The Climate Crisis as Learning Space

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It is becoming widely accepted that the climate crisis is a multiscale breakdown of interrelated ecological systems, caused by behavioural patterns that are unsustainable. As behaviours are largely informed by ideologies and as the latter are passed on by education, we submit that the climate crisis is also a crisis of learning.

Our game invites participants to reflect on a variety of ways of human thinking and sensemaking, i.e. paradigms. Putting the so-called Western paradigm into perspective by presenting other ontologies and epistemologies, we challenge participants to rethink learning as situated against the backdrop of new insights into the nature of 'situation', an intra-emergent phenomenon in which humans and other-than-humans are agentically enmeshed (Barad, 2007).

CONTEXT DESCRIPTION

Societies worldwide are responsible for unsustainable lifestyles. When we trace how we got to this, we see a history in which antique Greeks' speculations about a man-nature dualism are held to be unchallenged truth by Enlightenment philosophers. This truth is further reinforced during the development of modern science and has led to social fragmentation into individuals and exploitive stances towards nature. This paradigm is about essences, distinctions, and hierarchies. It is sustained by humanist education, which maintains human uniqueness among species and promotes personal uniqueness among individuals.

This paradigm has been identified as 'the Western paradigm'. However, we feel that this broad geographic label obscures a variety of paradigms in the West itself and, moreover, adherence to it in non-Western societies. Therefore, we suggest a perspective that allows us to see a variety of paradigms in more general terms.

For instance, Descola (2013) describes ontologies based on whether a culture assumes shared inner lives (soul, mentality, psychology) and shared embodiments. Animism assumes that all living creatures share a common inner life in different embodiments. Learning results from cooperation between humans and other-than-humans. In totemism all creatures share some elements of inner life and embodiment, depending on which life they continue in the sentient landscape. Learning is coming to understand how events (literally) take place. According to analogism there are radical differences between creatures regarding their inner lives and embodiments, but all are part of a web of interdependency. Learning means understanding this web and one's places therein. Naturalism assumes shared embodiment, but radically different inner lives. Learning is figuring out the essence of objects and how they interact.

Pálsson (1996) distinguishes three human-environment relations. Orientalist and paternalistic paradigms position humans opposite to the world and induce an ethics of exploitation and protection respectively. Knowledge is considered to be extracted from the world and about it (i.e. naturalistic, in Descola's frame). It is a uniquely human affair. In contrast, a communalist paradigm places humans in the world, wherein they learn by entering a dialogue with it.

Baggini (2018) sketches how communities worldwide vary in how they think about time as linear, circular or non-existent, about atomistic, related of non-selves, and about harmonious, conflicted and virtuous societies.

Despite variation, modern thinking persists in a naturalistic, non-communalist paradigm with atomistic selves in conflicted societies with linear time. Ontologically, the world contains objects (living or non-living) that are enclosed within themselves and interact. Epistemologically, learning and development take place within the objects and consist of acquiring knowledge about the world and changing oneself. As this paradigm permeates current education and as such offers a first frame of reference, it takes active effort to learn that this frame is not neutral and to acknowledge that other options for looking at the world and humans are not only available but also approach reality as currently understood by state-of-the-art science better (i.e. animism and totemism). In short, we assume that learning *about* the climate crisis misses the point that we are *in* a climate crisis, which requires a fundamental shift in thinking ourselves *in* a situation.

THE GAME

In educational game design it is common to distinguish between a little game and a big game. The first is the actual game people play, with a set of props, rules and a goal to achieve. The latter is the process design which ensures that the learning goal is achieved.

Big game

Figure 1. Totems such as figurines of a fly, a gecko, a petrified stone, a dish with a mermaid, and a tile with a centaur.

The goal of our big game is to learn to think beyond one's own paradigm by exploring pluralism in paradigms though dialogue with the more-than-human world. To ensure dialogue, the game is played in four teams with four or five players who deliberate on a question and come up with a team answer. Further, the other teams judge the quality of the answer and briefly comment on their 'yes' or 'no'. To ensure inclusion of the more-than-human world, teams play with totems that refer to Descola's ontologies (see Figure 1 for examples). Also, the powerpoint shown during the game displays a set of book covers from authors who have written about variation in paradigms (Figure 2). Totems and book covers are meant to inspire the players to think beyond their preferred paradigm. Ideally, teams could also use artefacts, animals or plants already present in the room. Finally, the only way to cross the Pálsson Line is by actually including non-humans while coming up with an answer.
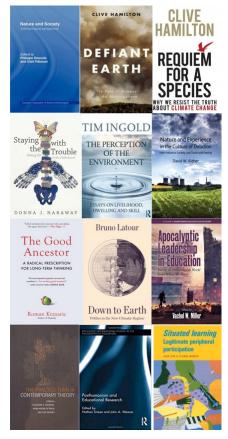
Figure 2. Book covers.

Little game

The objective of our little game is to cross the so-called Pálsson Line. The game is played in two rounds: a warming up and an end game. The goal of the warming up is to stretch the imagination and experience how difficult it can be to come up with fresh ways of expressing ourselves once we are entangled in our standard concepts and definitions. Each team receives three cards with a red word and three lines on it. The assignment is to reflect on the red word and write down in three definitions how you would describe it to someone else. After 5 minutes, the cards are switched between teams, so that each teams receives three cards they have not written themselves. The assignment now is for one person to try to explain the red word on the card without using the definitions given and for the rest of the team to guess what the word is. The red words on the cards in the warming up are: learning, teaching, knowledge, wisdom, democracy, speculation, myth, global, transdisciplinary, activism, education and crisis.

The so-called End game is played on a game board (see Figure 3 for an example). All teams start from the same position ("Start"). A team throws the dice and takes steps towards the Pálsson Line. It lands on a circle with a specific colour, that corresponds with a specific category of questions. The categories are The Speculative, The Mythic, The Global, The Transdisciplinary, The Activist and The Democratic.

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Figure 3 Game board.

All teams deliberate on an answer for three minutes. The team that has the turn then answers the question. The other teams take one minute to decide on the quality of the answer and then say 'yes' or 'no' with a brief explanation. Every 'yes' means an extra step forward, every 'no' is a step back (so if all teams agree on a 'yes', the team can take three extra steps). When a team is in the position to cross the Pállson Line, the game leaders decide on the quality of the answer. As said, to cross the line, a team has to actually include the non-human in coming up with an answer. If it does not, it cannot cross. The game leaders do not explain their decision. It is part of the game for the teams to figure out what is takes to cross the Pálsson Line. However, when due to time constraints the game has to end, game leaders can decide to elucidate the big game and help teams cross the line.

After the game there is time for afterthoughts, first by the teams, then by the game leaders who address uses of time pressure, muddling forward without knowing how to reach the goal, unusual questions that relate to the climate crisis and the need to collaborate and help each other cross the Pálsson Line.

We want to contribute to research focused on learning in the climate crisis and to the development of designs for learning for resilience. Our ground plan is that both the research and the climate crisis make up the learning environment: the climate crisis as a learning space. Based on Wenger (2004) we propose a game that functions as invitation to dialogue and provokes epistemic humility regarding different ways of knowledge construction.

Thinking there is one universal paradigm that functions as a neutral, objective truth for all humans and the world is a fallacy. Instead, paradigms work for the situations in which they are thought and developed. This opens the door for a new perspective on 'situatedness' and the reframing of ecological validity. With our game, we want to explore the merits of paradigmatic pluralism for learning in the climate crisis and develop resilience.

A starter kit will be available. If you are interested, please email us:
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APPENDIX: QUESTIONS USED IN THE END GAME

The speculative

- What is the core of a future-proof roadmap?
- In the 1960s people longed for the Aquarius era, to what extent are today's crises just a phase towards a better world?
- Chinese wisdom literature speaks of an era of great equality (Ta Toeng), what would a society based on equality look like?
- What if our idea of evolution is wrong and apes were the next step in human development?
- How can we rethink individualism from the perspective of entanglement in a more-than-human-world?
- How could Artificial Intelligence help us to create healthy ecologies?

The Mythic

- How do you think mythology (from all over the world) is intertwined with today's civilization?
- What do you think is the significance of hunting for the development of human civilization?
- How did early man develop from a prey creature to a predator?
- What is the problem with the following statement: Weakened and torn by the division between man and woman, human beings have been seeking their other half ever since?
- Imagine the elements were gods. How would we tread Earth if this were true?
- Typical Western stories have a plot development. To what extend does the need for a plot limit our imagination?

The Global

- Compare the use of nouns and verbs in name giving. What differences do you experience between "the Rhine" and "That which is the Rhine"? How would you address Rhine-related issues from the second perspective?
- In what way does history relate to sacredness?
- How would you mediate between the human and non-human world?
- Explain how the history of a place is relevant for its future in at least three ways.
- In what ways is decolonization a prerogative term?
- How can the notion of interconnectivity enhance being part of what Paul Hawken called 'Blessed Unrest'?

The Transdisciplinary

- How do you know what's it like to be a bat? Or a termite?

- How do we learn to understand the language of mushrooms? Why would we?
- Alexander von Humboldt combined measurement with how the world appeared to him, in other words objectivity and subjectivity. What modes of representation or communication fit this double-layered message?
- How do we creatively use non-essentialism, for instance in hybrids?
- How can the theatre term 'the fourth screen' help us to develop an epistemology of participative experience?
- Whanganui river is in a terrible state. Who would you invite to explore possible solutions?

The Activist

- Is human interference always destructive? What examples do you have of co-creative human interference?
- How can we represent non-human stakeholders in a productive way?
- What types of non-human activism do you know?
- How can our co-species strategically inform us and how do we hear what they have to say?
- In what way can totems become co-protesters?
- What did Alice Walker mean when she said: 'Activism is my rent for living on the planet'?

The Democratic

- What does plant and animal-based literacy look like?
- Animal speech is more common in indigenous cultures, to what extent is this communication reliable?
- To what extend is the European Union democratic?
- How can we represent the interest of things other than in terms of our own interests?
- Whanganui is a large river in New Zealand. It is also a legal entity and as such has a legal status with rights attached. Man acts as its legal guardian. What is the problem with this representative model?
- Finish the following sentence: a populist movement could increase democracy because …