

## Relational Transdisciplinarity: Five Reflexive Steps for Embodying Relational Ontologies in Transdisciplinary Learning Contexts

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### Abstract

Transdisciplinary learning is achieved through building reciprocal relationships in collaborative processes that hold room for diverse worldviews and ways of knowing and being. Understanding how to nurture relational dynamics in specific research contexts is key to co-producing transdisciplinary knowledge. In this article, we propose five reflexive steps to embody relational ontologies for transdisciplinary learning. Embodying a relational ontology goes beyond building relationships or learning relationally. It means that researchers open up to co-becoming in relation to the transdisciplinary learning context. Developed by a fellow group of international researchers from Malaysia, Botswana, the US, and Germany, we seek to provide guidance for a diversity of people interested in exploring how to enrich transdisciplinary learning processes.

### Introduction

Academic researchers are often trained to abstract themselves from their objects of study by suppressing their subjectivity and personal relations with others and the world (Manuel-Navarrete 2015). This is often associated with a “European/Western” approach to science in which knowledge is assumed to be neutral and objective (Chilisa, 2017). However, this view has increasingly been criticized as it contributes to reproducing power imbalances by, for example, valuing Western knowledge over Indigenous knowledge and thus perpetuating existing colonial and extractive approaches to science (Manuel-Navarrete et al., 2021). The mode of transdisciplinary research (TDR), however, aiming at building horizontal relationships across contexts and scales, appears to be one promising opportunity to move in the direction of more equal and just relationships.

Transdisciplinary settings of knowledge co-production involve a multiplicity of nonlinear, interactive relationships. Navigating and meaningfully engaging in these relationships requires self-reflexivity, attention to one’s own subjectivity, and the way we relate to others,

which includes all living and non-living beings. The continued practice of “reflecting on relationships” is what makes a transdisciplinary learning context relational. Therefore, it has been suggested that transdisciplinary (TD) researchers might benefit from enhancing their perspectives on learning and transformational processes with relational approaches (Lotz-Sisitka, 2018). To further improve transdisciplinary learning, we might, therefore, look for approaches that are not only sensitive to the specific context (Norström et al., 2020) but also enhance our understanding of better integrating existing relationships with newly emerging relational dynamics.

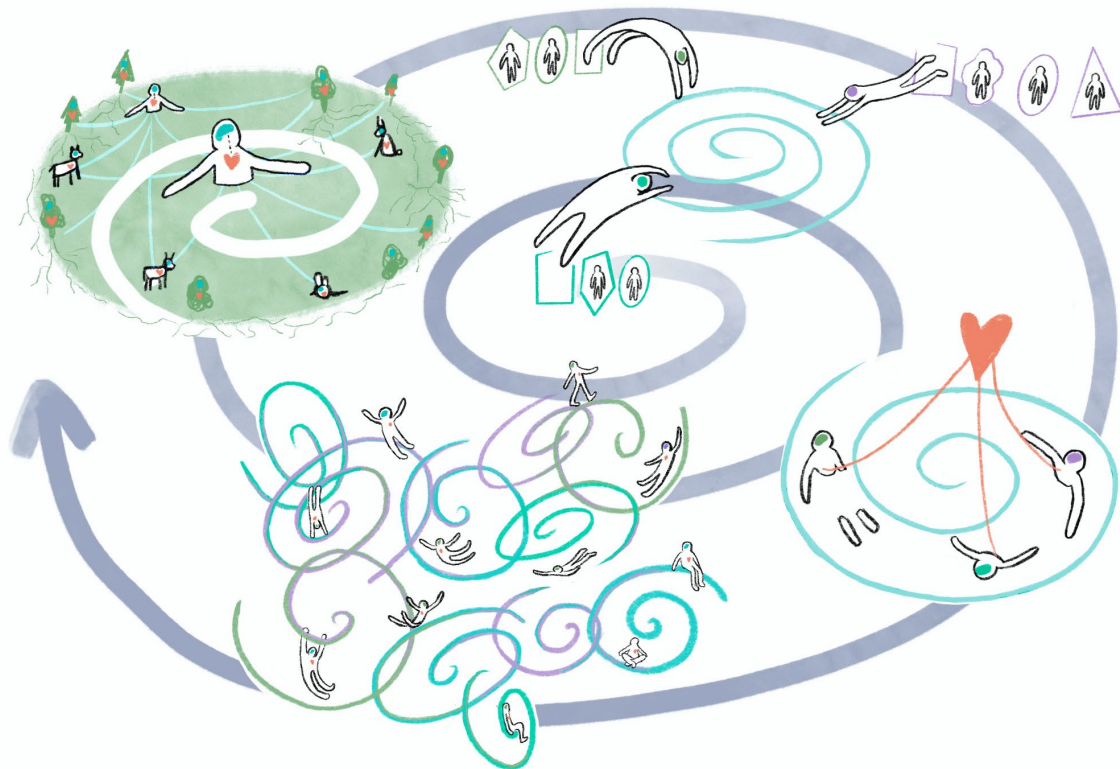
In this paper, we explore the potential of relational ontologies for building and improving relationships as a key outcome for research, learning, and practice. Contrary to the dominant Western worldview, which centers on the individual and maintains a human-nature divide, relational worldviews embrace a view in which humans are existentially related to everything around them (Lange, 2018; West et al., 2020). Indeed, it seems that relational values appear to become increasingly recognized in the fields of social-ecological research and sustainability science (Burns, 2015; Häggström & Schmidt, 2022; Helne, 2021; Lange, 2018; Walsh et al., 2020).

Furthermore, researchers from various disciplines argue that it is necessary to promote indigenous research paradigms within TDR and other academic fields concerned with sustainability transformations (Manuel-Navarrete et al., 2022) because they are rooted in value systems that emphasize the connections with place, people, past, present, future, the living and the non-living (Chilisa 2017; Chilisa & Mertens, 2021). Embracing these relational values is considered an important step towards a more just and globally equal research practice. At present, there seems to be an increasing interest in the role of emotions and interpersonal relationships for sustainability transitions (Chan et al., 2016; Hathaway, 2017; Mälkki & Green, 2016; Wamsler, 2020) and spirituality and vision (Chilisa, 2017) in sustainability research. This goes hand in hand with our interest in fostering relational ontologies within TD learning.

We find that indigenous relational ontologies such as Sejathra, Ubuntu, or Sumak Kawsay can enrich the way we approach research by widening our perspective on ourselves and the manifold relations that are relevant throughout transdisciplinary learning processes (Gould et al., 2023). Based on these ontologies, Shawn Wilson’s (2008) indigenous research paradigm and a postcolonial indigenous paradigm (Chilisa 2019), we drafted a preliminary set of five reflexive steps for embodying a relational ontology in transdisciplinary learning. They seek to enhance our way of engaging with the world and thus suggest a possible pathway for guiding anyone interested or active in facilitating transdisciplinary learning processes.

The steps can serve as entry points into a circular process of embodying relational ontologies in transdisciplinary collaborations and thereby contribute to shifting the attitude among actors towards fostering relations with themselves, others, and the environment. The steps showcase different levels on which relations can be observed and how they are relevant and conditional for enabling TD learning. By providing illustrations and reflexive questions for each step, we invite everyone interested to apply and further adapt them for different kinds of research, learning, and practice settings. However, we are aware that fully incorporating relational ontologies demands different efforts, reflections, and personal transformations depending on one’s cultural background and biographic trajectories.

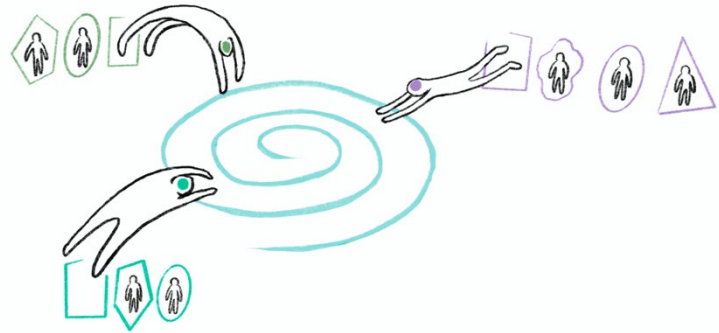
All steps invite you to raise **awareness** about the level of relationship described, **apply** the reflexive questions to your own research context, and **acknowledge** your observations.



### **1. Acknowledging the value and importance of building relationships for transdisciplinary learning**

Fostering a relational ontology begins with acknowledging the basis on which we embody relationships and how we value them. A transdisciplinary learning process is situated in a context that is shaped by its outer factors. These include political conditions, socio-cultural, economic, and environmental factors, as well as organizational limitations such as funding and the scope of the learning process that set the boundaries of the context. As participants in a transdisciplinary learning process, researchers especially seem to often perceive the context as something to look at from the outside. Embodying a relational ontology shifts the way we perceive and engage with the outer contexts. It improves our understanding of how context and the respective opportunities that shape our learning are determined by the people involved in the learning process, including ourselves. Context is not given but co-produced by the participants and their quality of interactions, which is a perspective often marginalized in education.

Within this illustration, several individuals jump into a big swirl representing the shared context in which TD learning occurs. Each one comes from its own box - personal context, related world views, and, in research, often disciplinary boundaries and knowledge paradigms.



Jumping into this context from a relational ontology enhances that jumping into this shared context by opening oneself to learn, unlearn, and relearn from and with others and being present about one's own positionality and boundaries of thinking, one brings into the swirl. For example, Western knowledge is often universally dominant when collaborative processes are formed. To identify and perceive the true value and importance of relationships in transdisciplinary learning contexts, all participants need to commonly feel they are part of the shared context and situated within a web of mutual relations. In this way, the value of relationships can be embodied.

*Questions:*

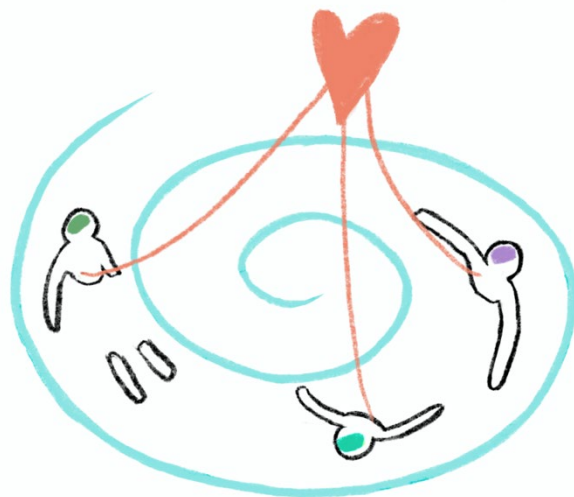
- What is the value and importance you give to relationships considering your own background and individual context when entering a transdisciplinary learning context?

**2. Creating your internal conditions for participation in transdisciplinary learning**

Within a relational ontology, we assume that the way we are and what we know is the result of our entanglement with the social-ecologic world and all its elements (Riley & White, 2019; Swist et al., 2016). Indigenous ways of knowing, such as Ubuntu, teach us that our human existence equally relies on our relations with others as well as with nature (“I am because we are”), which is why we care for what surrounds us (Swanson, 2010).

The places and communities we come from determine our relational accountability, meaning how we value relations, connect to ideas, and approach academia (Wilson, 2008).

Disentangling which relationships have shaped who one is today may help to better identify one's positionality within a research setting. For this, it is crucial to reflect upon the various aspects that shape one's personality, such as one's epistemologies, values, prior education, or relation to the





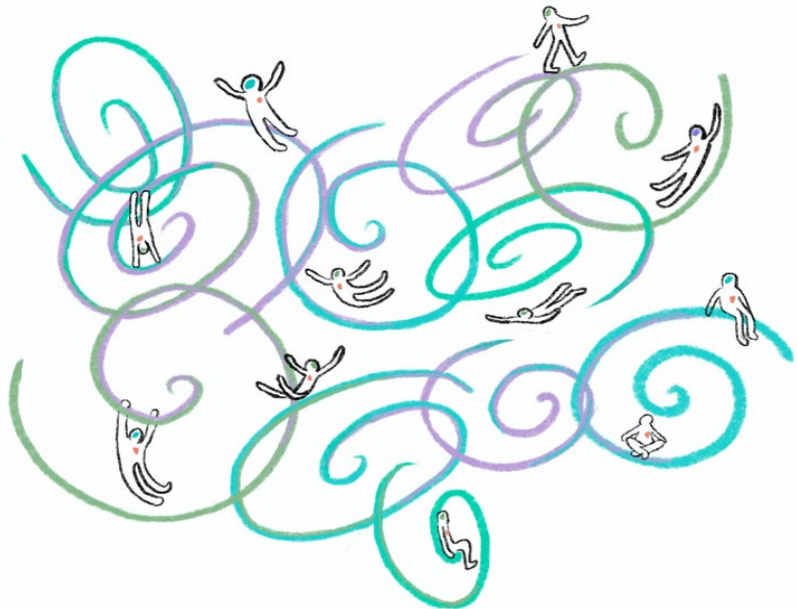
family history, ancestors, or history of certain places and human history in general. The way one thinks about colonial history and current discourses on the decolonization of mainstream knowledge systems, for instance, shapes how we interact with one another. Being relational means achieving a balance between the brain and the heart. Dominant Western ontologies mostly focus on materia-cognitive activities, or the brain, which tends to instrumentalize relationships by seeing them as resulting from cognitive decisions. For example, when introducing ourselves, many of us tend to mention our profession first. Yet there are many other parts of an individual that are also relevant when relating to others but are more difficult to conceptualize and grasp cognitively. Extending the level on which we encounter others to our hearts by sharing more personal information may enhance trust building and honesty in relationships.

*Questions:*

- Think about the relations that have formed and accompanied you in your life. Which of them have majorly influenced your ways of knowing, your epistemologies, beliefs, and logic?

### **3. Recognizing the diversity of ways of knowing in interpersonal relations**

Once aware of one's context as a participant in a transdisciplinary learning setting, e.g., as a practitioner, researcher, or political stakeholder, there is the challenge to situate this knowledge in relation to others' knowledge. There are always power imbalances in relationships between knowledge types that should be recognized and alleviated in the best case.



Engaging with each other's individual contexts can promote eye-to-eye encounters and, thus, the establishment of an ethos of care (Sellberg et al., 2021) in transdisciplinary learning.

The colored spirals represent those different contexts that mix in a transdisciplinary context and influence one another. By opening to another context and acknowledging, for example, that somebody has a completely different perspective on religion than you do, contexts merge, colors get mixed, and the co-production of new knowledge starts to merge.

*Questions:*

- How can you respectfully acknowledge the beliefs and knowledge systems of others within your relations?

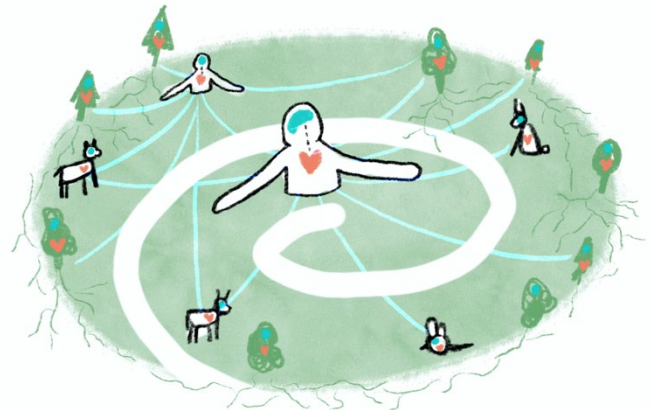
- Which power dynamics can you identify between knowledge systems present in your transdisciplinary learning context?

#### **4. Strengthening and acknowledging human-nature relationality**

A relational ontology considers all relations between humans and the living and nonliving elements of our world equally important. The visual seeks to depict this by showing the manifold connections through which humans are interconnected with animals, plants, and other non-living beings. Many societies place value on the sacredness of all life and thus foster a culture of respect and regeneration. In African culture, Mother Earth and her inhabitants are viewed as alive and as relatives of human beings capable of responding to people. Among the Kalanaga of Botswana, people are connected to each other and to the living and the non-living through totems symbolically represented by the living and the non-living (Chilisa, 2023). This is radically different from contemporary modernist Western thinking that regards nature as separated from human beings, thus holding strong implications for conservation and a destructive use of resources (O’Sullivan, 2008; Selby & Kagawa, 2018). In our highly technology-driven and human-centric societies, it is both increasingly difficult and increasingly necessary to recognize our ties to the more-than-human world. Internalizing how nature is a part of us that we depend on, we may embody more sustainable attitudes and practices of care.

##### *Questions:*

- How can you establish routines and a sense of care for nature and all non-living beings within yourself and among your transdisciplinary team?
- How can you give agency to non-living beings to advocate for their interest and establish learning from nature and its processes?

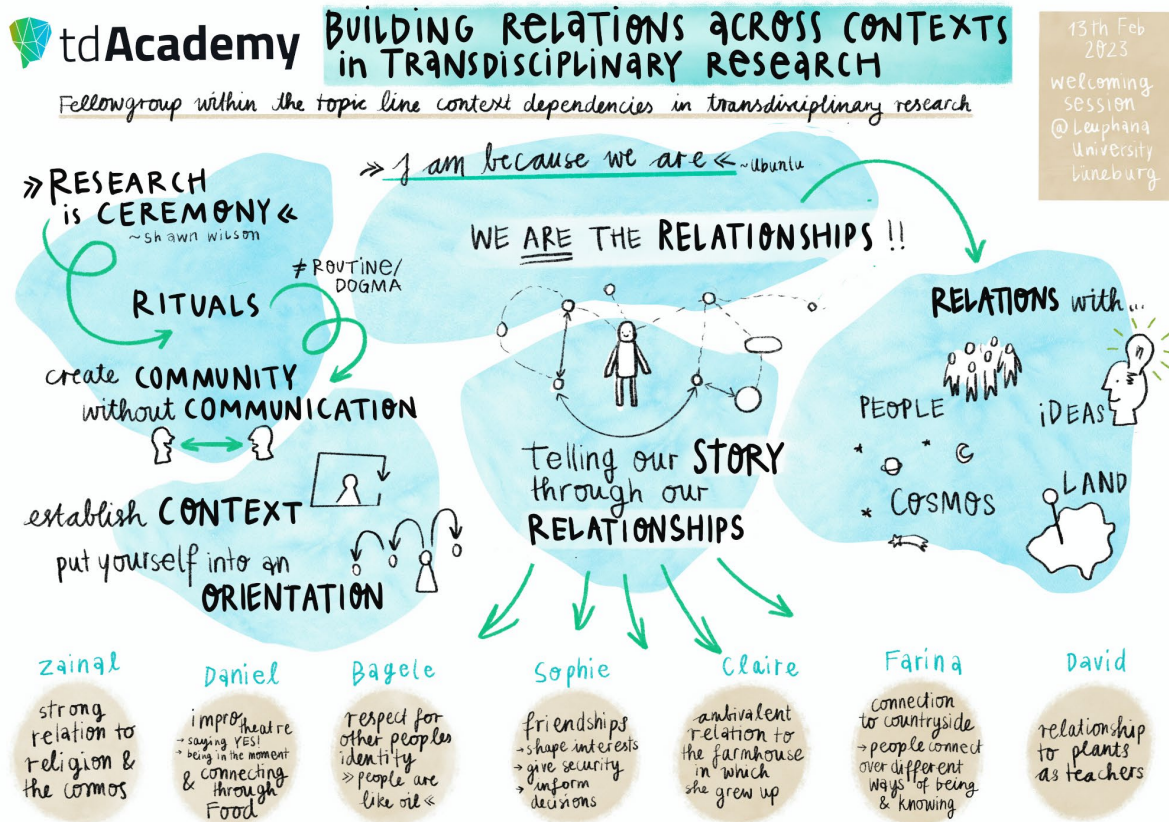


#### **5. Recognizing the values of interconnectedness**

All different levels of relations described in the previous steps become a cycle of building relationality to oneself, to other beings, and to nature. They emphasize giving relational thinking priority in education, learning processes, and other aspects of life. Emphasizing relationality may help to render aspects and relations visible that would otherwise get neglected or left out. This mode of research and thinking promises a more holistic understanding about the complex interdependencies in which a transdisciplinary research project takes place and, therefore, may help find more sensitive and suitable answers to occurring problems and questions. Entering processes of repeated reflection and thus embodying these steps might help to improve the building and fostering of relations among participants, also through paying attention to the particular contexts, including the physical, the historical, spiritual, and the environment, which are part of transdisciplinary learning settings.

*Questions:*

- Based on this ontology, how can you strengthen your relations to the ideas dealt with in transdisciplinary learning?
- How can a social and spiritual context inform your interactions with one another and the learning process in transdisciplinary research?
- In which levels of relations do you feel you have embodied a relational ontology?



**Who We Are**

These steps were developed within the Fellowship Programme of the tdAcademy during a five-day research stay at Leuphana University in Lüneburg. The fellow group consists of David Manuel-Navarrete, Bagele Chilisa, and Zainal Abidin Bin Sanusi. Claire Grauer, Daniel Lang, Sophie Rühl, and Farina Tolksdorf facilitated the research process at Leuphana University and contributed to the results. The process was accompanied by the illustrator Louisa Szymorek, who visualized the steps with a graphic recording approach. For the development of the steps, we used exploratory methods (e.g., rituals, reflexive forest walk, relational introductions) that laid the foundation for open and honest conversations about personal values and understandings. This allowed us to focus on the relationships among the group instead of abstracting the topic to its means. Our shared aim to contribute to a world with more harmony and mutual relationships was supported and provided a learning approach for context-sensitive transdisciplinary learning activities based on a relational ontology.

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