

In Dialogue

# Knowing in the Bones:

## Embodying and Uncovering Systems

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One of the hallmarks of awareness-based systems change is the integration of inner and outer awareness. Any type of deep systems change is utterly dependent on transformative learning and change of those embodying that system. Scharmer and Kaufer (2025) comment,

to transform a system we must transform the consciousness (the mindsets) of those who co-enact that system moment to moment. And to do that we need to create new forms and qualities of holding spaces that allow the system to *see and sense itself*. (p. 20)

While “seeing the system” is a common frame in systems change work, and one around which a multitude of methods have been developed, *sensing* the system hints at something beyond the cognitive engagement that often forms the basis of these methods. Sensing calls on us to draw on epistemologies less prevalent in systems change discourse—embodied, aesthetic, and intuitive forms of knowing—to inform our inquiry from a more holistic and complete understanding of what it means to be that system.

The 4D Mapping practice from Social Presencing Theater (SPT) offers a methodology to do this. It integrates systems mapping and embodiment to help participants see, sense, and make sense of system dynamics (*see more in Hayashi, 2025, and in Jung & Hayashi, 2025, this issue*). Participants in a

mapping experience embody key roles in the system and move through a process that reflects the current reality of the system and the future possibilities that may be available to it. 4D Mapping has been used across contexts, sectors and geographies, and it has both an in-person and online version. It is a process that can be organized and held by members of the system or led by external facilitators, as in the cases below.

In this dialogue, four leaders who have integrated 4D Mapping in their broader systems change initiatives come together to dialogue with three members of the SPT team. They share and reflect on their experiences of mapping their systems, the role and impact of the experience within their initiatives, and the lasting effect on themselves as leaders.

Throughout the dialogue, both leaders and the SPT team speak to the specifics of the 4D Mapping experience outlined in the box below.

#### **4D Mapping Practice**

An inquiry question held by members of the system is clarified.

Between six and eight key roles in the system are identified, for example local government, businesses, or residents, and each map includes representation of what is called the three divides: ecological, social, and spiritual (Scharmer, 2016, 2018). These are represented as Mother Earth, the most marginalized in the system and the highest future potential, respectively.

Each player, in their role, assumes an initial place, level, and direction in an embodied shape, positioned in relation to the other roles. When all players have settled into a position, each player speaks a word or phrase that emerges for them in the moment from that position, e.g. “I can’t see from here” or “unbalanced.”

The overall map of players in their chosen positions is called Sculpture 1.

Players are then invited to sense into their embodied role, letting go of any preconceived ideas about potential movement and instead attending to their embodied-knowing and spatial sense to lead any movement and to follow that movement until it settles into a second position.

The map of players in their second role is called Sculpture 2.

A structured dialogue follows with both the players and observers, called citizens, to surface observations about the shifting dynamics of the reflected in the movement from Sculpture 1 to Sculpture 2.

In sharing their experience, the systems leaders describe with granularity key moments in the process that supported a collective shift in the way in which a system or issue was framed and understood. At times this began before the practice itself, while clarifying the very question to be explored or in selecting the roles to be embodied. In other cases, shared awareness came during the mapping process. Regardless, these reflections, in their specificity and authenticity, provide insight into an experience that could be described as accessing the collective inner dimension of systems change.

## Dialogue Participants

**Arawana Hayashi** is a choreographer, performer, and educator, co-founder of the Presencing Institute and founder of Social Presencing Theater.

**Sebastian Jung** is an organizational development consultant, Research & Development Lead for Social Presencing Theater at the Presencing Institute.

**Beth Mount** is an activist, artist, and educator in the global movement toward inclusion in the service of people with intellectual disabilities and their allies and the founder of Graphic Futures, USA.

**Asiya Odugleh-Kolev** is a community engagement for quality health services lead at the World Health Organization Headquarters, Switzerland.

**Otto Scharmer** is a Senior Lecturer at MIT's Sloan School of Management and Founding Chair of the Presencing Institute.

**Ericka Toledo Zurita** is the Head of projects at the Water Center in Tecnológico de Monterrey, Mexico and founder of The Sustainability Atelier.

**Joost van der Crujisen** is the Manager of Strategy and Innovation at Waterboard De Dommel, Netherlands

## Dialogue Facilitator

**Eva Pomeroy** is the Research Lead at the Presencing Institute and Affiliate Faculty in the Department of Applied Human Sciences, Concordia University, Montreal.



*Figure 1: 4D Mapping at the Social Field Research Summer School, Berlin, 2019.*

## Opening the Space: Origins

**Eva:** It's so delightful to have this circle gathered. In speaking to Arawana last week, I learned that there never has been a time when people came together from different 4D Mapping experiences to exchange across maps and it's quite a thrill to do so. Perhaps we could start with a few comments to set the stage for our dialogue.

**Otto:** What comes to my mind now, Arawana, is the early days of SPT. I think for the first prototype with the 4D Mapping we had just a few people gathering together. Then, later in the same week we were to launch the first Global Forum and on the spot, we decided: let's go, let's do it. Let's use this method-in-the-making with hundreds of people in that public event, applying it to real cases in real time.<sup>1</sup> That really was the spirit of origin. We did that not as a random experiment, but because we felt that something important needs to be born and to be explored with a method, and based on that we went all in.

**Beth:** I was there in that room where we were just making things up and I will never forget. I played the role of a marginalized person. I was a mother, a low-

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<sup>1</sup> The Global Forum was an initiative to convene, across three in-person events, a global community emerging around Theory U and other awareness-based systems change methodologies. The event referred to here was held in Berlin, 2011.

income mother. That was before we learned to have people step out of their roles, and it affected me for the entire Global Forum.<sup>2</sup> It was so profound, my experience of inhabiting that role.

**Arawana:** I also was thinking about the first time we did this. It was connected to Occupy Wall Street. I think that was 2015. Even though I often think of mapping as a kind of ceremony that brings awareness in as a player, as the major player in the process, I also think it's political. I think that's because of how it started. This map started with Otto getting up on a chair and saying "banking," then Jan Jacob Stam coming in and saying "multinationals," and then Beth coming in and saying, "mothers."<sup>3</sup> That opened the unfolding of these different voices of the Planet. There's something about it that is both healing and also somehow political in the biggest sense.

**Sebastian:** It's interesting, Beth, that you mentioned you were part of the beginning of the 4D Mapping. To a certain degree you are also part of the beginning of the online 4D Mapping endeavors, as the case giver. It's a similar pattern. We had just started the whole inquiry with Arawana and Otto around how to do it online in the pandemic. We had the u-lab 2x program in process, and we said, "Okay, let's try this out" and launched it with your case and 500 viewers.<sup>4</sup> I remember that moment well and it was beautiful to see the impact it had and what now keeps evolving.

**Arawana:** The stories that we explored of the four of you really stay with me these years. Oftentimes I don't hear anything past the process and then I wonder, "whatever happened? Did it affect anything?" I'm delighted that we can have this conversation.

## Systems from Within

**Eva:** We're going to start off in a way that's more structured to make sure we get to hear each person's experience, and then we can open up into more open dialogue. For the first part, we invite each of you to share some reflections on the questions we shared last week in preparation for our time together:

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<sup>2</sup> At the end of a 4D Mapping process, players are invited to consciously "step out" of the role they were playing.

<sup>3</sup> See Stam (2016); Stam, et al. (2016); Stam, et al. (2017).

<sup>4</sup> u-lab 2x is a four-month accelerator program offered by the Presencing Institute, designed for teams with projects to grow those projects using an awareness-based systems change approach and process.

- What was the challenge or situation you were Mapping and the context that brought you to the experience?
- What were the key moments and most interesting insights from your Mapping experience?
- How has this experience influenced your actions (intentionally or not) since?

## Being in the World, Anchoring in Spaces

**Ericka:** I guess my work leans more towards the environmental community. We are a very wounded community. We don't want to feel too much, because it's hard sometimes. You see that you've stopped using the body, you've stopped feeling. Sometimes using these practices, especially in the Global South, because I live in northeastern Mexico where, we deal with systemic aggressions, I think we always need to design these transgressive processes. You need to find a way to transcend these aggressions and start healing the body and bringing the whole person in. You realize that it gives you so much information. This is something that I've been working on with government officials and the environmental community around the forest.

So, the challenge that we were trying to work with in our 4D Mapping was the protection of a forest in a place called Arterga in northeastern Mexico. We were figuring out how we could achieve a structure of governance around the forest and, of course, we were very focused on things like the land, the trees, the animals. The u-lab 2x team supported us—Arawana, particularly Sebastian, and eventually Otto. Arawana highlighted some aspects of the situation that were important to us. For instance, as we describe the forest, she said, “Well, this is like a care system, right? This is a system caring for the city and for the rural villagers and the biodiversity.” We said, “Yeah, but everyone is destroying it.” Back then a major company was going to build a plant that may trigger rampant urbanization, but in the end it didn't happen. But she said, “I don't think anyone wakes up thinking I'm going to destroy the forest. Maybe we are destroying it by being unconscious or not fully aware of the care system that it implies and the things that we receive from it.” So how do we attune our awareness, and support others in attuning theirs, to what the forest truly represents, without judgment? How do we fine-tune our attention to understand not just its function, but its meaning, its gift, and its presence? That is the potential we were invited to tap into.

Then, as we were trying to figure out the stakeholders, and who we should be working with at the beginning, she said, “As you think about the trees, the soil—all of which we had called the Forest Parliament—what about the water? Maybe the voice of water should be a stakeholder that we could explore because she sometimes is excluded.” I mean, we understood that water was important, but we didn't consider her a separate stakeholder. We went with that and I think that by giving water a voice it really opened a whole new layer of experience and

meaning. By unveiling water as a nonhuman stakeholder, we were revealing and ensouling her, and this personified essence activated an innate knowing within our collective.

At first, some people said, “how can you give voice to a nonhuman stakeholder?” We thought this would be the weakest element of the stakeholders. Then, when we started working with water, we realized it was the most powerful stakeholder because if you move water physically to any place, it will move the whole constellation. It’s not weak. I think we reframed the whole strategy around this being a water forest and water being the most important element. This is something that's gaining momentum, because now the climate agenda is being defunded and by default also the environmental agenda in some respects. But if you speak of water, there is no doubt about funding or the gravity of the problem. A lot of agencies are reframing their environmental agendas from biodiversity conservation to water preservation and water security. I think this is a very smart move. We have a water crisis globally with many layers of complexity. We were the first movers in that sense and now, after two years, we have learned a lot as a community by doing that. I'm not sure if Arawana is fully aware of the contribution she has made to the conservation of forests in Mexico.

We first did our case online, but then we did it physically, in the real world with these officials and people from industry and the municipalities. Something that happened then was because we don’t play our own roles in the mapping. If you were, for instance, part of the Federal Government in charge of conservation for the forest, we will make you take the role of, say, industry.

People fully understood that those they thought didn’t care, were also going through harsh human experiences. It's not like they're the devil. They also have pressures of their own. The city is dealing with people wanting to build more houses, wanting to use more water. Exchanging the pressures we're feeling and the emotions reminded us that everyone is human like us. I think that gave us a huge blank space that could be used for experimenting.

This group came into existence because we had a training which was funded by the German Government and this group emerged as a community who wanted to protect this forest, and thought “let's keep working together.” Having these intimate experiences was an early investment in a collaborative infrastructure that could be used later. In governance, they say the most expensive thing is trust. We had so much trust between us because we had felt at the human level and felt like that about each other.

We’re still going on with this strategy. We're part of a bigger project, and when we have challenges, this early stage of the process has given us a lot of agility to move forward. We have trust. We have a shared experience. It’s almost like sisterhood. Of course there's also men, but it's a very deep bond and you don't get to see that very often at this level.

**Otto:** Can I just ask a clarifying question, Ericka? I understand there's Arawana's input. There is the voice of water coming in that has an impact on the

mapping and the people who participate in the mapping. So that was back then. Then I understood you were saying we are almost post-climate, but water works. So, there's a practical strategic usefulness.

That's one thing. What I would be interested in is: how did you communicate? It's one thing if you participate in a 4D Mapping, it's another thing if I'm a mayor or another stakeholder and I did not participate. How are you showing up to me? Are you using the 4D Map? Is it just something that now helps you to frame it in a different way, or are you making explicit reference to the perspective-taking and bringing in the perspective of relevant nonhuman stakeholders? What have you learned about how the original experience can be made productive—to broaden, and deepen the tent, and bring in more stakeholders—in this different shared sense of understanding, more from multiple perspectives rather than mono-perspectives?

**Ericka:** That's a great question. We have the group who has had the experience and then we have to explain it to other people as we go forward. We use it a lot, to be honest. We took photographs of the process with the permission of people. We show the photographs. We show what it means, having the whole system in a room saying, “Okay, you know the Arteaga Forest. The whole system means this, this and this (as in the actors and their interconnections). We show them the different sculptures because we were lucky that during the u-lab you use the software with graphics of the actors and the map. We make a small explanation of the graphics: here the water was somewhere there and no one paid attention to her. In the second sculpture suddenly we involve her more, and she's part of the process. We delve deeper into how the actors change the quality of their relationship.

We are applying to a funding for doing research in regenerative design in protected areas within Arteaga and Monterrey, and we are exchanging methodologies with fellow researchers. I work now at the Water Center in Tecnológico de Monterrey, and we've shown our process with this natural protector area. I think people were shocked that the Water Center wasn't showing hydrographics and complex modelling. They were showing pictures of people moving and holding the space. I must say people were gladly shocked! “Oh, my God! We thought the water center was going to come with this complex modeling.” But we said the first step for us was to invest, as you say, Otto, in the quality of the soil. Of course, we want to build a governance structure. We want to build bigger projects. But we have to anchor it in the quality of the relationship between a group of people.

From the three projects that were presented there, you could see that there was huge human capital in our project already. Maybe we are still looking for other funding and still figuring out what's going to be the project, but our project had all the relational components to make it happen.

## Creating Beloved Community: Artisanal Pathways toward Handmade Peace-Centered Action

**Beth:** I've been involved in my work with people with disabilities and their allies for 50 years and I'm going to talk about the 4D Mapping that we offered during the u-lab 2x. This was the first virtual 4D Mapping.

Even deciding we would do it was important for our team of 14 people. We were a team of 14 activists from all over America who have been together for many years, and we're committed to creating the best possible lives for people with disabilities. Because we have been around for a while, we know it's possible and we've seen remarkable possibilities emerge over and over again. So we know this kind of rich and coherent life is possible for more and more people, and we understand the conditions that increase the likelihood of deep and generative change.

Yet we also lived with this terrible gap between what most of the services offer instead of what we know is possible. One of the first things we had to decide as a team was: are we willing to show up in this global community and be as depressed as we actually are, because not only has this always been difficult, this closing the gap between what is and what could be—but Covid had hit us like an asteroid. A meteorite. It has just devastated our communities and our work.

People were really hanging by a thread to even be in the u-lab 2x, much less show up to be a case right in front of 500 people.

One thing that happened right away was that the quality of the 4D experience created a profound sense of being held—held in the current reality that you're in, with an eye toward what you know is possible, and with a great compassion for how defeated you all feel.

As I thought back on it, our experience of shifting was more than just the 4D Map itself. The formulation of the question was hugely important. We spent a lot of time between us trying to really clarify. “What is the question we're bringing to this 4D Map? What is the question that we're really living with inside of ourselves?” It was a question about how we know so much more is possible. We feel so profoundly stuck and discouraged at how much the industrial care system hurts people. Ericka, you said that we are a wounded community. The wounds in our community are deep and pervasive—among everybody, within everybody, inside of everybody.

So the first level of being held was just contemplating and clarifying the core question, and then the second level of being held and in awakening surprises and insight, was in clarifying the roles. Sebastian, you and Arawana may remember this, but the roles came because you were so attuned to our feeling state. This is another thing that is profoundly different in the 4D Mapping process. You're going for a feeling state from the very beginning and you're making a space for everybody to go even deeper into how hard it feels, how broken-hearted and how much anguish there is among everyone, and where the biggest alarm sounds are.

There were eight roles, and three of these roles represented the divides. So often in our world we imagine that a person with disability or their family represents the social divide as the marginalized one. However, it became really clear to us that the people providing direct support were, in fact, the ones occupying that marginalized position. These are the people, mostly women and mostly women of color, holding the care and the quality of so many people's lives against enormous odds and strain. That was just a really important “aha” moment before we even got into the map.

The other important insight is that when we thought about the highest potential, the role that usually helps us understand the spiritual divide—it was the beloved community. This was not an abstract idea of a highest potential, it related more to the tangible experience of beloved community, in the spirit of Martin Luther King. Our work has flowed from the civil rights movement in America and continues to be framed dramatically by that. Having the beloved community as the highest potential also somehow changed the whole constellation of who is in this picture.

Finally, the other five roles, in general, are the stakeholders in our landscape, and they typically have nothing to do with each other. We could even more vividly see how disconnected they are.

In Sculpture 2, we moved to more integration and coherence even at a most basic level. Bringing in the three divides as people was powerful. The three divides are often what is crushing us. We can get lost in those three divides. We can get lost in the polycrisis, if you will. But there's something so amazing about the way the process allows the three divides into the space without becoming ogres or crushing everyone.

That felt so important to us, because I believe that when we started this conversation, we were feeling crushed by so much. In the space of the 4D Map we could feel held, all the pieces could be held, and we could still move, we could still find coherence. We could still find some kind of alignment and insight.

There was something profound in that being held by the whole group of 400 people. The complexity of what people are living with is being held, both the sorrow and the possibility, the anguish and the hope for better realities, better lives. There was a knowing that came in for us. It came in for everyone in our team in a very profound way.

I look back in my notes and it's hard to say what that knowing is, but someone said, “we allowed this greater being to speak to us, and it spoke to our bones. It came in and it spoke to our bones.” I think I said as much toward the end, that this had been electrifying in a good way. There was so much energy that was unleashed from holding at such a deep level. Having all of this in this space together was electrifying.

Part of that electrification was feeling and knowing in our whole body. Ericka, back to the point you made. It's so easy to get out of our bodies because there's so

much trauma. There's so much pain. Here we are, in our body and in this social body, being seen and felt and heard in a different light, and we know in our bones what more we are called to do.

There were a number of things that were stunning to me about all the things that have happened since then. We didn't do most of what we imagined we would do. That's important for me to say. However, we've enacted twice as much as we ever thought we might do. Does that make sense? It's interesting to look at our notes and the harvesting of our experience. In the prototyping phase, we had these grand schemes. Here's the thing that shifted in a big way: Somehow, we shifted out of our grand schemes and more toward what Pope Francis called the artisanal pathways toward handmade peace-centered action. That happens in pockets of possibility. It's not the same as islands of coherence, because it's probably smaller than an island. It's your damn pocket. Can we just have a little bit of hope to put in our pocket to get through this day? Can we also make the pockets? Can we nurture the pockets without having them be too large and unwieldy—so that they still feel artisanal, handmade, and, most importantly, maybe, that they are restorative places where people can come together across all these roles, across all these divides, across all this anguish, and still find new ways.

## Creating Pockets of Potentiality: The Courage to Access Non-Physical Data

**Asiya:** So much of what Ericka and Beth have already mentioned resonates deeply with me. For me, the context was slightly different, because the 4D Mapping wasn't around getting large numbers of people together to experience 4D Mapping.

My first experience of 4D Mapping was at the Berlin research meeting in 2019.<sup>5</sup> What's interesting is that when I participated in that gathering, I brought with me experiences from a staff-led action research project and had the opportunity to explore WHO's transformation agenda, from a very different perspective. At the time, our incoming Director General, Dr. Tedros Adhanom Ghebreyesus, brought an ambitious agenda for transforming WHO. A small group of us had already been operating as change agents engaged in action research. We'd gathered data about how we were experiencing our system from the inside, and I was looking for help in using this data. So, in Berlin I got the opportunity to understand WHO's stakeholders and the relationships between them. I agree with Beth, that the question, “What is the question that you bring to the 4D Map?” was really important.

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<sup>5</sup> In 2019, the Presencing Institute held the Social Field Research Summer School in Berlin, gathering academics, research-practitioners, and students to explore and expand the emerging field of awareness-based systems change.

That's the starting point, and that question has to come from people deeply embedded within a particular situation or system. It can't come from the outside and it's almost as though that kind of intelligence or data that is unlocked by the 4D Map resides within the spaces that these people occupy. Being very intentional and focused about the inquiry is critical.

It helped me begin to see the alliances between the different stakeholders. The methodology is clearly laid out. I was uncertain about where we should focus the attention of our research efforts. What was interesting was when the question was asked, where did the move start from? Exploring that first movement brought clarity.

Within our 4D Map, that movement wasn't from a place where I thought it would come from. It came from the face of the person representing the Director General turning towards the countries.<sup>6</sup> There was something around the relationship between global leadership and country leadership that was really important. That signaled to me that this was a space I needed to focus attention on. It wasn't with some of the more obvious stakeholders—the researchers, the practitioners, service users, or specific population groups. There was something important based on the origins of that movement. There were also other insights I took away that left an indelible mark.

Moving forward, the pandemic happened, and I got an invitation to support one of our regional offices in primary community engagement research. So, I got the opportunity to more fully understand the role of research in advancing practice and policy. We looked at relationship-building within health programming in multiple countries, working with researchers to understand how relationality could be embedded within typically vertical programs. We explored mental health in Malaysia, HIV/AIDS in Cambodia, and primary health care in Laos.

Alongside this external facing work, the internal transformation work also was continuing. I was awarded small project funds for staff development and so what we were learning from the countries was then being fed into learning how we, as an organization, could address relationality within our own ways of working and mindsets.

We used 4D Mapping to understand the dynamics within our department. We looked at our internal stakeholders and spent time crafting the right question to start the process. Again, what was insightful for us was the shift between the first sculpture and the second sculpture. We were working with people that had no idea what was happening within our organization, yet they were able to sense our lived experiences and be accurate in terms of the feeling state of those different stakeholders. 4D Mapping supported other pieces of work around the

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<sup>6</sup> This is a description of the person in the role of the Director General, in the movement from Sculpture 1 to Sculpture 2, turning toward the person embodying the role of Member Countries.

project which we were calling “Me2We.” So we didn't look at 4D Mapping in isolation. It was in combination with many other different inputs and activities.

I think that's important, we need different kinds of data but the biggest challenge is accessing data that is non-physical. That's the value of 4D Mapping because it gave us insights and validated other types of data. Spaces and people hold information, and it is ever-present. The question is whether we are aware and able to tap into what already exists—the pockets of potentiality, as you said, Beth.

I think for our organization and in the health sector specifically, I found that people who work in health delivery services are not often seen as people who also need to be cared for. They're conduits for interventions, to get people to change behaviors, deliver vaccines, or take up health interventions. Too little attention is given to who they are and how they do what they do. These aspects impact both the quality of their work and the end results.

When we incorporated aspects of sculpture within a relational learning experience crafted for our own staff, we had responses that we weren't expecting.

We're a diverse organization. We have cultures and subcultures just like many national health systems. In fact, our department has a team working on traditional, complementary and integrative medicine. A relational approach was very much aligned with their understanding and practice of health and medicine. We also had colleagues with a background in emergency care, who had a very different response to relationality. It brought home to me the need to be mindful of different worldviews and how culture and professional training shapes comfort levels with embodied practices such as 4D Mapping.

I think this practice has a healing element because it gives an experience of what it means to literally step into someone else's shoes from a sort of non-mental viewpoint. It gives you access to multiple kinds of data, but you have to be ready to step into that space. We used 4D Mapping to help those of us that were operating within a system be able to understand and navigate our system. I would love to see this kind of experience become part and parcel of the way that we do our work. But I think until we have shifts in mindsets and people are able to access themselves in a deeper way, I don't think it'll be used in the mainstream.

4D Mapping has influenced how I navigate my own system in ways that validate who I am and how I approach my work. I think that's been a strength of 4D Mapping. As I've evolved and grown, I suppose I've also stopped cowering in the face of the very confident attitudes and postures of those trained to value objective physical reality. I have proof too—but of another kind. One that is felt. And no, it's not a number. It's a direct subjective experience about who you are, what you notice about yourself, your environment, and others, and what you do with that information to make intentional and conscious choices. Having processes like this becomes really important in helping people like me navigate my own environment.

I think the other thing I would say is that the instruments of change in a system are people. It's about human beings. If we don't access the cumulative intelligence that resides within us—and the collective intelligence that lives between us and among us—then we will not arrive at holistic solutions to address the systemic problems that we're facing. I completely agree that trauma, intergenerational trauma, and intergenerational suffering are active on many levels, particularly in places of work and institutions. I think this kind of practice has the potential to surface this aspect, making it visible and I think that's why some people don't engage. They're not quite there yet. There's a kind of courage that's needed to come face-to-face with yourself. You also need facilitators highly skilled in engagement—people able to notice, hold space, and have competencies to work with what is.

## Accessing Human and Nature-Intelligence

**Joost:** I'm Joost, based here in the Netherlands at a local water board and working on water for more than 30 years. Last year we started a new water lab in a very small catchment area, and we started to work with something called nature intelligence.

Then came the opportunity to have an online 4D Mapping experience. It was—and still is—about, a polluted stream, a very small one. It is fed by a sewage plant which is used by 250,000 people in a small city and by a lot of different industries. We try to clean it the best we could, but it remains not clean enough and we had some problems with it. Two people got sick, so we decided to investigate more deeply. The people that are living next to the stream are not happy with the smell and it's not healthy. So, the focus of our map was on how to create a healthy and clean stream.

What I remember as key moments during this mapping experience was that we had all these stakeholders, and one of the things that struck me were the farmers. The farmers in the first sculpture were saying, “I know what to do, but this is so difficult, this is extremely difficult.” Then, in the second sculpture—I still get goosebumps when I think about it—was, “I will fight you if you hold my hand.” That was very profound. The other thing was that nature intelligence said in the first sculpture, “there is light,” and that was very promising, then in the second sculpture it said, “listen, really, listen.”

That was October 2023. In that year we had our first brainstorm within our water board. All my colleagues were there and there was tension all over the place. People were angry with each other, saying “no, we have to go that way,” “no, we have to go this way.” Finally, we came to about a hundred solutions in these brainstorms, but it was extremely tense.

Then in January 2024 we went to the stakeholders, to the citizens and to the farmers in that area and they were mad. The farmers were so angry with us and so were the citizens. The citizens said to us, “Why didn't we know this? Why didn't you tell us this stream was so bad?”

I think what happened next was synchronicity. We have an extensive pilot now on the sewage plant. We were granted the opportunity to monitor the incoming sewage water in detail. Where does the water exactly come from? What industries are responsible for the pollution and the smell? So we dove deep into finding what is actually happening and where the pollution comes from.

Last December, 2024, we had a stakeholder meeting and invited all these people that were so mad at us. And we had a beautiful day. We started with music because music helps to open the heart, and we showed what we had found. We conducted 16 studies on where the pollution comes from and shared what we know—what we do not know, and what we need. We really wanted to honestly say what we have found and what we didn't.

Then we went to the stream, and we listened to the stream. This was very challenging to do because for rational people this is a bit weird. But they came back with beautiful thoughts and emotions. This was a group of people from the government, citizens, scientists, and farmers. The feel of this meeting was completely different than the year before.

It has to do with the mapping experience, and, my deep interest in how to involve nature intelligence. It created a kind of personal leadership. This was my most important project and when my water board challenged me on this, I really got to be the dragon: You're not going to take this project away from me! It also attracted a lot of beautiful, energetic people. It became a magnet for people seeking change, with the energy to create it. Now we have a meeting every two weeks with the core team. It takes place on Friday mornings, and everyone is completely energized. It's unbelievable. People want to come to the office on Friday morning just to acknowledge and enjoy the energy.

**Otto:** I have one clarifying question about your story that we just heard. How much of the impact that you shared is due to the 4D Map? And what are other interventions? Maybe a more general version of the same question to everyone is this: we know in social reality it's many variables that lead to things. You never know without that what might have happened. But here's the question for you: if that mapping that you were referring to had not happened, what would be different today, if anything?

**Joost:** That's a very good question. I go back to the key moments—if you look at the difference between the farmer's reaction, it was very distinct, and I have this in the back of my mind. We should be more focused on how to get this community to work—and be honest about what we know and what we don't. Not, “we are the government, and we know everything.” No. We're part of one community, and we will try to help each other. I think that's one of the key differences.

## Varied Paths and Essential Essence of Systems Change

**Eva:** Asiya, Beth, and Ericka, I'm interested in that question that Otto asked. Without this mapping what would be different?

**Ericka:** This is something that I thought about a lot, because if you want to use these kinds of tools, you have to prepare this space and say, can we really do it? Will it make sense? Will people get scared and run away, thinking this is not professional? But I think it's very highly linked to something: You know that the hardest part of the U process is coming up the U.<sup>7</sup> A lot of people say, "oh I know what to do," and it becomes messy. As I explained before, we have another community of U-practitioners, and we had a very good facilitator, César Jure, an exceptional practitioner who worked between Germany and Latin America, and a dear friend—who recently passed away.

When he explained Theory U, he would say, when you arrive at the bottom of the U, in *presencing*, it's almost like being in the *MA*—the Japanese element of this emptiness full of potential. It's not a negative space, but it's like a fertile void. There's something happening. It's not a bad place. It's not like you're in the abyss.

I think the quality of how you arrive there, and the quality of attunement to what may emerge is highly dependent on these practices of Social Presencing Theater. If you arrive there in a rush, or without really exploring the deeper dimensions of this iceberg and what's happening there, you may rush out of this *presencing* moment. This is also because it entails feeling uncomfortable, suddenly it's a void and who wants to experience a void? Groups of people sometimes rush and come up with a prototype that is not attuned to the emerging future. But if you have done all this prep work, it's like priming yourself with somatic practices. Then you experience this differently. Cesar used to quote a phrase, that said, "This moment is the silence between the notes which make music, the quality of the music which will become your prototype. This song." It's highly linked to what you did before the presencing moment and I think if you could name it as a skill, it would be about the liminal space, that space where you are neither here nor there. Learning how to sit with it, with the people around you, and holding the space of not knowing but also aspiring to know when to move—it's only possible if you have invested in this prep work.

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<sup>7</sup> The reference to "coming up the right-hand side of the U" refers to the phase in the Theory U process that following the phase of presencing. Presencing can be understood as a period of pause and stillness, sometimes referred to as a *MA*, borrowing the Japanese term, that allows individuals and groups, "to connect from the Source of the highest future possibility that depends on us to come into reality" (Scharmer, 2016, p. 161). In the visual representation of Theory U, it lies at the bottom of the "U." Coming up the right-hand side, then, involves crystallizing the ideas and impulses emerging from the presencing phase and stepping into action through iterative prototyping.

**Beth:** What Ericka just said reminds me so much of what Asiya said about how we forget that the people are instruments of change, as in a musical instrument instead of tools, instead of mechanical parts. What is killing people is a mechanical view of who humans are. I love this added notion that the liminal space is between the notes, that it's how each of us are supported as instruments of change. And is the space safe enough? That's another point you made about safety so that you can be present to the liminal space. This safety issue is a big issue. I think it's what everybody here said all the way to the farmers, right?

**Asiya:** That really echoes with me as well. Beth, the issue of safety is on multiple levels. It's psychological; physical; physiological; and relational. What I've found helpful in my work is to connect safety to how our central nervous systems operate, because our central nervous systems are continuously feeling into the spaces in our environment and telling us whether we feel safe or not. Reflecting on "what did 4D Mapping bring?" the difference that it made is that there is something about connectedness and that connectedness is alive. It's living and it's felt by everyone that is in that experience. And it still is living. I feel it in my body right now. It's always present, it's moving and has an energetic signature.

I think the experience of 4D Mapping heightened that sense, it lifted it up. It brought it more to my awareness and established a way of understanding a situation with the others that were involved in the process as well. We took photographs of the sculptures before and after, and the statements from stakeholders that emerged from the process. I hadn't looked at it before until a couple of days ago when I was reflecting on coming into this space, and it just resonates. It's still very much alive.

## Attending to the Full Spectrum of Experience

**Eva:** We started with you, Otto, evoking the very first 4D Map, as an experiment. Now, many years and maps later, we've just heard four beautiful map stories. I want to loop back around to see if there's something that's very alive for any of you to close that circle.

**Otto:** Something that really struck me was, Beth, when you were talking about "it spoke to me in my bones." Asiya, you spoke about the "validation of who I am" and then your last statement about the connectedness—I feel it in my body right now. It's alive, it's always there. It's moving. I feel it now. I think that somehow belongs to the essence of the method. It's the presence of Sculpture 2 that's always in Sculpture 1, inherent, but not always visible, not always brought to our attention.

To me, the key takeaway is really that—and a question related to the "validation" that's always present, the validation of who I really am. What is the collective dimension of that? Is there a collective dimension? Because essentially what the method does is make a shared body visible to our attention that was there before, but not attended to, and that uncovering or revealing is part of the alchemy. That's really what started surfacing everything you shared.

**Sebastian:** I want to make one note on a pattern that stood out to me as I listened to your cases around the role of the marginalized. The role of the marginalized came through strongly in what I heard from Ericka, Beth, and Joost. In each case, it was a game changer.

Beth, you noted the way the three divides are being held compassionately so that they don't crush us.

Ericka, in your map, the voice of the marginalized was the voice of water—which wasn't what you had in mind in your initial inquiry—and also the forest protection. That shifted the whole game, and even unleashed the synchronicity that led you to your current work at the Water Center. It shifted the whole scenario.

Beth, in your case as well, you initially positioned disability in the role of the marginalized. But then you shifted that focus to the direct support workforce, which created a small paradigm shift in how we look at the system and who is actually marginalized.

Joost, I remember when we were framing the case. We had the water as one actor and nature intelligence as the marginalized. These were the subtle forces of nature itself—forces that are not being heard and listened to. Then came the instruction: “listen.” It was the nature force that said “listen” in the mapping and activated the idea and the agency to go to the river—to listen to the force of nature through the force of the stream. That's what struck me in your stories: the importance and power of bringing in who is marginalized in your system.

**Arawana:** There are many things that popped out to me, but what's curious is your ability to turn toward the degree of suffering present in the system. It's been spoken about as safety. You could say, “oh, people are uncomfortable using their bodies,” or “we don't want to feel.” But in the end, it's about how profound suffering is, and how to turn toward that as a motive force for agency, rather than to be crushed by it.

So it's about building a collective heart capacity for grief, and for this level of confusion. However, we name that—whether we use words like trauma; suffering; painfulness; broken-heartedness (all these words have been coming up), or anger, as with the farmers. How do we turn toward that, and both personally and collectively build the capacity to hold it?

It's the moisture of the soil, and without it, we go into an airy-fairy version of Sculpture 2 that doesn't reach to the depth of experience.

How do we frame that as an invitation—particularly in relation to professionalism? For example: “it's not professional to feel,” or “I have to keep this to myself.” The idea that “it's not professional to share that with the team” is still present somehow.

An interesting and provocative area in all your stories is the courage you each showed—to go toward the angry farmers, to face the despair of the team. All four

of you have that kind of courage and perspective without feeling like you'd be eaten alive or lose control. You're willing to take that risk, and step into the role of someone who says, "this is a tool that we can use." To be a champion of the method requires that kind of maturity or sophistication. It's not to be moved into with naivete.

On the other hand, we create safe spaces—whether that's through research, our basic humanness, or art. This is art. I don't know the frames exactly, but what stands out for me is the respect and courage I feel for the four of you. I also feel inspired to think more about this particular invitation we're making: for people to be really uncomfortable, "to not know, to not do, and to be uncomfortable," as Otto says. It's not everybody's cup of tea, and yet it seems like being able to hold and transform our heartbrokenness is the key to being beneficial on the planet, given what we've got to work with here.

## References

- Hayashi, A. (2025). Streams of origin for Social Presencing Theater and its contribution to social transformation. *Journal of Awareness-Based Systems Change*, 5(1), 13–36. <https://doi.org/10.47061/jasc.v5i1.10163>
- Jung, S., & Hayashi, A. (2025). 4D mapping: An Embodied Awareness-Based Approach to Regenerative Organizational Development. *Journal of Awareness-Based Systems Change*, 5(1), 37–70. <https://doi.org/10.47061/jasc.v5i1.9213>
- Scharmer, C. O. (2016). *Theory U: Leading from the future as it emerges* (2nd ed.). Berrett-Koehler Publishers.
- Scharmer, C. O. (2018). *The essentials of Theory U: Core principles and applications*. Berrett-Koehler Publishers.
- Scharmer, C. O., & Kaufer, K. (2025). *Presencing: 7 practices for transforming self, society and business*. Berrett-Koehler Publishers.
- Stam, J. J. (2016). *Fields of connection: The practice of business constellations*. Systemic Books Publishing.
- Stam, J. J., Campbell, J., & Kies, D. (2016). *Wings for change: Systemic organizational development*. Systemic Books Publishing.
- Stam, J. J., Schreuder, B., & Piper, B. (2017). *Systemic coaching: Systemic work without the constellation*. Systemic Books Publishing.

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