, 60-minute semi-structured interviews were conducted. These interviews focused on participants' experiences, emotional experiences, and reflections on the practice of engaging with transformations through the cultural probe.



Figure 3. Contributions of different participants

The two lead authors analysed (1) the interview transcripts, (2) written and visual materials produced during the process (drawings, textiles, journal entries, photographs), (3) participants' reflexive notes, and applied (4) constant auto-ethnographic reflection (in the form of conversations on research diaries) about the

data and materials throughout the process. The analysis followed a collaborative, iterative approach combining open, thematic, and emotional coding (Saldaña, 2021; Braun & Clarke, 2006). Coding was guided by Verlie's (2022) conceptual framework of living-with but also allowed for upcoming new themes, which informed how we interpreted emotional engagement and sense-making across materials.

RESULTS

From our analysis of all the data and our autoethnographic reflections, two big themes emerged: the design of the cultural probe, the materiality and instructions, the process and how it afforded (or obstructed) affective-reflective practices for living-with and second, a critical reflection on legitimacy, the privilege and the politics of affective-reflective practices in academia and beyond.

Designing for affective-reflective practices

A broad variety of different experiences and perceptions emerged. All of us engaged with the cultural probe in very different ways. Fascinating, because it revealed how varied our emotional landscapes, needs and learning styles are, and challenging, because it shows there is no single way to invite for or sustain affective-reflective practices. While some followed the suggested process closely (I5, I6), others adapted the process to their own needs (I2, I3, I4, I8, I9), and some did not engage with the proposed (material) form at all (I7, I1).

For some, the cultural probe's materiality, its aesthetic quality, its tactility, the way it arrived as a package, created an atmosphere of care and intention. It invited slowing down and treating reflection as a meaningful practice.

"It felt like a present. It felt really special. And I took it home and I put it next to my desk on a very prominent place and I was happy every time I saw it. And I said, okay, this is so special. I want to dedicate good time to it." (I4)

At the same time, this sense of specialness could become a barrier.

"Having it so special felt really cool. And at the same time, it hindered me to get started. I was like, okay, and then I need to have an uninterrupted afternoon because I had no idea what to expect." (I4)

Others deliberately changed the process to fit their own form of reflection.

"I didn't use any of the materials provided because the situation in which I was in, was not appropriate for using them in this way. And also, I didn't feel that it would strengthen me because it was too much out in the open. Whereas for me, it's very much about introspection, which for me works well through drawing." (11)

Some participants (17) described a more emotional kind of resistance, as engaging with the cultural probe felt too confronting in a period of personal grief, especially since its materials were related to materials used in ritual practices that engage with loss:

"I can notice that there are many times that I was like, I'm going to start it now. And there was a sense of resistance towards that. And I was curious about the resistance... why have I not been able to do this? ... I was grieving my beloved one." (17)

These accounts show that starting the process itself was part of the practice: not a neutral methodological step, but a decision requiring readiness and care, and for some, exposing the limits of their capacity at that time. This highlights the importance of attending to the temporality and phases we find ourselves in during these moments, and it raises important questions around the ethics of inviting people to affective-reflective practices and how much can be asked of someone without, e.g. causing harm or re-traumatisation. As 18 reflected on 'how much is too much':

"it feels like you don't want to disturb people's inner worlds, I for sure do not want to harm or re-traumatize them. But you also kind of do want to disturb them a little bit, because you want them to sit with the pain to start moving".

For us this made clear that there is no one-size-fits-all approach to the design and use of cultural probes in affective-reflective practices. What works for one person could be inaccessible or even painful for another – this is a constant balancing act. Different people need different entry points, paces, and forms of engagement: collective and/or individual, embodied and/or reflective, structured and/or more open-ended.

"Every person needs something different... For some it might be meditating or journaling, for others it might be painting, walking, or running." (I4)

"You say, think about a phase in your life or a situation in which you felt societal transition or transformation unfolding, and stress to focus on a moment. And for me, transformation is not about a moment. ... I took the liberty of focusing on what transformation was for me during that period, but I was slightly hindered in the cultural probe because you continuously referred to moments." (I1)

The cultural probe revealed both the potential and the limits of (designing) cultural probes for affective-reflective practices. Such a process requires openness and flexibility, holding space for differences and incompleteness rather than seeking standardisation. Cultural probes require, but also allow for, accountability. As the differences in approaching and using the cultural probe showed, all participants made the cultural probe 'work' for themselves in one way or another, ranging from working closely with the given materials to fully reshaping them. This highlights the importance of first and foremost offering the physical and temporal space for affective-reflective practices, as well as general willingness to engage with the overall purpose of the cultural probe, rather than adherence to step-by-step instructions or specific materials.

Difference in transformative moments and their meanings

This variety was equally evident in the transformative moments participants named, ranging from geo-political to very private events. Two of us felt transformation unfolding in moments of political change, in particular the first election of Trump as US president (I2, I5). Similarly, one of us reflected on the election of an extreme right party in the Netherlands (I9), one around farmers' protests and street blockages (I4), while another described a very personal experience, reflecting on their engagement with a beloved one who was suffering (I3).

I4 described the emotional embodied experience of being caught in the middle of political upheaval, and highlighted the importance of connecting to their body and emotions:

“Basically it is around the farmers' protests in the beginning of 2023... I had to be on the highway before six o'clock in the morning because that's when they would block the highway and I would not be able to be at work on time.” (I4)

The moment became a metaphor for losing control and being drawn into ‘feeling’ transformation:

“what I instantly had when revisiting this moment was the emotion. The anger. The emotions instantly came and brought me back.” (I4)

In a similar vein, I2 reflected on the moment of Trump's first election, describing it as:

“The moment that really, I think, I was like: ‘Oh, okay, shit, this is like ... it.’” (I2)

which they experienced as expressive and embodied

“a kind of endless, sort of drumbeat you know... Like a dark cloud. It's this sort of tightness in my chest, which partly came back from doing the cultural probe again and thinking about it. It was this kind of feeling of tightness. Like nothing's ever relaxed anymore.” (I2)

This moment changed how they related to their work:

“It definitely made me think there's no point in doing all this academic stuff if it doesn't in some way seek to sort of help bring more justice about.” (I2)

Others brought personal experiences, showing how multiple, often opposing emotions shape the same transformative moment, connecting the private to the political:

"Someone I love was in a deep hole, not doing well at all. (...) In my culture, there is a strong expectation of being responsible to take care of loved ones, no matter what. So, I felt very responsible, indeed, even though it very much affected me and my life (...) I was frustrated with the lack of some ethical guideline on what is the right thing to do? (...) Then someone I had a conversation with told me about some things we could learn from Buddhism and one metaphor really stuck with me: a big black hole that someone is in: you cannot help them if you enter that hole as well. I felt very understood by this person. (...) he offered an additional layer that feelings can co-exist: yes, I can love and I can feel responsible, and especially then, I also have to take care of me and love myself." (I3)

Across all these reflections, multiple emotions and their embodied experiences played a significant role. Especially more 'taboo' emotions (grief, anger, frustration) seemed to have strongly influenced perception and action.

The cultural probe as a tool for affective-reflective practices

The cultural probe helped participants surface, experience and stay with emotions and work with their discomfort. It did not aim to resolve feelings, but to make them accessible for reflection and action.

I4, for instance, described how the cultural probe revealed a new emotional truth, that of anger, and how through journaling and drawing this evolved into understanding and renewed meaning:

"(My transformative moment) has become the picture for the feeling of anger. I don't consider myself an angry person at all... It's not something that comes natural to me. So, I was quite surprised. It's like "hey, actually, you are angry". You didn't put the word to it, but you were angry." Through journaling and drawing, this anger evolved into understanding and a renewed sense of meaning: "The exercise made me make sense of how I felt and what was going on. Before, I just didn't know what was happening, and now I could give words to it and could give meaning to it in a different way. That helped me quite a bit." (I4)

In addition to that realisation, for I4, this process even extended into professional practice, showing how much affective-reflective practices and actions influence each other:

"One of my questions was: how are you dealing with it now? So, I basically put it into a research proposal. The cultural probe made me realise: oh, that's what happened. I've written a research proposal on polarization to regain agency." (I4)

The design of the cultural probe, its dedicated time and space, temporal openness, and reflective prompts, allowed participants to slow down and attend to emotions that face the risk of otherwise remaining unarticulated or hidden. I4 described reaching a point of acceptance;

"I think I'm at peace with it now. The peace at the end is really part of it. When I was doing the journaling and writing it up, after that I felt closure. A feeling of closure and emotion of peace." (I4)

These reflections illustrate how a cultural probe can create spaces for staying with discomfort, turning emotions into insight such as orientation and action: *practices of living-with*, experiencing transformation as something that happens through and with our emotions. As I3 stated:

"(for me) it really also confirmed that (knowing about something in) theory is not the same as feeling it. It's also such a cliché, but people need to feel it."

The legitimacy and politics of affective-reflective practices, in academia and beyond

Engaging with the cultural probe revealed how difficult it was for many of us to make space for affective-reflective practices within the logics and institutions of academia (and our broader life). Participants described how these forms of reflection often clashed with how they had been conditioned to think, work, and evaluate their professional productivity.

"It took quite a long time before I managed to do it. (...) I'm used to doing things very fast, faster than others. (So, I planned that I would) just finish it like the academic style, right? So, I'll just make it. I made the commitment. Thursday, I'm going to block two hours to do the first step. (...) And then I started reading, I was like: no way. (...)" (I3)

"Another thing that I felt during this exercise is a deep gratitude that I have been invited to do this exercise. It is very inspiring and also self-nourishing. (...) So, to be encouraged to do this as part of work and partly during work time feels incredibly empowering and special. It also makes me feel a bit guilty. Is this really work? Is it not too self-indulgent to be work? Which are interesting thoughts to unpack, because if not during work, then when? Is meditating not an inherent part of knowledge creation?" (I3)

Even when participants recognised the value of the cultural probe, academic structures made it hard to engage without feeling guilt or pressure to justify the work as "academic."

Participants also reflected on questions of privilege and the risks of personal transformation without societal transformation, recognising that opportunities for reflective-affective engagement are unequally distributed.

"I kept thinking: who else could actually do this? I have the flexibility and safety to take time, but many people don't. It's a luxury to have space to feel." (17)

"It's interesting how easily something like reflection becomes an expectation for those of us who already have more freedom, while others are struggling just to keep up." (14)

"Having the political energy to fight for justice highly depends on being able to let go of personal matters even if just for a while, which really emphasizes the point about how transformation requires personal transformation." (13)

Participants also questioned whether 'personal' transformation is a prerequisite for societal transformation.

"There's this hypothesis that everybody needs to first personally transform in order for society to transform. I am not 100 percent buying into it. But I think for those seeing this as one of the paths to contribute to societal transformation, that this is really, really a very good path." (14)

These reflections underline that while affective-reflective practices can open important spaces for awareness and accountability, they also raise questions about institutional logics, legitimacy, privilege, access, and the risk of recentering already privileged actors.

REFLECTION & DISCUSSION

Our autoethnographic engagements with the process and results revealed a fundamental paradox at the heart of affective-reflective practices in academia: we need practices that help us to live-with, stay with discomfort, yet the very act of creating and engaging with such practices are a privilege and can reproduce the conditions that prevent us from doing so. This paradox manifested across two interrelated dimensions: the radical diversity of what different people need to practice living-with, and the troubling questions of legitimacy, institutional fit, privilege and power that emerged when we attempted to make space for this work.

Probing and holding complex affective entanglements

In a society and academic context that consistently avoids what is considered dark or heavy, one is constantly invited into numbness or shallowness. Yet 'negative' emotions

cannot be neatly separated from 'positive' ones – even the most 'positive' emotions carry more: melancholy, nostalgia, or preemptive grief. Practices that afford fuller engagement with the whole spectrum of affective entanglements (Machado de Oliveira, 2021) are thus needed, not because they instrumentally result in readiness for action, but because the affective entanglements the cultural probe helped surface are multivalent and resist neat categorisation. Grief, attended with presence, can transmute into gratitude. Anxiety can reveal existential fears that become the basis of sustained solidarity. Rather than treating these as pathological or in need of a salve, we need spaces that afford holding off the impulses that prevent candid familiarity with these depths. In the words of poet Kae Tempest:

**“Hold your own
Every pain
Every grievance
Every stab of shame
Every day spent with a demon in your brain giving chase
Hold it
Know the wolves that hunt you
In time, they will be the dogs that bring your slippers”**
Passage from Kae Tempest, Hold your Own

Creating spaces where affective entanglements can remain ambivalent, irreducible, and messy is essential, giving them the chance to unravel and reveal their hidden potentialities and calls for action. For these spaces to work, participants need room to resist the quick explanatory drive ("I feel this because of that") and the tendency to positively reframe the negative (e.g., I feel loss, but it's fine, because it means I loved). As they develop familiarity with 'the wolves', they may gradually find ways to live-with. Yet where this cultural probe created opportunities for individual encountering and storying, there remains a clear need for collective spaces where private experiences can be recontextualised and wherefrom mutual support and sensemaking can be practised.

The impossibility of one-size-fits-all approaches

The radical diversity in how participants engaged with the cultural probe (or in some cases, could not engage with it at all) demonstrates that there can be no one-size-fits-all approach to affective-reflective practices. While Verlie's (2022) framework of encountering, witnessing, and storying provided a conceptual foundation, our experiences revealed that what worked as an invitation for one person became a barrier for another; what created opportunities to hold space for some felt restrictive or overwhelming to others.

This diversity is not a methodological limitation to overcome through better design, but a fundamental characteristic of affective-reflective practices themselves. What Machado de Oliveira (2021) describes as exercising "muscles that most of us have neglected" takes on new meaning when we recognise that these muscles are differently developed, differently atrophied, and require different forms of training for different bodies, histories, and contexts.

This challenges the current proliferation of frameworks, toolkits, and models for 'personal transformation' that promise scalable, replicable approaches to emotional capacity-building. If, as Verlie argues, living-with requires us to stay present with

ambiguity and multiplicity, then our approaches to supporting this work must themselves remain ambiguous and multiple, resisting the temptation to codify "best practices" or create replicable models and 'one-size-fits-all'. Such practices can never be a 'one-time only' intervention but must be a continuous process and ongoing commitment.

For educators and scholars hoping to cultivate practices for living-with, this means designing for multiplicity instead of consistency, for ongoing engagement instead of one-time interventions, offering diverse practices while acknowledging that none will always work for everyone. It requires a kind of pedagogical humility that Western education systems rarely cultivate, treating frameworks not as prescriptions to be followed but as conceptual provocations to be adapted, resisted, and transformed in practice.

'Personal transformation' as a privilege project and its risks for transformative change

Especially the autoethnographic reflections on our cultural probe and the process we went through showcased an aspect that before, we only knew from the literature. It pointed out how affective-reflective practices for 'personal transformation' may risk functioning as a privilege project, potentially sidelining societal transformations and political change.

As authors and participants, we are aware that engagement with the cultural probe promotes a privileged way of engaging with the world, especially since many of us engaged with it from the comfort of our homes in the Global North, with permanent contracts, where the multiple challenges of our times remain largely intangible. As Cooper & Gibson (2022) highlight, "untethered from moral and ethical guidelines as well as caring understanding of local and global prospects for lasting wellbeing, mindfulness programs, workshops, and interventions for inner transformation can inadvertently strengthen unsustainable systems and deepen inequities." Additionally, Verlie (2022, p.122) warns that focusing on emotional resilience without taking historical systems of oppression and privilege into account, "reaffirms and re-enacts the needs, identities and feelings of climate-complicit people".

The very act of engaging with and displaying emotions is not neutral. It takes up space, redirects attention, and grants or hinders access to resources (Bogner et al., forthcoming). This is why some scholars criticise the 'unbearable whiteness of climate anxiety' and note that foregrounding white people's anxieties once again serves to "devoting resources toward appeasing the dominant group" (Ray, 2021). As Ahmed's (2010) work demonstrates, emotions emerge from within specific systems of power. For instance, those with more material security may more easily engage emotionally, having the time and energy to attend protests, write policy feedback, or express grief. Åsa Wettergren describes this privilege of emotional reflexivity (Wettergren, 2015), reflecting on the ability to process and express complex emotions without jeopardising one's basic survival, which is not equally available to all. We must therefore ask: whose emotions are validated and whose are dismissed? Which emotions do we foreground as reasons for political action, and which then shape said transformations? Not all emotions are equally situated, nor do they equally influence access to spaces of power (Ahmed 2013, Bogner et al., forthcoming).

Without attending to these questions, affective-reflective practices risk providing those already privileged with sophisticated vocabularies for disengagement, enabling

a sense of "doing the work" while avoiding the discomfort of actual political struggles. This creates what we might call a "personal transformation elite": those who have developed reflexive capacities and can speak the language of transformations, yet whose actual relationships to systems of oppression remain largely unchanged. It allows us to feel transformed without being displaced, to experience discomfort without losing comfort, to process complicity without actually divesting from what makes us complicit.

Moreover, focusing on 'personal transformation' can defer societal transformation and political action. There is always more personal transformation to do, always another layer of conditioning to unlearn. This infinite work serves, in contrast to its aspirations, the perpetuation of the status quo perfectly: we remain perpetually in preparation, perpetually not-yet-ready, perpetually working on ourselves rather than working to dismantle oppressive systems. Affective-reflective practices must not be exercised or misunderstood as atomised self-improvement projects up to burnout (Han, 2015). As the crises of our times accelerate, as ecological collapse intensifies, as inequalities deepen, we cannot afford to mistake emotional processing for political struggle.

CONCLUSION: Holding space for affective-reflective practices

The findings presented in this paper suggest that designing cultural probes for affective-reflective practices for practising living-with requires holding spaces for multiple, often conflicting, complexities. We invite readers to approach affective-reflective practices for living-with in academic contexts with profound ambivalence – neither fully and uncritically embraced nor outright rejected but held in productive tension. Crucially, holding space for complexity and tensions calls for a deeper engagement with the question of how to prevent affective-reflective practices from becoming the very self-soothing mechanisms they aspire to overcome.

The cultural probe is offered not as a model to be standardised and replicated, but as an imperfect tool to be critically explored, adapted, refused, and transformed. For scholars aiming to create spaces for living-with transformations across the various contexts they operate in – research, teaching, or stakeholder engagement – we call for approaches that resist standardisation and remain accountable to questions of privilege and power.

We encourage those designing cultural probes for affective-reflective practices to bridge the individual and the collective, the private and the political. While this specific process started with exploring affective entanglements, it should not stop there – it must extend beyond the self. Learning to live-with transformations requires staying with contradictions and working with the discomfort they generate, rather than seeking premature resolution. The challenge lies not in perfecting affective-reflective practices, but in using them as complementary to the difficult, collective work of political transformation.

ACKNOWLEDGEMENTS

We explicitly want to thank all authors who participated in the cultural probe and the writing of this paper. We thank Clara Urià Weis for carefully collecting the cultural probe material. We also thank Erin Quigley for introducing us to the wonderful work of Blanche Verlie.

Author contributions: Femke Coops and Kristina Bogner are shared first-authors of this paper. Together, they developed the conceptualisation and design of this paper and wrote the original manuscript. They developed the cultural probe and conducted all data collection and analysis. Dan Lockton and Jonas Torrens helped in shaping the cultural probe. All co-authors read and revised the manuscript multiple times.

DATA STATEMENT

Anonymised parts of the data that do not violate the right for privacy of the participants can be obtained by contacting the first authors of this paper.

REFERENCES

Ahmed, S. (2004). *The cultural politics of emotion*. Routledge.

Ahmed, S. (2010). *The promise of happiness*. Duke University Press.

Avelino, F., Wijsman, K., Van Steenberghe, F., Jhagroe, S., Wittmayer, J., Akerboom, S., ... & Kalfagianni, A. (2024). Just sustainability transitions: politics, power, and prefiguration in transformative change toward justice and sustainability. *Annual Review of Environment and Resources*, 49(1), 519-547.

Ayobi, A., Sonne, T., Marshall, P., and Cox, A.L. (2018). Flexible and Mindful Self-Tracking: Design Implications from Paper Bullet Journals. In *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems (CHI '18)*. ACM, New York, NY, USA. <https://doi.org/10.1145/3173574.3173602>

Berlant, L. (2020). *Cruel optimism*. Duke university press.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, 3(2), 77-101.

Bristow, J., Bell, R., Wamsler, C., Björkman, T., Tickell, P., Kim, J., & Scharmer, O. (2024). *The system within: Addressing the inner dimensions of sustainability and systems transformation*.

Bogner, K., Kump, B., Beekman, M., & Wittmayer, J. (2024). Coping with transition pain: An emotions perspective on phase-outs in sustainability transitions. *Environmental Innovation and Societal Transitions*, 50, 100806.

Çerçi, S. (2024). *Probing into research through design: understanding design-led knowledge production in HCI*. Doctoral thesis, Northumbria University.

Chang, H., Ngunjiri, F., & Hernandez, K. A. C. (2016). *Collaborative autoethnography*. Routledge.

Cooper, K. J., & Gibson, R. B. (2022). A novel framework for inner-outer sustainability assessment. *Challenges*, 13(2), 64.

Coops, F., Bogner, K., & Hummels, C. (2024a). Letting go in sustainability transitions: designing spaces for the unavoidable companion of change. In *Routledge Handbook of Sustainable Design* (pp. 493-504). Routledge.

Coops, F., van der Veen, R., van der Horst, S., Bogner, K., & Lockton, D. (2024b). Designing spaces for letting go in sustainability transitions. *Proceedings of Relating Systems Thinking and Design, RSD12*, Article 057. Georgetown University. <https://rsdsymposium.org/letting-go-in-sustainability-transitionsletting-go-in-sustainability-transitions>

Desjardins, A., Key, C., Biggs, H.R., and Aschenbeck, K. (2019). Bespoke Booklets: A Method for Situated Co-Speculation. In *Proceedings of the 2019 on Designing Interactive Systems Conference (DIS '19)*. Association for Computing Machinery, New York, NY, USA, 697–709. <https://doi.org/10.1145/3322276.3322311>

Dixon, T. (2023). *The history of emotions: A very short introduction* (Vol. 735). Oxford University Press.

Freire, P. (2021). *Education for critical consciousness*.

Gaver, W., Dunne, A., and Pacenti, E. (1999). Design: Cultural probes. *Interactions* 6(1), 21–29. <https://doi.org/10.1145/291224.291235>

Global Grassroots. (n.d.). Inner Work for Social Change. *Conscious Change Wisdom*. <https://www.consciouschangewisdom.org/inner-work>

Han, B. C. (2015). *The burnout society*. Stanford University Press.

Haraway, D. (1988). Situated knowledges: The science question in feminism and the privilege of partial perspective. *Feminist Studies*, 14(3), 575–599. <http://www.jstor.org/stable/3178066>

Inner Development Goals. (n.d.). Inner growth for outer change. Retrieved November 20, 2025, from <https://innerdevelopmentgoals.org/>

Ives, C. D., Schöpke, N., Woiwode, C., & Wamsler, C. (2023). IMAGINE sustainability: Integrated inner-outer transformation in research, education and practice. *Sustainability Science*, 18(6), 2777-2786.

Izard, C. E. (2010a). The many meanings/aspects of emotion: Definitions, functions, activation, and regulation. *Emotion Review*, 2(4), 363-370.

Izard, C. E. (2010b). More meanings and more questions for the term "emotion". *Emotion Review*, 2(4), 383-385.

Jaggar, A. M. (1989). EMOTION IN FEMINIST. *Gender/body/knowledge: Feminist Reconstructions of Being and Knowing*, 145.

Koistinen, K., & Teerikangas, S. (2021). The debate if agents matter vs. The system matters in sustainability transitions—a review of the literature. *Sustainability*, 13(5), 2821.

- Lindström, K., Jönsson, L., & Hillgren, P. A. (2024). Reorientations: Practicing Grief and Hope in Post-Carbon Futures. In *Proceedings of the Participatory Design Conference 2024: Full Papers-Volume 1* (pp. 187-196).
- Lockton, D., Vervoort, J., Waardenburg, M., Duncan, J., Chambers, J., Ripoll-Bosch, R., ... & Colombant, S. (2023). *Playing With Systems*. *Proceedings of Relating Systems Thinking and Design*.
- Lockton, D., Zea-Wolfson, T., Chou, J., Song, Y., Ryan, E., and Walsh, C.J. (2020). Sleep Ecologies: Tools for Snoozy Autoethnography. In *Proceedings of the 2020 ACM Designing Interactive Systems Conference (DIS '20)*. Association for Computing Machinery, New York, NY, USA, 1579–1591. <https://doi.org/10.1145/3357236.3395482>
- Machado De Oliveira, V. (2021). *Hospicing Modernity: Parting with Harmful Ways of Living*, Berkeley.
- O'Brien, K. (2013). The courage to change: Adaptation from the inside-out. In *Successful adaptation to climate change* (pp. 306-319). Routledge.
- Ojala, M., Cunsolo, A., Ogunbode, C. A., & Middleton, J. (2021). Anxiety, worry, and grief in a time of environmental and climate crisis: A narrative review. *Annual review of environment and resources*, 46(1), 35-58.
- Oogjes, D., Odom, W., and Fung, P. (2018). Designing for an other Home: Expanding and Speculating on Different Forms of Domestic Life. In *Proceedings of the 2018 Designing Interactive Systems Conference (DIS '18)*. Association for Computing Machinery, New York, NY, USA, 313–326. <https://doi.org/10.1145/3196709.3196810>
- Pihkala, P. (2020). Anxiety and the ecological crisis: An analysis of eco-anxiety and climate anxiety. *Sustainability*, 12(19), 7836.
- Ray, S. J. (2021). Climate anxiety is an overwhelmingly white phenomenon. *Scientific American*. <https://www.scientificamerican.com/article/the-unbearable-whiteness-of-climate-anxiety/>
- Rhodes, J., Blakeley-Glover, J., Miller, A., Taylor, A., & Rochmankowski, I. (2023) 'Inner Development Goals and the Meaning, Awareness and Purpose (MAP) Model for Climate Coaching', *Journal of Mental Health and Climate Change*, Saldaña, J. (2021). Coding techniques for quantitative and mixed data. *The Routledge reviewer's guide to mixed methods analysis*, 151-160.
- Servant-Miklos, G. (2024). *Pedagogies of collapse: A hopeful education for the end of the world as we know it*. Bloomsbury Publishing.
- Schmitz, S., & Ahmed, S. (2014). Affect/emotion: orientation matters. a conversation between Sigrid Schmitz and Sara Ahmed. *FZG–Freiburger Zeitschrift für GeschlechterStudien*, 20(2), 13-14.
- Stodulka, T. (2019). Orders of feeling. In *Affective Societies* (pp. 310-318). Routledge.
- Verlie, B. (2022). *Learning to live with climate change: From anxiety to transformation* (p. 140). Taylor & Francis.

Wamsler, C., Osberg, G., Osika, W., Herndersson, H., & Mundaca, L. (2021). Linking internal and external transformation for sustainability and climate action: Towards a new research and policy agenda. *Global Environmental Change*, 71, 102373.

Wettergren, Å. (2015). How do we know what they feel?. In *Methods of exploring emotions* (pp. 115-124). Routledge.