

Systems Sensing for Transformations Organizations: Lessons from the Transformations Conference 2023

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Abstract

What lessons can be drawn from our systems sensing practice at the Transformations Conference for application in transformations organizations? We conduct a practitioner reflection on practice to present key insights from facilitating two systems sensing workshops (one in-person, one online) at the Transformations Conference 2023. *Systems sensing* “can be understood as a visceral aptitude that draws on innate human capacities for being in relation with, listening deeply to, and momentarily embodying the elements of a system” (Ritter and Zamierowski 2021, 105). Our interest in systems sensing is rooted in the mounting urgency of eco-social crises and the corresponding need for novel forms of inner and outer transformation. Our workshops led participants through various systems sensing practices, most importantly a systemic constellation, to explore an inner and collective transformative learning edge. This paper aims to harness key lessons from these workshops for applying systems sensing practices in transformations organizations. The lessons we discuss cover aspects such as how systems sensing practices can gather and share data to help emerging inquiry processes see and sense themselves; how their practice can provide novel perspectives on experiences; how they can foster spaces for recalibration; and how they can help us become present to invisible or unacknowledged systemic dynamics. Closing these practitioner reflections, we discuss recommendations for applying systems sensing methods in transformations organizations and beyond. We hope to spark joint explorations of the role of systems sensing in the restoration of ways of existence that allow all life on Earth to thrive.

Introduction

In this paper, we conduct a practitioner reflection on practice to present key insights from facilitating two systems sensing workshops (one in-person, one online) at the Transformations Conference 2023. This biennial conference, hosted by the Transformations Community, “a global community of action-oriented researchers and reflective practitioners supports transformations to a sustainable and regenerative future” (Goldstein et al. 2022, 2). Originating in Norway in 2013, the Transformations Community brings together sustainability-oriented multi-sectoral practitioners and academics to advance “deliberate, ethical and sustainable transformation in response to climate change” (Goldstein et al. 2022, 2).

The 2023 conference took place in a hybrid format, which combined online panels and workshops with three in-person local hubs in Sydney, Australia; Prague, Czechia; and Portland, Maine. The conference's overarching theme was “Transformative Partnerships for a Better World.” We attended the European hub in Prague, which had the subtheme of “Design and Management of Transformations Organizations.” We write this article from the position of “transformations pracademics” (Goldstein et al., 2022) - actors bridging knowledge creation and on-the-ground application toward just transformations.

In line with the theme of the European hub, our workshops were aimed at practitioners and academics working in and with transformations organizations (hereafter T-Orgs, Benedum, et al., 2022). These are defined as “initiatives that support their members’ efforts to create and scale innovation for systems change” (Goldstein et al. 2022, 2), “acknowledging that we need radically new approaches that are responsive, adaptive, and participatory and that can help us evolve in how we relate to and care for each other, the natural world, and all forms and expressions of life” (Ritter and Zamierowski 2021, 102). In our definition of transformations organizations, we include community-based non-profits, employee-owned businesses, workers cooperatives, communities of practice around shared inquiries, and other types of organizational entities that bring about systems change through collaborative efforts. We see T-Orgs as grounds to experiment with novel strategies, methods, and inner attitudes to catalyze systemic change creatively and courageously. In line with this explorative orientation, our workshops invited participants to experiment with different sensing methods to inquire into internal, social, and systemic realities.

What do we mean by sensing methods? While exact definitions of sensing are currently being developed, we employ several working definitions to situate ourselves within the emerging literature on sensing. *Sensing* itself may be understood as using extended, multiple ways of knowing to understand and relate to different aspects of, e.g., a situation or context (Heron & Reason, 2008; Rajagopalan, 2022; Spiller et al., 2015). These ways of knowing can be emotional, embodied, intuitive, aesthetic, or practical and can be drawn upon by individuals and groups. *Systems sensing*, a form of sensing, “can be understood as a visceral aptitude that draws on innate human capacities for being in relation with, listening deeply to, and momentarily embodying the elements of a system” (Ritter and Zamierowski 2021, 105). Again, this can be used by individuals and groups. As a collective practice, systems sensing may be understood as “thinking and feeling together” (Scharmer 2016, 142). We understand practices such as systemic constellations (Ritter & Zamierowski 2021) and Social Presencing Theatre (Dutra Gonçalves & Hayashi 2021) as systems sensing practices.

Taking these individual and relational dimensions of systems sensing into consideration, our workshops guided participants through mindfulness and embodiment exercises, employed methods from the canon of Theatre of the Oppressed (Boal 2008) to explore inner and physical space, and led a systemic constellations practice (Ritter and Zamierowski 2021) to inquire into individual and collective transformative learning edges. All these steps invited participants to explore internal and social interdependent dynamics through wider ways of knowing. This paper aims to harness the key lessons from these workshops, following the research question: "What

lessons can be drawn from our systems sensing practice at the Transformations Conference for application in T-Orgs?”

We will first detail the conceptual background that underpins our view on the relevance of systems sensing for eco-social transformations. After describing the workshops and our observations in more detail, we will discuss our four key lessons. These are:

- Systems sensing practices could provide innovative ways to gather and share data to help an emerging inquiry process sense and see itself.
- By accessing wider ways of knowing, systems sensing practices can give individuals novel perspectives on their experiences.
- Systems sensing practices can create a space for reconnection and recalibration.
- Systems sensing practices can help us become present to invisible or unacknowledged systemic dynamics, including pain and grief, differently.

In conclusion, we will discuss recommendations and future directions for applying systems sensing methods in T-Orgs and beyond.

Conceptual Background

In this section, we delineate our conceptual understanding and contextualize the relevance of systems sensing methods for the work of T-Orgs to advance systemic change. Trying to wrap our heads around these concepts resembles drawing a map of a complex system - every idea is intimately and non-linearly linked to everything else. To retain some order, we have written this section as a set of principles and context from which our work is sourced.

1. *Relational ontology and epistemology*: We position ourselves and our work within relational ontology (the nature of being) and epistemology (the nature of knowledge). In adopting these viewpoints, we are inspired by scholars from diverse fields and traditions, including indigenous and decolonial scholars (e.g., Gram-Hanssen et al. 2021); science and technology studies (Latour 1993); cyberfeminism (Haraway 1991, 2016), and feminist and posthumanist studies (Barad 2003, 2006). Rather than viewing the world as a collection of separate, isolated objects, relational ontology highlights the web of relationships and interdependencies that shape our existence and posits that entities and phenomena exist and derive their meaning through their relationships and interactions with other entities. Conversely, relational epistemology views knowledge as co-created through social interactions and diverse ways of knowing (Heron & Reason, 2008).
2. *Separation worldviews at the root of the polycrisis*: We, as humanity, find ourselves in a context of intersecting crises or polycrisis, including climate change, biodiversity loss, structural racism, and more (Lawrence et al. 2022; Miller and Heinberg 2023). We agree with Riedy (2022) and Mutuwa (1996) that ontologies of separation, growth, individualism, and competition are at the root of the polycrisis. Addressing the crises requires transforming these underlying worldviews. Part of working from a relational ontology and leaning into emerging potential is acknowledging where we are and where

we come from and creating a deep and shared understanding of what led us to the divides and fragmentations of the polycrises.

3. *Linear problem-solving is inadequate for the crises' complexity:* These interlocked crises and the systemic and hidden dynamics that keep them currently in place are multifaceted and complex – traditional, linear, controlling, technocratic, and input-output modes of problem-solving are ineffective in tackling them. Complexity is a way to describe that everything is alive and “interacting in multiple ways” (Johnson 2001, 19). It may exceed our ability to process it mentally because the “causal relationships [of components] are entangled and dynamic, and the only way to understand the system is to interact” (see Cynefin’s theory, cited in Snowden 2021, 16).
4. *Need for ‘upgrading the how’ from within and without:* Consequently, actors working towards systemic change need to develop and evolve methodologies and strategies to probe, sense, and respond to complex systems dynamics in a way that uncovers and shifts source conditions. We call this innovation ‘upgrading the how’. These changes towards more coherence must encompass both the inner and outer realms. With the outer upgrade, we refer to methods, tools, strategies, and technologies, including novel forms of collaboration. With the inner realm, we refer to the interior condition of the intervenor, including reflexively exploring the worldviews and ontologies we act from as individuals and collectives.
5. *T-Orgs as experimental grounds for ‘upgrading the how’:* We see T-Orgs as experimental grounds for such approaches, innovations, and upgrades to be experimented with, tested, and iteratively refined. In our experience, it is only when T-Orgs work on fostering their inner mindsets, including a transformative and learning-centered approach, that they can steward the outer and systemic transformations they work towards in their given contexts with greater effectiveness. Nurturing such a transformative mindset as an integral part of the work, including being with what is and embracing differences, can unlock untapped potential for co-creation across sector, space, and scale. We contend that a safe enough space is vital to enable such experimentation of upgrading the how (Singer-Brodowski et al. 2022).

To summarize the main contentions, we position ourselves and our work within relational ontology and epistemology and see paradigms of separation as one of the root causes of the intersecting crises we face. The complexity of these interdependent crises entails that they can no longer be tackled with linear problem-solving modalities. We advocate for an ‘upgrading’ of practices, strategies, and inner dimensions to meet these complex systemic challenges and move towards a relational ontology and epistemology. We see T-Orgs as experimental grounds for such inner-outer transformative innovations. Our facilitation of systems sensing practices at the Transformations Conference represents such experimentation, and we synthesize key lessons in this paper.

Bringing these contentions together, the research question that guided our reflection was: "What lessons can be drawn from our systems sensing practice at the Transformations Conference for application in T-Orgs?"

Methodology & Observations

In this section, we describe the structure of the workshops and our corresponding observations. We will discuss the in-person workshop first. The online session followed a similar structure but had some variations. We will discuss these in the second part of this section.

In-person Workshop (90 min)

Our in-person workshop was held on the morning of the conference's second day. On the same morning, a little earlier, the whole Prague hub had gathered to listen to the morning keynote of Otto Scharmer (Scharmer 2023). With Scharmer being a prominent advocate for the rehabilitation of the senses and experiencing ourselves as part of social fields (Pomeroy & Hermann 2023) to tackle systemic crises, we felt that the stage had been set perfectly for what we wanted to explore in our sessions.

During the first day, the conference primarily held panels and discussion-based workshops. Instead of these more traditional conference formats, participants gathered in a big standing circle for our session - it was clear that this would be a different kind of space. More and more people kept pouring in (we estimate that about 50 people participated) - with the silence and the gathering crowd, there was a tangible buzz in the air.

Arrival and framing

We opened the session by giving participants an overview of the flow of the day before launching straight into the opening segment. The intention of the opening activity was twofold. We wanted participants to settle into the space and become alive to their bodies and senses to balance out the cognitive demands of an academic conference. Secondly, we believe that the sensibilities to sense a collective, a social field, or a relational space are already present within everyone. The opening exercises aimed to awaken this sensibility.

We started by guiding a grounding mindfulness meditation - we asked people to put their hands on their bellies and gently rock back and forth to arrive in the space. We invited them to become aware of their own internal reality, the social reality, the feeling of the intersubjective space we were already co-creating, and the planetary reality, the wider ecological system we are all held by.

Next, we used methods inspired by Theatre of the Oppressed (Boal 2008) to arrive in the space - we started moving around the space and mingling randomly. Participants were invited to greet each other with their eyes as they passed, explore the space with curiosity, and recenter their awareness of their moving body and breath whenever the mind wandered. As participants walked

in this way, we invited anyone to stop and start walking. The invitation to everyone was that whenever someone stopped, the whole group would stop as instantaneously as possible. Whenever someone started, the collective was invited to start again as instantaneously as possible. This activity invited participants to include in their awareness their own movements and the collective movement of the group. We continued moving as a swarm, playing with different speeds and challenges for collective movement.

To close the arriving segment, we gathered in a circle again for a check-in. Despite the size of the group, we were determined to hear everyone's voice to deepen the experience of the social field further. We went around the room, and every participant introduced their name, checked in with one word about how the opening activities were for them, and with another word about how they were feeling right now. While we did not record these answers, we remember a prevalence of words such as "grounded, relaxed, curious, nervous, and settled." One participant even called the opening segment "transformative."

Guided Systems Sensing Journey

The main body of the workshop deepened the exploration of systems sensing by guiding participants through a systemic constellation practice. We began by introducing the two primary roots of this practice. First, we contextualized systems sensing within the interdisciplinary field of systems thinking (e.g., Meadows 2008; Senge et al. 2004), highlighting the value of "listening to the wisdom of the system" as well as "celebrating complexity" (Meadows 2008, 178, 181). Second, we introduced the background of systemic constellations work - the therapeutic approach known as family constellations (Hellinger et al., 1998). This approach includes trans-generational and phenomenological aspects with a connection to family systems therapy. It is also inspired by the ancestor reverence of South Africa's Zulu people (Cohen, 2006). Many practitioners and researchers have contributed to this developmental practice, and literature and systemic constellations have further evolved from family constellations, organizational constellations (Weber, 2000), and structural constellations (Sparrer & Varga von Kibéd, 2000).

The guiding question for this practice was: What is there for me to know now about a transformative learning edge that I am called to lean into? (work, private or in general). We had preselected the following 'elements' for participants to visit:

- *Transformative learning edge*: The area where the participant moves beyond their comfort zone into a space that can feel daunting, uncertain, and unknown but where something vital can be learned
- *Self*: The participants' self-view and situatedness in relation to their transformative learning edge
- *Context*: The environment or system (work, culture, private) that the transformative learning edge is embedded in
- *Resource*: A material, emotional, or spiritual aspect in the participants' lives that could be helpful in moving toward the transformative learning edge
- *Leap*: The movement, trigger, or leverage that makes the participant "surrender" into the unknown

- *Interference*: An aspect of the participants' context that might be blocking or disturbing the open connection with their transformative learning

After introducing the practice and giving participants time to reflect on a transformative learning edge they wanted to explore with this embodied practice, we introduced the 'neutral' position - a place of centredness and neutral presence that participants could return to at any point of the practice. Participants took a moment to breathe into their bellies again and become acquainted with this place of presence.

Thus, grounded in themselves and their individually defined question, participants - as a whole group - were invited to visit each 'element' by taking one step forward and becoming in contact with the element. They were then invited to explore with their senses and wider ways of knowing what they experience in relation to that element. How does their body feel? What does their posture express? Is there a change in temperature? Is there a sense of inner pressure? Participants are then invited to use all of these impressions as raw material to listen to what the element might convey. Participants were also encouraged to use all these diverse sources of input to form new perspectives in relation to the element. If the transformative learning edge was, for example, whether to take a new professional position, the element 'context' might give them cues about which contextual factors were important in this question. After visiting each element, participants stepped back into their neutral space, 'cleansed the energy' of the element, and let the information sink into their system, including in their mind, before being guided by the facilitator to visit the next element. In this exercise, we started with visiting the *Self*, then the *context*, followed by the *transformative learning edge*, the *leap*, a possible *interference*, and a *resource*. We closed with once more stepping into the element of *Self* before concluding this part of the exercise.

As facilitators, we use different indicators to judge whether a workshop has gone well. Direct feedback and outcomes are clear indicators. Moreover, during the 25 minutes of the guided systems sensing journey, the workshop space was alive with vibrancy and palpable affective energy, a phenomenon we refer to as 'atmospheric charge.' We could hear loud sighs and exhalations, see the emotion and movement on people's faces, and viscerally feel the depth of people's engagement and presence. The 'atmospheric charge' is a more subtle, nonetheless vital, cue in such an evaluation.

Sharing and Integration

In the final stage of the workshop, we invited people to reflect and share their experiences in pairs or groups of three. The conversations were so lively that bringing people back into the circle was challenging. Finally, participants shared some impressions with the whole group. We closed the space with a collective clap to officially end the exploration altogether.

Online Session (60 min)

The online session followed a similar format. Since this session was scheduled for sixty minutes and did not permit walking through a space, we did a grounding meditation and checked in with each other at the beginning. The group was also smaller - we were six people.

The only notable difference in the session flow was that the systemic constellations practice invited people to inquire into a collective learning edge. The inquiry question was: “What is there for us to know now about a transformative (learning) edge that the Transformations community is called into?” The elements participants visited were *Transformation Community, resource, transformative learning edge, leap, partnerships, and interference.*

Given the small group size, we fed back the results of the journey as the whole group. We found it fascinating to hear the commonalities and differences in people’s perceptions of the Transformation Community’s learning edge and the different elements. These reflections and insights moved us so much that we attempted to synthesize and feed them back to the entire conference. We discuss this process in more detail in Lesson 1 of the following section.

Due to the exploratory nature of this paper, the following section presents lessons learned across the online and live sessions. Yet, there are considerable differences between these ways of engaging participants. The group size may have affected comparison, allowing for more in-depth explorations of topics in the smaller online workshop. Further, the inquiry question differed - the live workshop explored individual learning edges, while the online session investigated a collective learning edge shared in the Transformations Community. We reflect further on these limitations in the conclusion of the paper.

Lessons Learned

Lesson 1: Systems sensing practices could provide innovative ways to gather and share data to help an emerging inquiry process sense and see itself.

This lesson is based on the assumption that, for any profound systemic change to occur, consciousness must be transformed (Meadows 1999) by making the system see and sense itself (Scharmer 2018). A call for action researchers accompanying such processes is to *gather* and *share* data in ways that are rigorous yet rapid enough to help the system see and sense itself in the emerging process (e.g., Bradbury et al. 2019; Pomeroy et al. 2021).

We contend that the systems sensing practices we conducted at the Transformations conference could present powerful ways of *gathering* sensory-intuitive data about what it is like to be part of an emergent initiative. Given the *felt* nature of the data and experience, these processes could be especially potent in uncovering invisible systemic dynamics and realities.

We saw this process at play, especially in the online workshop, where we inquired into the collective learning edge of the Transformations community. Some common themes in participants' reflections viewed the diversity of perspectives and knowledge within the

community as an asset, felt that an essential leap for the community was to cohere and build collective power, and experienced multilingualism as a potential excluding factor, to name a few examples (see Table 1 for a compilation of our notes during the session).

Table 1. *Notes of Participants' Reflections on the systemic constellation practice during the Online Session*

Element	Participants' Reflections
Transformations Community	<ul style="list-style-type: none"> ● Searching for understanding ● Walking together into uncertainty ● Imagine a community where we walk the talk individually, professionally, and collectively ● Walking together with courage across space and time ● Birds in a murmuration, floating
Resource	<ul style="list-style-type: none"> ● Multiplicity of voices, pieces of knowledge, perspectives, ways of knowing ● Nature quality was available, what we need is already available ● Natural wisdom of our local cultures, our own indigenous perspectives ● We have been doing this for a long time; our collective wisdom is more than what each of us bring
Edge	<ul style="list-style-type: none"> ● Hold talents more gently, don't grab, be together but not hurt, don't force our personal worldviews
Leap	<ul style="list-style-type: none"> ● Leap into the sky, blue, positive, light ● Accepting that we don't have a common shared language among us all ● Enlarge our community to be more inclusive ● Understand the history of our localized cultures ● Courage to take scary steps
Barrier	<ul style="list-style-type: none"> ● Disconnection but trying to connect people, knowledge, and what's required to make transformation happen, getting there but slowly ● Language barrier

Both of us facilitators felt that these reflections were so potent that we tried to harness and feed them back to the wider community. Yet, we did not find an efficient way to *share* this data back to the emerging process. Furthermore, both sessions required us to fulfill the dual role of facilitator and researcher. This dual role meant that we could not record data during the unfolding workshop. We were only able to gather notes from the online workshop by recording the session.

To summarize this lesson, our experience shows that systems sensing practices such as the ones we facilitated could be a powerful way to *gather* data about the invisible dynamics of what it is like to be in a system. Yet, as facilitators and researchers, we struggled to appropriately record these data. Further, and following Pomeroy et al. (2021), we do not know how we can *share* this data back to the community in a way that is rapid, rigorous, and in service of action.

Lesson 2: By accessing wider ways of knowing, systems sensing practices can give individuals novel perspectives on their experiences.

The in-person systems sensing practice invited individuals to explore a transformative learning edge and associated elements through wider ways of knowing, including intuition, felt sense, feelings, and somatic experiences (Ritter & Zamierowski 2021). Investigating a personal question through these modalities gave participants a fresh view of themselves and their topic and generated novel, sometimes surprising insights. One participant later shared: “Something that I can recall from your session is (...) [that] it felt like a dance between embodiment and reflection, physicality and mental activity. From this dance, I was able to explore new angles in my experience as transformations pracademic and new realizations that surprised me also emerged.” Of course, this assertion is just based on our observations and would have to be analyzed through more rigorous qualitative studies, which we discuss in the section on ‘future directions and limitations.’

Lesson 3: Systems sensing practices can create a space for reconnection and recalibration.

The reconnection to wider ways of knowing, including our intuition, emotion, and embodiment, can create a sense of grounding, recalibration, and a deeper connection to self, others, and the wider social field. This reconnection can be especially soothing in settings requiring our entire outward-oriented presence and cognitive capacities, such as the Transformations conference. The buzz in the room when we began the session and the gradual ‘dropping deeper’ that we experienced and described above are important indicators that our in-person session helped participants arrive in their bodies and the present moment.

Reflecting and recalibrating regularly is a vital part of the ability to navigate complexity, “pulling all the information together to know where you are supposed to be” (Spiller et al. 2015, 33). This dance with complexity is an inherent part of the work of T-Orgs. It helps us see the steps ahead and act with precision and clarity. We think systems sensing practices can be vital in fostering such recalibration.

Lesson 4: Systems sensing practices can help us become present to invisible or unacknowledged systemic dynamics, including pain and grief, differently.

The rise of phenomena such as eco-grief and climate anxiety indicates that living in a time of intersecting crises takes a significant emotional toll on many (e.g., Atkinson, 2022). Creatively tackling the crises requires us not only to analyze problems and find solutions (which we do over-proportionately with our cognitive mind) but also to make space to face, be with, and process our grief and mourn our loss - individually and collectively.

Participants' responses in our sessions indicated some engagement with fear, hardship, and disconnection (see Table 1). The occurrence of these themes tentatively confirms our hunch that accessing wider ways of knowing collectively can bring underlying root causes and conditions, such as intergenerational pain, into conscious reflection.

Our workshops did not explicitly focus on confronting difficult emotions like mourning, grieving, or fear. However, we know from our practice that systems sensing modalities can powerfully facilitate such processes. In the same way that we viscerally interacted with elements such as leap and context, we could come into close contact with elements of our realities that we mourn or fear. The place of connection to these painful emotions invites us to move toward reconciliation and healing. We are left with a sense of potential to facilitate such processes in transformation environments explicitly.

Future Directions and Limitations

In summary, this paper presented a practitioner reflection on the practice of two systems sensing sessions conducted at the Transformations Conference 2023. We used the experience of facilitating the workshops at the conference to delineate four lessons for applying systems sensing practices in T-Orgs. The lessons we gathered are:

- Systems sensing practices could provide innovative ways to gather and share data to help an emerging inquiry process sense and see itself.
- By accessing wider ways of knowing, systems sensing practices can give individuals novel perspectives on their experiences.
- Systems sensing practices can create a space for reconnection and recalibration.
- Systems sensing practices can help us become present to invisible or unacknowledged systemic dynamics, including pain and grief, differently.

Of course, these reflections are tentative observations that rely on our own perspectives as facilitators. The process of harvesting these lessons deepened our excitement to inspire and conduct more research into systems sensing. We are particularly curious about several areas of inquiry, which we wish to emphasize here.

We recognize that the way we collect data and draw meaning from the experiences presented here hold in themselves paradoxes and limitations that we are eager to unpack further in future research. For example, our dual role as facilitators and researchers made it difficult for us to record data formally or to be neutral observers. How can facilitators innovate processes of data gathering that include wider ways of knowing? How can participants and co-researchers actively contribute to these data-gathering and sharing processes?

Furthermore, due to the exploratory nature of this paper, we discussed our practitioner reflections across the online and live workshops. Future research should investigate the differences in engaging systems sensing across these mediums more critically. How does the tactile quality of sharing the same physical space affect the range and depth of participants' engagement with the

sensing methods? Might online formats promote a deeper sense of inclusion, safety, or access for participants?

Moreover, the Transformations Conference, and T-Orgs in general, arguably include people open to innovative practices that engage different forms of knowing. Future research should investigate whether and how systems sensing can be applied in contexts with less pre-existing openness or experience with embodied approaches. What is the appropriate language for engaging professionals from the public and private sectors? How do learning processes unravel differently across sectors, identities, and cultural backgrounds? We look forward to future research to expand our knowledge and practice in conversation with other practitioners and researchers in the field.

Recommendations and Conclusion

Based on the lessons we discussed, we want to end this paper with recommendations that T-Orgs can apply in their practice.

Firstly, as discussed above, the intersecting crises of the time demand creative and daring solutions sourced from an inner place of relationality and emancipation. We invite T-Orgs to learn and use systems sensing modalities and wider ways of knowing when working with complex problems and transformations. A growing body of practice-based literature outlines different ways systems sensing methods can be used in organizational practice (e.g., Guenther, 2022; Ritter & Zamierowski, 2021). We encourage those working in T-Orgs to call upon facilitators to apply systems sensing in their operations.

Secondly, based on our experience facilitating systems sensing practices, it is clear to us that taking time and slowing down - both as teams and individually - is essential in allowing these methods to unfold their full potential. Allowing new questions, surprises, and even confusion to emerge requires spaciousness and a slower rhythm than the input-output approaches prevalent in many organizations.

Thirdly, we urge individuals and teams to take time to rest and recalibrate. While resting can seem like a loss of time, we know from experience that our perceptive awareness of the manifold signals within ourselves and the social field becomes sharper the more rested we are. When we are present and able to hold diverse and even contradictory signals, the gap between cognitive and wider ways of knowing becomes more easily bridged. This interweaving can help transform our tensions and hidden dynamics into more coherence (Bockler 2022) and resource our high-intensity work.

Lastly, we acknowledge that systems sensing practices hold the capacity to surface deeply held individual and collective traumas. Since T-Orgs often endeavor to transform the profound source conditions of inner and outer systems, they are prone to encountering these trauma layers in their work. It is thus vital that systems sensing practices and their facilitators be trauma-informed and attentive to the possibility of surfacing internal and systemic traumas. We are actively working

on supporting T-Org's endeavors, ensuring that the surfacing dynamics can be appropriately handled and metabolized to reach a transformative state ideally.

This paper has sketched out ways in which systems sensing methods may be useful to T-Orgs and transformations practitioners tackle today's polycrises. We believe that reinhabiting the senses, "navigating complexity as artistry" (Ritter & Zamierowski 2021, 102), and amplifying relational ontologies are all vital elements of restoring ways of existence that allow all life on earth to thrive. We are aware that we are at the beginning of a conversation and that rigorous empirical, qualitative, and participatory action research is needed to uncover the relation of systems sensing to these interdependent elements. As practitioners and action researchers, we see it as part of our work and responsibility to elucidate and articulate shared understandings and diverse applications of systems sensing. In this vein, we hope this article will tickle transformations practitioners to experiment with and develop the ideas presented here. We welcome critique and further co-creation, as we can only 'upgrade the how' of transformations as determined, inspired, and courageous collectives.

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