

**Stories from  
Watertown**

# **Subjectification in Living labs or an auto-ethnographic game for the development of world- view awareness.**

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**Context.** En l'època actual, és de vital importància transitar cap a futurs afirmatius i de vida. Hi ha amplis esforços per actualitzar el sistema actual tal que sigui menys perjudicial per al planeta i nosaltres mateixos. Tot i això, les disciplines emergents en transicions de sistemes reconeixen que no n'hi ha prou, i que, de fet, necessitem nous models integrals de pensament i comportament. L'especulació i les arts en són els més grans contribuents, però encara en calen molts més: les transicions s'han de fer al món real, amb diversos agents i en espais on es pugui experimentar, com els living labs.

**Objectiu de la recerca.** Sent conscient que els living labs sovint fallen en comportar-se segons la seva definició i limiten la innovació, la finalitat d'aquest treball és proposar un marc per introduir la necessitat d'innovar a diferents nivells (tecnològicament, socialment, i en mentalitats), amb especial atenció a les visions del món. Això ho presento com a essencial per la confiança entre diversos agents, que és un dels problemes més presents i reconeguts en els living labs.

**Metodologia.** Aquest treball utilitza diversos mètodes: des de síntesi teòrica a pràctiques de recerca auto-etnogràfiques en disciplines com la sociologia, el disseny i la filosofia (occidental i indígena). A través de raonament abductiu i validacions a través de converses, es desenvolupa un model per incentivar diàlegs autoreflexius cap a maneres de ser postantropocèntriques i posthumanes.

**Proposta clau.** Es mostra un joc iteratiu per iniciar converses individuals i col·lectives que permetin guanyar consciència de la visió del món d'un mateix. El joc de reflexió inclou una col·lecció de contes amb diverses visions del món i 16 cartes que animen a la reflexió i a emmirallar-se en les teves pròpies ontologies. A més, també inclou la plantilla d'una cartografia per guiar discussions col·lectives sobre les reflexions personals.

## Abstract

**Background.** In current times, it is of vital importance to transition into new futures of affirmation and life. Broad efforts are in place to come up with upgrades in the current system to become less harmful to the planet and ourselves. But the emerging disciplines of system transitions acknowledge it is not enough and we, in fact, are in need of integral new models of doing and thinking. Speculation and arts are the main contributors, yet more contributions are needed: transitions must be set up in the playing field, in multi-stakeholder and experimental spaces such as living labs (LLs).

**Research aims.** Aware living labs often fail to act by their definition and limit their innovations, the aim is to propose a framework to introduce the need for multilevel innovation (technology, society, and mindsets) with a special focus on worldviews. This is presented and argued as a keystone for trust, which is a broad and acknowledged issue within LLs.

**Methodology.** This work has employed mixed methods, from theoretical synthesis to autoethnography research practices in disciplines such as sociology, design and (western and indigenous) philosophy. Through abductive reasoning and conversation-based validations, a model to arise self-reflection dialogues towards postanthropocentric and posthuman ways of being in living labs is developed.

**Key proposal.** An iterative conversation-starter game for individual and collective worldview awareness is proposed. This reflection game includes a collection of multi-worldview short stories and 16 call-to-reflection question cards that call to mirror to participants' ontologies. Also, a cartography template is included to guide collective discussions about people's own reflexions.

**Keywords:**  
Trust,  
Stakeholder  
collaboration,  
Worldviews,  
Posthumanities,  
Living labs,  
Design,  
Systems  
transitions

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# Preface.

## The Importance of Activism in Design; Research and Subjects in Times of Crisis

I would like to begin spoiling what you will and will not find in this work. Because if there's anything I can be certain of, that is you will not find any objectivity nor absolute truths among these pages. Instead, you will find collections of subjective perspectives that try to be acknowledged, understood, and treated respectfully. You will find an exercise of listening and sensing, of identification and guidance, and mostly reflexions from diverse people and myself as a form of narrative-based autoethnography. This is a story about becoming in western societies. So let me abuse of your patience and start at (my) beginning.

### This is where it all begins

In 2020, as the Covid-19 pandemic spread across the globe, I found myself returning to my hometown seeking refuge from the loneliness in a foreigner place and stay-at-home orders. I traded the Northern wind, perpetual clouds, and cold, for the feel-good weather of the Mediterranean in a river town. To my (false) surprise, the anxiety of a virus humans had no control of, slowly transformed into the anxiety of a dry weather that is becoming more and more cruel to the living beings in the Mediterranean and elsewhere.

That same spring, while debating myself between taking an internship in a company or taking a minor within the university, Bas van den Berg from The Hague University of Applied Sciences (The Netherlands) convinced me to enroll in a minor focused on research, design, and ecologies for

**Autoethnography** The study of oneself's behaviour and own interpretation of it and the culture.

**Minor** A 5-month long 30 European Credits university course focusing on one topic or subject.

transitions. At that time, I had grown frustrated of the objectivist research discourses that were failing to make a stand towards better futures, and I was deeply mad to designer's practice under the capitalist and exploitative dynamics. As a designer, you would get a (design) brief or some sort of problem the client wanted us to solve but not question in intention, values or practice (they wanted to *be surprised within their comfort zone*). In the minor, I was shown a space for philosophy and design, politics, activism, emotions, learning and dreaming that transcended the above frustrations. A place of convergence from which all sorts of emergences were possible. I found out about Transitions Design (TD), which is an area of design that dares to tackle wicked problems like biodiversity loss or the socio-economic conditions leading to suicide (Iwabuchi, 2019; Schmidlin, 2018), and got to explore the power of narratives and metanarratives; worldviews, as presented by Hedlund-de Witt (2013).

Those experiences brought me to embrace a process of becoming I had been long dwelling and for which I didn't find space in traditional education (not in the old-fashioned mandatory education of public schools in Catalonia, nor in forward-aiming programs of Dutch universities). I needed to find a space to ask who I am, who we are, and where do we really want to go. That was about creating visions, but moreover about creating visions that radically redefine ourselves in a life-affirming manner. That is essentially the process of becoming a subject, that of finding the particular position between the external pressures and the inner drivers, between being one with the universe and being an individual and agent of change.

#### **Objectivist Research**

The practice of doing research separating the researcher from the object of study in a pursue of objectivity.

**Brief** A list with a designer's client knowledge regarding the problem they want to be solved and what is expected of the solution. It usually gives context and sets requirements to the design process and object.

**Visions** Fictional images and imaginaries of the future.

#### **Metanarratives**

The underlying social and cultural narratives, beliefs and norms behind a main story.

## We are in Times of Crisis

In *Earth in Mind*, David Orr (2004) describes how the current issues are a set of interlinked crisis of all kinds: social, geological, chemical, biological and of biodiversity, ugliness, economical decay... and how it is all a problem of scales. To this list we could add those of fascism, postmodern nihilism, depression, epidemics (and pandemics), wars and a long list of monsters of a humankind relating at the wrong scale and with the wrong senses with the planet we are part of. The behaviour of our kin has deeply affected the so-many complex systems that regulate life in this *Spaceship Earth*, as R. Buckminster Fuller named it (1969).

I see all these issues as part of one and the same. Ziegler (2018) argues that the disconnection of the postindustrial times sustains a structure of unaccountability that allows for the systemic exploitation of resources, which causes vast prejudices among the planet's inhabitants. But these are not simple problems we could simply state in a sentence and look for a solution to. They are paradoxes embedded in the system(s) where they exist, and only changing the way the system works can overcome the paradox (Bohm, 2004). In Meadows' words (1999), that is changing the paradigm. Yet, paradigms, or the systems they are made of, are highly complex and often uncertain. We usually perceive them through behaviours, but these behaviours are expressions of the ways we think and articulate thought: our worldviews, values, narratives, etc. Worldviews are the lenses through which we observe the world and make sense of it. Accordingly, it shapes our behaviour (Hedlund-de Witt, 2013; Wahl, 2021). Because of this mind-behaviour structure, changing worldviews has the power of transforming the systems we sustain. Therefore, this project shall be understood as an exploratory journey about worldviews shifting; my own and those of the system I'm working with.

**Worldview** Are the underlying sets of values and forms of meaning-making that define our stance as beings. They have collective and individual nuances, and are expressed through behaviours, traditions, artefacts and societal structures and norms.

Changing worldviews is not an easy feat, and definitely not something that can be forced on to people. To our hopes, when looking into people's worldviews, one can sense we already are in a point of transition (Ferrer i Picó & van den Berg, 2022). Many of these changes are well present in the raising posthuman philosophies of feminism, environmentalism, and [radical] indigenism (Braidotti, 2019). Examples of these debates have been recently visible in Barcelona though exhibitions like *Multispecies Imaginaries: The art of Living in a Contingent, Uncertain World* (Ajuntament de Barcelona, 2022) or *Ciència Fricció* (CCCB, 2021). But the scope of these new currents goes well beyond and reach hither and thither of western societies. They present new stands in life to overcome the traditional definition of what it means to be human and propose new postanthropocentric relational forms of existence (Braidotti, 2019). We will explore this topic further and with far more care in the chapter two of this work. But for now, what is relevant is that these new stances in life break with the dichotomical humanist worldviews, while offering alternatives to what 'being' means. They advocate for a process of consciously becoming subject within the whole, for which is necessary to recognise the self-position and agency in our relational forms (internal and external). Hence the term 'subjectification' (Biesta, 2021), which will be accompanying us in until the last pages.

## Standing for activism and research in design

For far too long, design has been at the service of the mercantilistic requirements of the capitalist market, turning the designer into a pawn at the service of bigger economic 'laws' and purposes. I don't mean to disregard the honest or well-intended designers and their struggle with the market. In fact, there are many innovations and learnings to be taken from the decades before us.

## Becoming subjects

**Radical Indigenism** Is a scholar attitude posing that indigenous people's have their own epistemologies capable of generating knowledge from distinctive models than Western (philosophy). It is a next-step to the critique of post-colonialism.

**Postanthropocentrism** Refers to ontologies of life and existence that recognise the importance and agency of non-human beings or systems, sometimes even beyond the dichotomy inert/alive.



### Vision in Design

Is a design framework based on the deconstruction of existing designs and their reconstruction from a prospective vision of the future. It relies on trend analysis and long-term forecasting of scenarios to design 'objects' attuned to a chosen scenario and seeks to allow the emergence of the best solution to a given situation by avoiding the tradition ideation design process until the very end of the process.

Nonetheless, design contributions have mostly been human-centred while disregarded the existence of a much more complex system of interdependencies which got harmed along the way. Only now, some areas of design begin to engage with new design perspectives as the ones I mentioned in the previous paragraphs.

The main issue we find in the design sector, is the unawareness of the responsibilities it has. Sustainable forms of design have been trying to address this over the last decades, but the responsibility goes way beyond the product's life cycle, the recyclability or the impact of the chosen materials. Schouwenberg & Kaethler (2021) argue that designs are representations of worldviews, something that I previously reflected on, explored and defended through a Transitions Design case study (Ferrer i Picó & van den Berg, 2022). In that case, we showed how artefacts (regardless of their form) are embodiments of bigger cultural metanarratives and how the current times of crisis require for dialoguing artefacts proposing new worldviews. This is not a novel argument, Dunne and Raby (2013) already talked about the importance of design to trigger critique, dialogue and collective imaginaries that catapult us into new futures. Yet, somewhat advanced design methods that actively look into the future as Vision in Design (Hekkert & van Dijk, 2011), still rely on a heavy forecasting to offer products and services adequate to desired and possible future scenarios. This pragmatic look at the bridging of the present and the future kills the possibility of radically new paradigms (Gaziulusoy et al., 2013).

Besides, Schouwenberg et al. (2021) note that the dissociation between the designer and the reality for which something is designed and the notion of the western designer as a saviour and solver promote a rather harmful do-goodism (Schouwenberg & Kaethler, 2021). So, in the current context, it is no longer acceptable to make this dissociation (Braidotti, 2019). When a designer projects an artefact, an idea, they are including in it the worldview they choose (either





consciously or unconsciously) and the design becomes *de facto* a stance for something. This is the nature of relational forms of being. Therefore, it would be naive to think we can make any design from objectivity. Arguing we need a subjectification process also implies developing consciousness on the position the designer takes, including them in a process of self-becoming, and embracing the perspectivism of what they do. There's a lot to be learned here from regenerative practices where individuals work simultaneously on self-development (internal), guiding other's development and that of projects (external), and leveraging the potential people and projects have in system shifting (Andersson, 2022). Hence, design processes shall be seen as learning and research journeys involving the inner, the outer, and the systemic. This requires a hands-on approach to both design and research, where through design practice we generate knowledge towards new futures and practices that embody them. Possibly, autoethnographic design could help us find that balance by considering the designer the central element to the knowledge obtained. In this practice, it is the reflexions, discoveries, learnings, frictions, emotions, the designer experiences that inform design decisions and outputs (Kaethler & Schouwenberg, 2021). It is attuning design to the senses.

In short, I'm arguing the designer should not detach them-self from the process nor the output, but rather should be an active subjective part of it.

## An overview to this work and its approach

This project will focus on designing a tool to guide subjectification in the context of Living labs, and it will do so taking into account the exposed arguments. This means the project is understood as a developmental process for me as a designer (and researcher), for the project, and the system where I am having an impact at. Such recognition begins from acknowledging I am learning along the project and generating knowledge on what it means and how subjectification occurs in Living labs, but also considering myself part of it, and accepting

autoethnography as a valid and leading method within the project. To facilitate the understanding of the different levels of development (from theory to practice, inner to outer and systemic), I will expose the project in 4 thematic chapters where philosophy is included as a transversal discipline.

While this preface is giving some context on the approach to the project, **the first chapter** will give some context regarding what Living labs are, their struggles, and why do they need the 'toolkit' I propose at the end of the work. This will be done through a review of literature about Living labs combined with the experiences and research outputs of five researchers (from the Future Proof Labs, The Hague University of Applied Sciences — Overdiek et al., upcoming) looking into four Living labs in The Netherlands.

**The second chapter** explores the field of the posthumanities, by giving some context on what they are, how are these new discourses articulated and why. Finally, it will propose a theoretical framework that considers the struggles in the Living labs, hence presenting a way to map the position of individuals in Living labs from a subjectification process perspective.

**The third chapter** proposes and explores how a collective process of subjectification can be triggered and guided. For it, it follows different experiments in a dialogue group where different practices are tested to realise assumptions and come up with new collective understandings. At this point, as part of the group subjectification process, I am included within the group, blurring the dichotomy of researcher and research subject, and articulating the leanings from my own journaling practice. Then, **the fourth chapter** takes the outputs from the dialogue groups and the previous chapters and translates them into a toolkit/game to be used in Living labs. Finally, it presents the best practices for subjectification in the selected contexts and further improvements for the toolkit into an implementable tooling.

A final and **fifth chapter** presents an overview of the previous chapters, summarising the conclusions of the work and proposing further what could be next in the topics of subjectification and enabling it in transitional spaces.

# Chapter 1.

## A feel and look into Living labs. Why, what, and notes to realise the potential.

The dragon couldn't be vegan. It was a given. Every-being in the town had already assumed that. It even wasn't that bad. It provided a sort of equilibrium. Every-being was used to it. One day or another it would be their turn to be a meal for the dragon. Living with the anxiousness and pressure was what all they knew. Was there even an alternative to it? No-being could imagine any.

18 One winter day, a Sir was visiting the town and he heard of the dragon. With great itch he asked where was the dragon to be found. No-being dared to answer at first. They knew where the dragon was, but any ever had the nerve to talk about it. Following some screams and a strange heat at a dawn, our Sir found the dragon. The dragon was scared for his presence, and the Sir perceived it. "What is that you are frightened for, my friend?" The dragon was in stupefaction; no-being had ever asked him how he was, and he broke down. Soon after, our Sir and the dragon became good friends, the dragon got to articulate his worries about how unsustainable his life was for beings of the place. Together, they began experimenting new ways the dragon could be part of that place and keeping track of how they changed the place. Spring came, and the presence of the dragon wasn't a strain anymore to the place. Life was blossoming, and from the new equilibrium all kinds of new beings reappeared after a long time. Among them, roses. It was April 23rd.

Today, Europe is filled of dragons.



This story, based on the European legend of Saint George and the Dragon, shows the concept of Living labs as multi-stakeholder approaches to deal with wicked problems. It presents the idea that through deep-listening and sensing, new (unexpected) relationships can be formed and that by identifying the underlying paradoxes that cause friction we can experiment ways to overcome them as long as we do it so in awareness, sensing and keeping track of the emergences of our new forms of existence. These are the topics that will be covered in this chapter.

The chapter begins with a small explanation of the approach that articulates the knowledge and the story of the chapter. In its first section, I presents what wicked problems are and how Living labs can play a role to deal with them, including definitions. Then, I expose the identified struggles in Living labs when dealing with wicked problems, especially in the field of social innovation. Finally, I include a review on how these are dealt though evaluation methodologies and a reflexion on the opportunities to have better tools.



## Methodologies for this chapter

For the writing of this chapter, knowledge from different sources is employed to present a coherent narrative where [academic] literature and personal experiences are entwined. My autoethnographic practice serves as inquiry that is answered with the theoretical knowledge of the literature review, the practical knowledge from four case-studies, and reflexions and perceptions from conversations

### 1. Personal reflexions and experiences

They are used as a basis for a storytelling approach to introduce wicked problems and argue for the potential of Living labs as paradigmatic cases of multi-stakeholder innovation in the field of transitions. Paradigmatic cases are those that allow to highlight general characteristics of the subject of study (Flyvbjerg, 2006). Hence, how looking at individual cases on innovation we can abstract (and assume) what happens more broadly in transition projects.

### 2. Literature Review

Complements the storytelling with literature sources and complementary arguments besides adding knowledge that as a researcher I have no first-hand experience with.

### 3. Case studies

I include four case studies realised by researchers from the Future Proof Labs (FPL) research group of the Mission Zero Kenniscentrum (The Hague University of Applied Sciences). Besides presenting each lab's situation, I conclude them with their main insights. These insights have been validated by the original researchers who worked on the case study. Finally, the insights are used to propose three factors that could potentially improve the capacity to innovate in Living labs.

## Finding a (pragmatic) way out from wicked problems

Back when I was on high school and later when I began to study in an engineering program, I had my hopes on the possibilities technical knowledge would give me to build alternatives to current destructive technologies. Yet, my (maybe too ingenuous) perspective began to fall in some contradictions. Out of my lack of knowledge, when I was presented with 'problems,' I couldn't help myself but realise that in fact those weren't actual problems but symptoms of much profound issues. The problems I was presented with were tame, and I was identifying wicked problems (Rittel & Weber, 1973). Dealing with these sorts of problems requires acknowledging their multi-scalar complex nature and that there will be no straight nor right solutions and that every intervention will have unpredictable extensive implications (Capra, 1996). Such acknowledgment has often been neglected since it requires different perspectives than the predominant reductionist western culture (Berman, 1996) and embracing the uncertainty we try to avoid. In other words, to deal with those complex wicked problems we need changes of mindset.

For some time, I wondered how people could be so wrong about some stuff, but I eventually came to the realisation that it wasn't a matter of being right or wrong, but of operating our mindset in different ways, through different worldviews. That is everyone builds a worldview of their own with the information they have been taught and the experiences they had, but still deeply rooted in the society they live. This worldview defines how we understand the world but also how we behave in and deal with it (Bohm, 1996/2014; Irwin, 2012; Ives et al., 2020). For the last centuries, western society has been operating under a mechanistic and reductionist culture that pictured

**Tame problems** are simplified problems that allow for to provide a positive or negative answer to solving the presented problem without further questions; i.e. the stated problem is solved or it is not.

**Wicked problems** are defined from the complexities of their multi-scalar nature and the conflicting perspectives of the stakeholders involved in them. They are often symptoms of more complex ones, and their conflicting perspectives are the result of many stakeholders acting differently, having different purposes, or even unawareness of playing a role in the problem at all.

**Limited-liability corporations** enjoy the capacity to limit responsibilities to the company, hence protecting the decision-makers and shareholders from the external impacts of the company operations they control while being able to keep the benefits of it. They are known under some acronyms such as AG, SA, Ltd., GmbH among many others.

small, disconnected fragments of the global systems, including a vision of the human as separated from the rest of the cosmos, and often exceptional and in control of the rest (Irwin, 2012; Wahl, 2016). This culture of separation can be perceived in many ways, from the individual behaviour to the social and in the organisational structures that currently operate across the globe: a paradigmatic case are the limited-liability corporations which embody the culture of separation from unaccountability (Zigler, 2018; Whyte, 2020). Hence, as long as we keep looking at problems from the established western perspective, we will keep fragmenting reality and avoiding to deal with the underlying crises.

Shifting the perspectives on problems can be scary, it requires challenging our underlying assumptions and loosing fear of uncertainty. Many times, one of the first things that happens (to me and other people I had the chance to talk to about this) is a sense of being lost and not knowing how to react and engage with this new view. It happens this creates a blockage that can lead to catastrophist, pessimist or even nihilistic stances. When this happens, there is a process of self-objectification. I.e. the subject releases of its agency and individuality in favour of a submission to an uncontrollable paradigm (N. Landriati & J. Ferrer i Picó, personal communication, 2022). Instead, we should identify the paradoxes conforming that paradigm and take affirmative positions to propose new ways of doing and thinking that overcome them (Bohm, 1996/2014; Braidotti, 2019; Brewer, 2022). This is imperative if we are to avoid the ongoing 6th mass extinction.

## Transitions Design

In design, some disciplines try to deal with the frustrations of the current paradigm mainly from their business-as-usual practices, perpetuating the reductionist problem-solution approaches and human-centred processes. In response, the emerging discipline of Transitions Design aims to take the

before-mentioned affirmative positions by exploring the complexities of wicked problems and proposing ways out through the speculation of new mindsets and artefacts (Ferrer i Picó & van den Berg, 2022) as a way to engage with system intervention points (Meadows, 1999). For it, TD uses abductive approaches with (collaborative) mapping and narrative-based activities as integral to the whole process. Nonetheless, focusing on radical mindset changes is a leap of faith as these changes are slow, emergent, and uncontrollable (Ferrer i Picó & van den Berg, 2022).

## Living labs

One day, I came across the activities researchers from Mission Zero Kenniscentrum's Future Proof Labs were doing on Living labs. Reading about this approach to innovation, I realised of the numerous intersections it had with the field of TD. Living labs (LLs) are a concept coined by William Mitchell (Schumacher & Feurstein, 2007) as a research methodology that involves public-private collaboration to test and develop innovations in real-life environments, effectively combining users, innovation, and research agents. Today, LLs are understood to be far more than a methodology; Schuurman & Leminen (2021) described them as being *'platforms with shared resources, which organise their stakeholders into a collaboration network(s) that rely on representative governance, participation, open standards, and diverse activities and methods to gather, create, communicate, and deliver new knowledge, validated solutions, professional development, and social impact in real-life context.'* In other words, they implement new forms of collaboration to have an impact (social innovation) and

**Living labs** emerged as a modern western term in the 1990 simultaneously from different academics, but the popular term was coined by William Mitchell (MIT) at the late 1990 and early 2000s as a real-life-like environment that allowed to do research to gather data about real-life behaviours. Soon after, the concept was brought to Europe by Nokia. Nokia focused on setting up environments to understand real-usage of people's connectivity and improve on technologies. By that time, Living labs began to be understood as neighbourhoods or cities that used to perform real-life like research. The EU implementation of funding and a framework for these labs, along with the creation of ENoLL in the late 2000s, finally transformed them into what is currently understood as Living labs. I.e. an area where multi-stakeholder partnerships co-create to develop innovations in real-life contexts (Leminen & Westerlund, 2019).

**Social Innovation**  
Innovation in social structures, the ways people organise, collaborate and participate in a society or community.



### Technical Innovation

The development of novel technologies or applications towards executing certain functions.

### Knowledge-practice-belief Complex

Is a theoretical framework based on indigenous cultures that describes a model for Traditional Ecological Knowledge. It was described in western science by Fikret Berkes (2008). In this chapter I use it as a naming for the integration of all knowledge, behaviour and beliefs (i.e. from worldview to action) of a society, but chapter 2 will present it further.

deliver new solutions (technical innovation), which wouldn't be possible to combine in traditional problem-solution approaches (De Lille & Overdiek, 2021). Besides, LLs aim to do so not only from practice but the meld of practice, reflexion and analysis in collaboration with academia (van Geenhuizen, 2017). Due to the integral innovation approach in LLs, I would argue they have to actively engage with all the [anthropological] knowledge-practice-belief complex; from worldviews to individuals and all social, technological and knowledge structures in between (Watson, 2017), hence being an ideal platform for TD.

Nonetheless, I quickly realised something was off. As mentioned, living labs mainly focus on two sorts of innovations (and rarely the both of them simultaneously): social or technical (A. Overdiek, personal communication, 2022) and usually, without any consideration of the (rather philosophical) mindset aspects I presented before. In fact, Leminen & Westlund (2017) found out that many LLs follow linear innovation processes which limit participation, co-creation, and innovation capacity and are more common of reductionist problem definitions (Irwin, 2012).

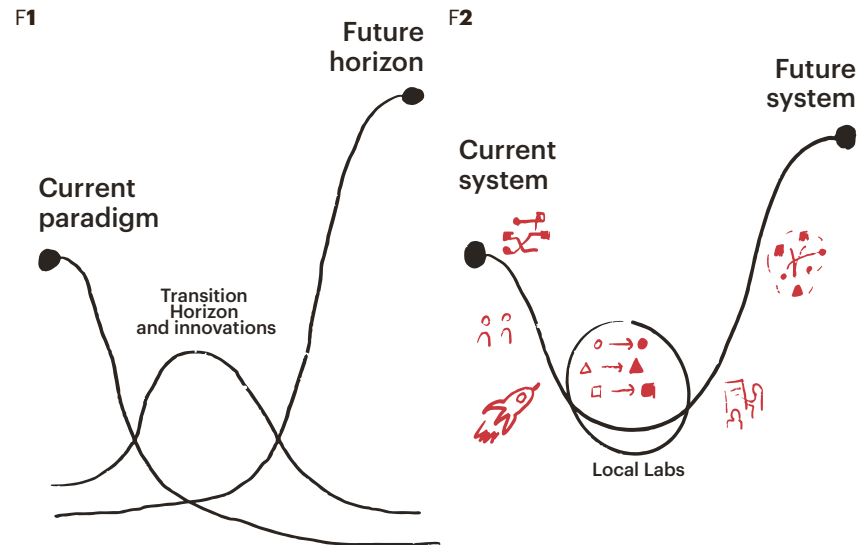


Figure 1. The 3 Horizons framework illustrates the role of a transitions horizon to advance towards a future horizon. Ideally innovations within this horizon help emerge the future horizon while phasing out the current paradigm. Adapted from International Futures Forum (n. d.).

Figure 2. 'Impact systems in living labs' shows how living labs work on the development and experimentation of new systems that can be scaled to build a new future paradigm. Innovation in living labs would fit within the transition horizon in the 3 Horizons Framework. Adapted from De Lille & Overdiek (2021).

## The Struggle with Social Innovation

When I joined the Future-Proof Labs team I had understood and assumed that in Living labs social and technical innovation were combined to a considerable degree, but that within the social field, the role of mindsets was simply disregarded. Soon I learned that the problems and dynamics were far more complex. By that time, the FPL researchers were working on four case studies of living labs in The Netherlands. They had chosen four specific labs because of their different initiators: government, private companies, universities, or citizens (*Leren in én over living labs*, 2022). Yet, throughout my time with them, in conversations some worries and judgements were brought up on whether if living lab was an appropriate label to some of them. In fact, Steen & van Bueren (2017) already advised that most allegedly LLs don't co-create and most of times act as simple top-down innovation approaches. That's also why Overdiek (personal communication, 2022) mentioned that the goal of the FPL work in LLs was to make coordinators of these endeavours realise that true technical innovation (in the current context) is only possible once there also is social innovation.

In the following pages, I will go through these four cases from the conversations with the researchers (hence bringing in the thoughts they shared with me) and drafts of their publication (Overdiek et al, upcoming) to highlight the main struggles that might be stopping living labs from dealing with the whole knowledge-practice-belief complex and being true platforms for transitions.

### Case Studies

Future Proof Labs is a project part of Mission Zero Kenniscentrum doing research on the impact of Living Labs and ways to evaluate it. The project, lead by researcher Anja Overdiek, is a spin-off of Future-Proof Retail and financed through ClickNL grants. In summer 2022 ends the first part of the project focused on analysing four Living Labs in The Netherlands. In the following years, the FPL team will work to develop evaluation tools and insights for Living Labs coordinators.

# Where is Social Innovation?

## A university-initiated Living Lab

Based on  
Overdiek, A., Sluijs, J., Bustamante, G., Genova, M.,  
Schut, A. & van Doorn, F. (upcoming). *Future-Proof  
Labs, Insights across living labs for sustainability*.  
The Hague University of Applied Sciences.

Isolated among the buildings of a university campus, surrounded by a canal, there is a Living Lab composed of a few residences. That LLa is managed by an NGO and funded by a well-known Dutch university, the European Regional Development Fund, Province Zuid-Holland, a municipality, and several companies. The Lab has a glassy building that serves as co-creation centre for the stakeholders. Attached to the building, next to an access bridge, there is a tower built in collaboration with different companies to regulate the temperature of the building passively.

This centre and the neighbouring buildings that include 8 houses offer to the university and private companies three types of test-beds where sustainable technologies are tested. Some experiments involve the testing of technologies in its late development or testing phase in a real life-like setting, whereas others require a few stakeholders to come together to set up a collective project and develop the technologies together. Then, the installed technologies are tested by the 12 long-term inhabitants of the lab, whose experiences and data are collected.

Should the Living Lab be open to anyone who wants to make use it, in reality only a few companies and the university are exploiting it previous approval of the lab manager, which added to the money flows makes look the lab as a test-beds service. But the interests clash when companies also expect to have an active collaboration with the university but the university failing to deploy their knowledge and facilitating the convergence of expertises. Considering that participating companies have a very practical approach and researchers a much more theoretical and model-focused, it wouldn't be outwardly to say that partners come together to go [and speak] their own ways.

The result is very positive on the technical side, mainly given the abundance of resources they get, but cooperation is very limited, to the point that some interests end up unfulfilled, and the social aspect undressed. But the passive-role residents are given, and the distance of the lab from the other city neighbourhoods fail to offer a real-life context, and as original case study authors noticed, there isn't any (conscious) overarching theme and interrelation among projects.

### Test-beds

An infrastructure where a technology can be safely tested in controlled conditions before being openly deployed.

## Insights

1. Focus of technical aspects
2. Brand as key for funding success
3. Lack of collaboration among stakeholders
4. Problems of communication due to different languages
5. Worldviews are simply disregarded



## Co-creation, how we do it?

### A municipality-initiated Living Lab

From the centre of a coastal city, a district emerges as a potential municipality-impulsed Living Lab to develop participation mechanisms and advance towards a carbon-free energy grid from the bottom-up. There is no office, the space is the neighbourhood, and researchers and representatives come and go in a constant stream of faces.

More than half of the neighbourhood's population are migrants, yet it has a growing grass-roots movement and had already been in dialogue with the municipality before the plan was put into action. When the city lab was set up, the municipality saw it as a novel project, whereas citizens perceived it as a follow-up on previous activities. From here on, this lab can only be described as a cascade of disagreements and diverging conceptions.

The municipality's purpose with the lab was to "explore the desired citizen participation". Hence, the main activities of the lab were hosting dialogue sessions. Nonetheless, the lab is financed through energy transition projects (financed from the municipality) but coordinated the city's university. At this point the myriad of different interests begins to be seen: the municipality wanted to focus on participation, but at the same time had a team of experts proposing solutions, and the university

Based on Overdiek, A., Sluijs, J., Bustamante, G., Genova, M., Schut, A. & van Doorn, F. (upcoming). *Future-Proof Labs, Insights across living labs for sustainability*. The Hague University of Applied Sciences.

coordinator hadn't an arbitrary stance but that of acting as researcher. Moreover, the municipality would propose energy solutions about which the house owners had very strong ideas about (mostly against), tenants had worries about them (costs, works annoyance, etc.), and house corporations had reluctancies because they didn't want to give false expectations to their tenants. The underlying interests of these parties were never shared, and from the talk based approach taken from the municipality, no real sense of building-together emerged.

Then, everyone had their own assumptions, too. Citizens perceived the municipality experts as not enough experts, the municipal community representative saw the execution of small experiments as a way to increase trust, and the council wanted to focus the talks only in energy, even disregarding explicit energy experiments as they looked for a general plan. Questioning the process was the norm. What was the actual intention of the municipality? What were their expectations? How did they want people to participate? Did they even want to experiment with transition solutions? Was the lab meant to be a set of experiments about different ways of participation and decision-making, a consultation process about a

transition plan, or a lab of energy solutions within the neighbourhood?

The debate is ultimately about the purpose of each stakeholder, how activities align with this purpose, the level of co-creation, and the communication of expectations by the different parties. But it is not only a problem about these living labs; Steen & van Bueren (2017) analysed 90 Living labs in Amsterdam, and found out that from these only 51 had included participation in their activities. However, only 12 engaged in co-creation.

#### Participation

The involvement of a party in a certain activity.

#### Co-creation

The highest levels of participation which give (decision) power to all participants (Arnstein, 1969).

## Insights

1. Activities and purposes have to align
2. Expectations, intentions, and interests shall be transparent
3. The processes and forms of participation should be clear and openly discussed

# You are not in the club!

## A business-initiated Living Lab

It was the beginning of the hot season, I was visiting a friend in the Hague. It was getting a bit late and we had nothing for dinner so we went to buy some groceries. At the corner, down the street, there was a little groceries shop and at their entrance they had some loquats. I found it strange since the season was about to begin, but there were a few weeks left till they are tender and sweet enough to be eaten. Where I come from, loquats can be collected around mid-May. But they had them there, on a box, so I asked. My friend replied 'here the sun never sets, season never changes.' Which I found it to be a poetic way to remember that we found ourselves at one of the most light-polluted places in Europe (Falchi et al., 2016).

Where the sun never sets and season never changes, rows of green houses produce fruits and vegetables that are exported over Europe, and houses set up a disseminated neighbourhood. Amidst these huge extensions of greenhouses, a few owners decided to organise a replanning of the area and neighbourhood where they produce (work or live) to optimise resources and operations, have less environmental impact, and make the neighbourhood more liveable. Residents and business owners set up a cooperative and de-

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veloped a master plan for the area that involved rebuilding all the infrastructures in a different arrangement. The project is managed by the cooperative, but there is a fee to being a member which not everyone can afford. To include all these people's in the plan they held a co-creation session the results of which were shared with the cooperative members and from time to time they host informal cafes to update people on the plans. Hence, many perceived the initiative as rather top-down.

But as the case study researchers point out, there is even another problem related to who is allowed to make decisions, because just as some residents — those who are not members of the cooperative — are excluded, so are children and youth, or what will be most impacted by the changes in the plan: the landscape, the water, the plants... They are mostly seen as simply resources to be managed and assigned a value. Within the cooperative things seem fine and everyone talks the same language (money). Yet, the context is mined by lawsuits, crossfire, and blurred boundaries on every stakeholders' right to make certain decisions.

Overall, like being on a tightrope balancing life and work, and business and sustainability.

### Cooperative

A model of enterprise which is socially capitalised equally among all members.

### Loquats

Sweet fruits of the loquat tree. They are yellow and measure around 3 centimeters in diameter. They are collected in spring or early summer. The tree grows in subtropical to mild temperate climates

## Insights

1. A specific [undiscussed] language sets a barrier for some important stakeholders
2. Specific requirements and formal organisational structures leave human and non-human voices disregarded

# Who did you say you are?

## A citizen-initiated Living Lab

In the middle of the city there is a block of buildings with a curved and boxy architecture and wooden and Galician grey slate facades that look apart (and foreign) from the red brick Dutch residencies. The houses are built around and open to a permaculture garden with curved pathways along what I would describe as a sort of community agora. If we were a bird, we would observe the whiteness of the roof, broken by arrays of dark-blue solar panels, drawing the silhouette of a grand piano against the trumpetish grey serpent of the surrounding buildings. There is a housing association (owned by the residents) that manages the place, its governance, and the living lab activities. They organise various sorts of activities and participation practices, so even children are an active part of the community and their decision making. Currently one of the most ambitious projects of the LL is that of setting up a neighbourhood-level distributed energy grid. For that, they operate through an energy cooperative and connect surrounding houses. But they also partner with external stakeholders who provide the necessary technologies, infrastructure, research and even funding. In fact, to make that possible they got exemptions to energetic distribution laws that sets the

path to experimentation and insights for new energy regulations.

But contrary to being in their garden, the management is not a walk in the park. As they hold a 'strange' position as an association of residents but also as an energy cooperative (usually treated by administrations as a company), certain stakeholders don't know how to deal with them as they are neither a company (with company interests), nor a group of residents (with their traditional demands and —perceived? — limited power). Seemingly for this same reason they have very limited access to funding. The ambiguity of their role, and what makes this living lab so interesting for social innovation, is also their curse when dealing with formal and established stakeholders whose culture (or organisational worldview) doesn't allow them to deal with other than traditionally structured organisations.

Based on  
Overdiek, A., Sluijs, J., Bustamante, G., Genova, M., Schut, A. & van Doorn, F. (upcoming). *Future-Proof Labs, Insights across living labs for sustainability*. The Hague University of Applied Sciences.

### Slate

Is a foliated metamorphic rock, usually dark grey or black. It is popularly known for its widespread use in the construction of rooftops.

### Distributed energy grid

Is a concept of an energy grid based on interconnected small energy production points and system management assets that reduce (or make obsolete) the energy production in central plants and centralised energy management. This new form of grid leverages home-owned solar panels, small wind-turbines, home-batteries and other devices that allow to manage the network. Because their interconnectedness and complex management these grids are only allowed for experimentation as there are no regulations in place.

Dienke (a fictional name) is a participating member to the decentralised energy grid. On a voluntary basis, she collaborates and is active as any other member, but during work hours she is an employee in the municipality's energy transitions department. Seemingly, for the cooperative that would be positive; the municipality is involved officially and from a human and personal perspective, hence they know the project inside-out. But as Dienke switches hats, her ability to participate and bridge the two organisations transforms which is confusing for the coordinators of the cooperative. Why doesn't she act in the municipality accordingly to what she stands for on her personal time?

## Insights

1. Similar worldviews allow to set up out-of-the-ordinary systems
2. The cultural and worldviews clash between organisation models limits collaboration capacity
3. People's role play and dependencies with different cultures are a source of confusion and limit the exploration of new forms of interaction among stakeholders

## Three factors for transitions: WAHT

As previously mentioned, one of the main problems with living labs was their lack of co-creation (which essentially rendered them into not being living labs), but they also struggled with offering social or technical innovation together, although that might not be extremely important as long as there is an awareness of the limitations of each and an interplay between one or the other (Overdiek et al., upcoming). Besides, the original purpose of this work was to argue for the importance of worldviews in these transitional innovation contexts. When I look at the four case studies, there are three main factors I regard as being important (table 1). Allow me to call them WAHT.

The first factor would be the **worldview awareness**: as seen in the case studies, when worldviews are not considered and the same thought models that existed before are sustained. But, in other cases, their disregard can lock up structures that repeatedly deny the right to participate and of decision making to other stakeholders, either human or not. This would be the case of people who want to participate but they can't access to the spaces of participation, they are not invited, or even invisibilized. Worldview awareness also has a huge role to play when interacting with other stakeholders; clashing worldviews are one of the obstacles for collaboration and mutual understanding of another's position. Hence, acknowledging the differing worldviews of each part can be a step further to reaching common viewpoints, forms of interaction or even disagreeing from mutual understanding rather than opposition and reaching new positions.

The second factor I identify is **honesty, self-capacity and power**. In the different cases there were different stakeholders that aimed to certain goals but acted in different (or not obvious) directions. This brings confusion to the rest of the stakeholders, and diminishes the capacity of the lab. Hence, it seems reasonable to me to argue that there needs to be an alignment between what is done and what is aimed for; both at a personal level and collective one. This alignment is about being honest about one self's position and actions, look at them critically and recognise (and communicate) what responsibilities these positions imply.

The last factor is **transparent communication**. Although highly related with the former, transparent communication appeared as keystone to enable trust among the stakeholders, define everyone's intentions and expectations. Through these, the development of a common language and models of participation and co-creation can be established accordingly to the needs of the experiments and the stakeholders. As seen in the case studies (e.g. 'co-creation how we do it?'), the lack of thereof leads to false expectations, frustrated participation and unmet interests and eventually a loss of reputation from the different stakeholders. It is worth mentioning that this example also highlights the importance of not only communicating needs but the growing assumptions, which are narrowly tight to worldviews. It could be said, transparent communication is about communicating the worldviews, knowledge, and practices.

It is worth noting that these insights focus on the scope of worldviews, and therefore, they differ somewhat from those in Overdiek et al. (upcoming).

<b>Worldviews awareness</b>	1. Explore beyond-technical solutions; 2. Integrate multiple voices; 3. Ease collaboration with stakeholders
<b>Honesty, self-capacity and power</b>	4. Alignment of the personal and professional; 5. Alignment of action and purpose; 6. Recognition of power roles and capacities
<b>Transparent communication</b>	7. Establish common languages of mutual understanding; 8. Agree on models of participation and co-creation; 9. Enable trust through the alignment of intentions and needs

**Table 1.** The three WAHT factors along with their respective potential impact in multi-stakeholder innovation settings (like Living labs) as identified through the case studies.

### **Integrative Worldview Framework (IWF)**

A descriptive framework that defines four archetypes of western worldviews, considering their epistemology, ontology, axiology, anthropology, and societal vision.

## **Evaluating labs, from case-studies to tools**

Ensuring the three previous factors occur could be necessary for a broader and more effective innovation to happen in living labs. Yet, getting to develop awareness of the worldviews, being honest, and having a transparent communication can be rather abstract concepts that while being implemented cause the same dynamics I am suggesting should be overcome. For example, what if due to different perceptions or worldviews we argue differently about whether transparent communication is happening or not?

To avoid that it is important to establish tools and ways to measure the performance of the living lab (or stakeholders) and be able to address the different issues accordingly. In fact, there are numerous tools for living labs, and these focus on the evaluation of the organisation dynamics, the methodology of the living lab, and the impact of their projects in the regions where they operate (Overdiek & Genova, 2021). As Overdiek and Genova explain, these tools offer indicators to know if the assessed living labs performs based on the definition (multi-stakeholder collaboration, co-creation, business, innovation) or what's their current state. But usually, these are rather managerial and seek to assess the current state of the lab through numeric variables, closed questions, or abstract indicators about practices and outputs. An exception is the FormIT Method, which based on 5 principles (value, influence, sustainability, openness, and realism), invites to answer questions and reflect on the performance of the living lab and their activities. Yet, as far as the authors point out, no tool addresses the reflexions required for the WAHT factors, especially regarding worldviews awareness. In this sense, works like that of Hedlund-de Witt ([The Integrative Worldviews Framework](#), 2013) could shine some light into the evaluation of worldviews, but it requires certain adaptations

and the integration of the honesty and transparent communication factors. This tool be developed (and this is the topic of the upcoming chapters), Overdiek and Genova (2021) call for breaking with the managerial fashion of current tools and integrate the evaluation (or more appropriately, reflexions) with playful design-oriented assessment practices.

## **Project Relevance**

In this chapter, we looked into the complexities of current-day issues and how they can only be dealt with from new perspectives and ways of thinking. This is, to overcome the issues, we need to transcend the paradigm, which is transitioning our worldviews, and engaging with new knowledge and practices. There is a discipline in design dealing with this: Transitions Design. But we also saw how Living labs offer the possibility for very hands-on, multi-stakeholder takes on transitions. Nonetheless, they don't deal with worldviews, and with the four case studies from The Netherlands, we identified the WAHT factors which could hold great potential for improving dynamics in these innovation platforms. These factors included developing Worldviews Awareness, being Honest, identifying the self-position and roles of power, and Transparently communicating all of it, including expectations and intentions. Due to a lack of tools to reflect on these aspects in living labs, the following chapters aim to extend the theoretical background of worldview awareness and develop a tool to allow the WAHT reflexions.



## Chapter 2.

# Proposing a Framework for Becoming in New Relational Forms as Posthumans

The great raven was in love with the world and the beings he created, so he decided to go live with them. As he was sailing the White Sea, he saw a whale on the horizon, which he went to visit. When he approached her, the whale opened her mouth and he got in. He went through seven guts, and at her interior found a dancer tied to the whale. The dancer told the raven she was the soul of the whale. And with her dance, the whale moved.

He was mesmerized by her. 'She has to be mine', he thought. And when the dancer stopped to rest, the raven used his beak to cut the ropes holding the dancer. She fought back, but the raven took her and brought her outside the whale before beginning to fly up and up.

As the raven flew higher, the dancer became lighter and lighter until above the clouds she vanished. He saw the whale, as a little spot by the coast, and he understood that everything he created could disappear, and living beings come to leave one day.

He felt so heavy, he flew back to the whale and cried, perhaps for a year. These were the first tears.

Then, he felt light again, and danced over the dead whale, perhaps for a year. It was the first dance celebrating life.

And he singed, perhaps for a year. I was the first song.

Tears, dances, and songs, remember us we are alive.



This is a story adapted from the *Raven and the Whale*, an Inuit tale (Laura Sims, 2001, as cited in Bloch et al., 2010). It shows the connection between culture and remembering of the most essential things. Those things that we shall not forget to keep being who we are and relating in synergy with nature. Dances, celebrations, stories, etc. remind us to remember we are alive, and that is a celebration of being, here and now. Of appreciation to those who preceded us, the ones who will follow and all these we are with in this planet.

This chapter explores what it might mean to be within nature, to take life-affirmative stances and imagine new forms of life where we are no longer the centre and reciprocally engage with the more-than-human. The interrelatedness between mind and behaviour are explained, the western understandings of the world shown, and an affirmative message introduces the chapter and sets the tone about what we can be. The chapter ends with a model to map and reflect about one's own mindset and how it allows to understand the world and behave in a certain manner.



## Methodologies for this chapter

This chapter presents a collection of western and indigenous, contemporary and ancestral philosophies towards new forms of being attuned within the universe. After highlighting the need for these new worldviews and the requirement to engage in their development for innovation towards sustainability, I aim to give some context about these emerging philosophies that challenge the traditional western understandings we inherited from the Enlightenment. For it, I propose a philosophical gallery that combines (academic) literature and arts. Due its compilation nature, it is at the edge —of fully within— of being scholarly bullshit —it barely proposes anything new— (Kirchherr, 2022), but I believe it might be useful for the understanding of the following chapters in this work.

In a second part of the chapter, I reflect through the insights of the living labs and my own auto-ethnographic practice to assess the possibilities of the Integrative Worldview Framework (Hedlund-de Witt, 2013) to enable WAHT reflexions in living labs. From this assessment and the insights of the exhibition at the beginning of this chapter, inspired by the cartographic practices of Transitions Design, I propose a ‘cartography of being’ to map worldviews (and worldview transitions) in what is to be the foundation of the living labs WAHT-enabling tool.

### Scholarly bullshit

is an academic genre under which irrelevant works are published. Often these aim to contribute to the corpus of publications about a fashionable topic without adding value to the ongoing discussions (Kirchherr, 2021). According to the author there are even journals that have a huge focus on these kinds of publications (e.g. Sustainability)

## A showroom into new worldviews

# Room 1: Introduction to identity and being

## Western identity

In the book *Posthuman Knowledge* (2019), Braidotti opens by questioning human identity in the current era. We are constantly reminded of who we should be. On websites, we are required to demonstrate our humanity through CAPTCHAs, provide personal information, or log in with a verified credential (e.g. on government sites). States require us to have an ID to be identified from a picture of the face, a fingerprint, a name, nationality, and number, and to report what we *own*, our *capital*. In social media, we are profiled and reminded of all these things we are supposed to like and do. In social relationships we might be classified from where we are from, what language we speak, how we look, our opinions, behaviours, political views, etc. And often, we still struggle to respond to the question ‘who am I?’. All these aspects define *who we are*, as individuals but also as a society. They set the grounds for what defines us. In this era, you are a human because a DNA test proves it, because another human has verified you, or a computer has found your behaviour to be human-like (as in CAPTCHAs). There is a system that has to recognise you as one to have access to the very same system ruling contemporary life. And well, you cannot be a citizen if you are presumably dead (Willsher, 2021). So while we seek for an answer to who we are, the performance of our own systems and structures leave very little room to question what are we.

By the product of our thought and mind we built a whole conception of the self, identity and the world that surround us. As these assumptions are shared among people, they are regarded as truth (Bohm, 1996/2014). And as we regard them as truths, we set in place systems that lock

these assumptions down. Hence, if someone perceives a different truth you fall out of the system, you no longer fit in. Our current conception of identity has been shaped by the neodarwinian theory of evolution which relies on the competition for survival and vertical hierarchical structures. We define, ‘we are *individuals* of a species (Homo Sapiens) who comes from the evolution of the primates, with “x” characteristics and “y” genome.’ But we can identify the roots of such individualism in texts prior to him: in *Discourse of the Arts and Sciences* (1750/1761), Rousseau made a fierce critique to the private property — which is tight linked to individuality —, but he also talked of the infant Man as that in a competitive context against other natural individuals and conditions. The existence of these debates at the time slowly built a narrative that following events, like the French Revolution, locked down within the social structure. It was only natural the subsequent cultural evolution towards individualism and sepeciesim. Nonetheless, it is worth noting that in other-than-western epistemologies, and increasingly so in western science there is a shift from these positions towards new evolutionary stances that completely redefine identity. Hopefully, these will percolate in popular culture, making Darwinian conceptions of evolution and Enlightenment humanism fall far behind after the current crisis.

**Neodarwinism**  
is the modern synthesis of evolutionary theories that takes Darwinism as its base. Notably, neodarwinism has included insights from genomics and molecular biology, evolutionary ecology, and other research fields.

**Speciesism**  
is the regard of a hierarchy between species where some are considered better than others, or at least with the right to be treated differently, mainly the human. Speciesism critics often highlight the human double moral we apply to different species.

**Epistemology**  
The philosophy of knowledge, especially about methods, forms of knowledge, and the differences between facts and opinions.

**Enlightenment**  
An European intellectual movement from the 17th and 18th century which heavily focused on human individuality (as opposed to the old traditional values). Rousseau (who is seldom cited in this work) belongs to this movement.

## The Knowledge-Practice-Belief Complex

The before-mentioned Knowledge-Practice-Belief Complex (Berkes, 2008) is a theoretical framework with its origins in the Māori peoples (King & Goff, 2010) that very well describe how these thoughts and structures I was talking about are articulated. This framework describes the Traditional Ecological Knowledge. That is, the knowledge a cultural group has about its environment and which includes their practices and beliefs (Watson, 2017). Hence, it doesn't limit knowledge to what is put and proved in a paper but what is embodied by a culture. According to Watson, The Knowledge-Practice-Belief Complex defined four levels. The first of which is about the local knowledge which includes all known about the near environment (plants, soils, landscape, water, animals, etc.). The second level consists of all these practices, tools and techniques to manage the environmental conditions. Hence, it involves the understanding of the processes and dynamics of the place. The third level is that of social organisation and governance, and the fourth level is the worldview which includes the belief system, ethics, spirituality, etc.

These levels conform a castle of information and —if appropriately, wisdom— that defines the culture of a community, its performance and the inter-personal but also supra-human relationships. Because of this integrity, I would argue all levels are interlinked. Watson (2017, p. 20) indicates that the knowledge of this complex *'[for indigenous peoples] is conveyed through mythology and forms the foundation of a complex understanding of the natural world.'* As a result, the dichotomy culture-nature falls apart and leaves space to a dance of human and more-than-human wisdom, knowledge and performances that symbiotically manage the Oikos and which is articulated in its human level through narratives.

In fact, western society doesn't fall further; we are also embodying our own Knowledge-Practice-Belief Complex, but ours is rooted in the general disconnection between levels

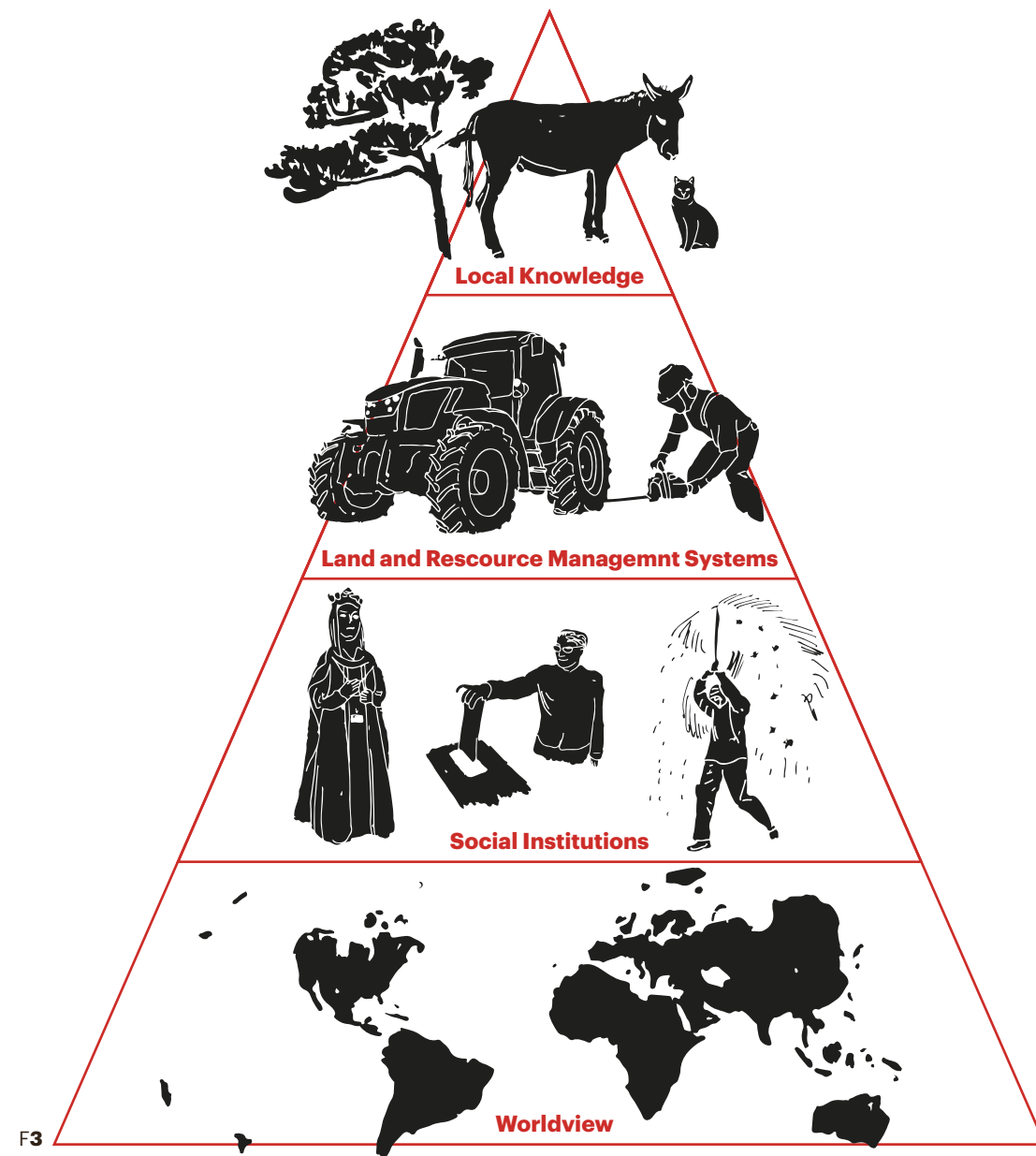


Figure 3. The Levels of the Knowledge-Practice-Belief Complex. Adapted to western symbols from Watson (2017).

### **Folkloric**

referring to the body of material and non-material patrimony and iconography of a culture. Especially in the sense of cultural artefacts that are just as an expression of the cultural group but without narrative importance in people's lives and everyday behaviour. Unnecessary, void of meaning.

### **Ontology**

The metanarrative about the nature of things and being.

### **Axiology**

The study of nature, its value and values. Different axiologies take different ways to measure value, understand and attribute it)

### **Animism**

The philosophies for which the essence relies on the souls (of people, animals, beings, systems, objects, etc)

### **Neomaterialism**

The philosophy for which the essence is matter, and everything is to be understood as a material embodiment. It shall not be mistaken for classical materialism, which understands matter as void of value.

### **Caucasian**

the (physical) archetype of a white human from Europe, West-Asia or the North of Africa.

and a mechanistic understanding. If the Complex describes a dance, our stance is none other than stopping the music and placing each piece in isolation while trying to understand their dance movements. The picture will be wrong.

## **Worldviews, what are those**

Following Watson (2017), I just defined worldviews as 'belief system, ethics, spirituality, etc.' But these in our western society might seem anecdotal elements, they have nothing to do with 'the nature', they are folkloric. But as I have been highlighting from the beginning, they are in fact at the core of current issues. In the Knowledge-Practice-Belief Complex worldviews are at the base of the pyramid. That is because each level influences each other, and worldviews become the foundation to everything else. Let me illustrate it. When we sense and learn we come to some assumptions. Based on these assumptions, we act, and from the responses to this behaviour we acquire new assumptions that redefine our behaviour. This might happen to the natural world, but also happens on how we think about ourselves and when we interact with other humans. These assumptions are connected by our thought and create a global understanding which includes our beliefs. We don't distinguish between what is real and what is our understanding. Hence, when we grow up in a community with established assumptions, ontologies, axiologies, epistemologies, practices and a body of knowledge. And, it will be from this understanding that we will read the world. For example, it will be different how we understand the world and interact with it depending of if we have a mechanistic and reductionist materialistic stance, an animist one, or a neomaterialist one. In essence, at the level of worldviews, we are answering to the 'why?' behind our methods, behaviours, and forms of knowledge (Ives, et al., 2019).

## **Room 2: Waving goodbye to the human**

### **The Man in crisis**

Over the last decades the humanist concept of the Man fall in disgrace. Form the slowly but steady open acceptance of 'non-normative' sexualities and a society that decided, decade after-decade, to challenge what was understood to be the norm, the conception of the caucasian man has Man blurred into a gradient of identities. Meanwhile, the society of digital data and capital has steadily engaged on a journey of dehumanisation. The globalist world is hyper-connecting peoples and places, anything you touch might have travelled more than you will ever do —and at a fraction of the cost—. We are more connected than ever, but we communicate effectively less than ever (Bohm, 1996/2014). We are more humans than ever, but we have never been less human than now; in fact, we have to constantly prove we are human (Braidotti, 2019).

In the current time, as previously said, who we are has little meaning as this importance has been replaced by what we are said to be. But as alternative ideas and understandings emerge the [human] system is challenged. The discourses become apocalyptic, and we begin to realise some things are inherently wrong with the mechanistic and reductionist understandings we had of the world. Science crashes into the limits of its own methodologies and attempts to find new methods and epistemologies (Ives, et al., 2019). The knowledge acquired until now becomes obsolete:

The edifice of the modern [evolution] synthesis has crumbled, apparently, beyond repair. The hallmark of the Darwinian discourse of 2009 is the plurality of evolutionary processes and patterns. Nevertheless, glimpses of a new synthesis might be discernible in emerging

### universals of evolution.

(Koonin, 2009)

And, in the process we realise humans are not as 'human' as we thought. Theories like the endosymbiosis propose a new narrative about becoming humans and what allows life (Ptqk, 2021; see page 53). Lovelock's Gaia theory challenges the whole cultural separation (Wahl, 2016), and in the crisis of climate change but also the time of technological augmentation we cannot understand ourselves 'alone' without being with the other (Braidotti, 2016).

Once the old reductionist definitions have been rendered useless, the old dichotomies have to be ditched. It is needless to spend time defining what is 'human' and what is not, what is 'tree' and what is not, and even what is 'alive' and what is 'inert'. These dichotomies were useful to distinguish objects from subjects, but they are not in the context of postanthropocentric subjectification. We could see feminism and LGBTBI+ as the answer to these dichotomies in the spectrum of gender and sexuality. If the traditional categories of male/female in a patriarchal society allowed for the objectification of the female body, the value behind empowerment is to reclaim the subject by women. Nonetheless, the emancipation of the subject in feminism is very limited in scope compared to the current crisis, although very valuable. In the current times and upcoming decades, we will have to expand this discourse to the broader concepts of humans, life, and Earth.

The dichotomy human/non-human in humanism was crucial for the mechanistic objectification of the world and the categorisation of resources, as opposed to subjects with rights. That is, the rooted understanding of a river as a source of water and energy, a mountain as a source of stones, an ocean as a source of fish, etc. In the current times, with once again the rise of fascism, post-truth, endemic economical trouble, virtual realities, and little future

expectative in a globalised and mercantilist world there is a general culture of dehumanisation. But this approach is not the right one to posthumanism (Braidotti, 2019). Dehumanisation is instead a systematic approach to objectifying everyone and everything. Super-powered by the massive business of data, dehumanisation reduces the human to a simple transactional element, it is in essence still a reductionist form of overcoming the dichotomy. Under dehumanisation, we have no agency and become passive elements of this society. It offers no space to enact changes and become new things. It is dystopian, and before the current global challenges requiring us to be subjects, it is a death sentence. Instead, we need affirmative approaches to posthumanism (Braidotti, 2016; Braidotti, 2019; Haraway, 1997). The affirmative approach takes the individual and social pain from the current context and transforms it into a driving force for change. Switches the 'I am removed from being human' to an 'I am me and part of *this*' (Braidotti, 2019). Hence, I am suggesting that in this new stances we should embrace the uncertainty of becoming posthumans in a generative and productive manner.

I believe many social justice moments in the recent years can really exemplify this becoming, this transformation of the narrative and the creation of a thing to be part of — which we seek (Bohm, 1996/2014)— and produce ontological disobedience. Nonetheless, these are often very human-centric and perpetuate speciesism as fail to include anything beyond themselves as humans. Some time ago I lived an example of that, maybe because I lived it in first person, I think can exemplify the need for these stances to be generative although it is Eurocentric and nationally-limited.

In 2017, for a while, a part of the Catalan population reclaimed their capacity of acting as subjects against the odds of the whole state-structure, moving away from pessimism and using the energy into a massive

### **Gaia**

Theory for which the Earth is understood as one symbiotic organism that regulates its own systems.

### **Inert**

Lacking movement, vigour. Not alive, chemically inactive.

### **Ontological Disobedience**

I propose this term as a complement to Mingolo's epistemic disobedience (2011). While Mingolo calls for new forms of knowledge, through this work I call (in line to so many authors) for new forms of being. That is, to disobey the self-perception from that mainstream in the current dehumanising culture. Hence, Ontological Disobedience.



### More-than-human

Forms of life beyond the understanding of the individual being and that are not human. These could be whole ecosystems or symbiotic relationships.

popular action that made it feel like anything was possible. In that case, the citizens transformed the spoken 'I am not a Spanish citizen' discourse into a performance that embodied it. Indeed, the only reaction Spanish authorities had against the enacted ontological disobedience was police violence. If such acts of disobedience can be extended to other narratives and sustained across time and scales, then there is possibility for new postcolonial posthuman and postanthropocentric civilisations.

Now, I insist that these processes of subjectification shall go far beyond the humans. They require reclaiming the subject identity for what has traditionally been non-human: from computers to trees, or more accurately, the symbioses they enact (Ptqk, 2021; Braidotti, 2019). I will refer to those as more-than-humans.

## How many trees make a forest or the loss of individuality

I once read a children's magazine article asking how many trees make a forest. Although it might seem a trivial question at first, it quickly becomes obvious is not an easy question to answer and one that is discussed in conservation efforts.

The lack of clarity around defining forests generates difficulties in how we measure deforestation – and in turn, how we stop it. Does a patch of brand-new seedlings count as a “forest”? Should we count three trees or three hundred? What about woodlands with lots of open grassy clearings? And some trees are lost each year due to forest fires or log harvesting, but the forest will regrow. We generally don't count that as deforestation, but it can look similar.

These details might seem arcane and unimportant, but in fact they matter greatly to the cause of preventing deforestation. If we can't agree on what a forest is and is not, then we can't determine when forests have been converted, nor effectively prevent this conversion.

(Fisher, 2019)

Although these are interesting questions, I would argue this argument is rather dull or uncreative, at its best, as it goes by the current mainstream narrative and fails to question a few underlying assumptions. The first thing that comes to mind when looking at it is that a forest is a group of trees. That is because we generally understand the tree as the individual, the basic constituent of a forest.

**T = T // A tree is a tree, it is an entity**

**F = nT // A forest is n trees**

**n > ? // but how big should the number be for trees to make a forest?**

But two trees do not make a forest (yet, they are a group of trees), so it might not be a good idea to put a threshold on the number of trees that form a forest. I believe it would be smart to remember that famous sentence, attributed to Albert Einstein, that goes '*If I had an hour to solve a problem I'd spend 55 minutes thinking about the problem and 5 minutes thinking about solutions.*' Then, we might realise once again we are thinking about the wrong question. If we keep the argumentation limited to trees, we could also wonder if a tree plantation is a forest\*. \* Possibly different people would have different answers. Instead, maybe we could think not about trees but ask what a forest is. I propose:

**T = T? // Is a tree a tree?**

**F = nT? // Is a forest a number of trees?**

At this point, we have questioned the most basic assumption about trees and forests. Now, alternative definitions are possible. For example, a tree is an association of organic compounds organised to perform certain functions. These associations, associate



with other organised compounds through symbiosis to perform other functions that otherwise wouldn't be able to do, and support their mutual existence. A tree is a symbiosis, and a forest is a symbiosis of symbiotic organisms. Hence, 'tree' and 'forest' are just names for scales of life. Let me illustrate this, over the last decades studies have been pointing out the role of ectomycorrhizal fungal networks in forest self-management (Germain & Lutz, 2021; Simard, 2021). These networks spread through the soil and get inside the roots. Their presence allows the transportation of nutrients and signals that allow the trees to communicate and alter their surrounding conditions to manage their life cycle. Hence, they have control over which trees have the most favourable conditions to grow and die. Because the tree is no longer an autonomous individual but a dependent one to the other trees and species, the classical definition of a tree as an individual organism blurs.

Our thinking culture is based on the abstraction and segmentation of ideas (Bohm, 1996/2014; Wahl, 2016). This allows us to structure thought and think in complex terms, but also has the danger of ignoring the connections between the entities we are segmenting, i.e. reductionism. It is precisely this model of thought that is in crisis as of now and for which we need alternatives. These require questioning the underlying assumptions in our understanding and developing new ones, such as individuality. But, of course, it is not only a matter of trees.

## **Room 3: The symbiotic existence**

### **Endosymbiosis and the future of being**

From an evolutionary perspective we already have answers to this narrative that have been gaining traction over time. Lynn Margulis was one of the main proponents of the theory of the endosymbiosis which greatly shifts the understanding of evolution from 'competition' to 'collaboration' and supports the theory of Gaia (Gran, 2019). The principle under which Margulis articulates her work is rather simple, 'what if collaboration was the norm instead of the exception?' (Gran, 2019; Ptqk, 2021). This theory in evolution sustains that the current form of life—and cells—wouldn't be possible if not for the symbiosis of bacterias that varied and associated to generate conditions that allowed for their sustained life and the generation of conditions which allowed for evolution, but also because of the associations of different organisms into a single one (Ptqk, 2021). As each organism is good at performing certain functions, from their associations much more complex and capable cells formed which have been the biggest evolutionary leaps towards current complex forms of life.

With her work, Margulis—and most famously Lovelock—open the door to a new understanding of our presence in Earth, not driven by the competition among species but our symbiosis with them in order to sustain our co-existence. This implies not only that we have to reduce our impact or protect certain species and ecosystems, but that we have to radically redefine the kind of impact we have so it produces conditions leading to life (Wahl, 2016). Perhaps, the loss of humanity can be affirmative as it is linked to a new understanding of this existence, we could understand ourselves as conscious holosymbionts, each of us from its own position and role. Quimera Rosa (2019) proposes us an artistic performative

### Chlorin E-6

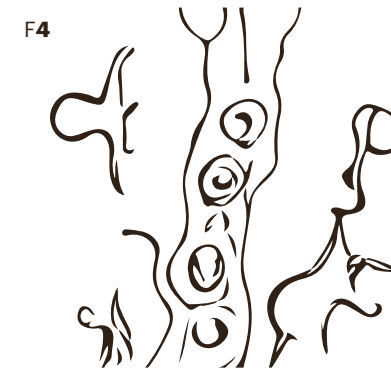
It is a photosensitive molecule synthesized by Chlorella, a unicellular green algae.

experiment on our narrative: the association of [Chlorin E-6](#) and humans into a chlorophyllated human. Injecting chlorophyll in our bodies might not be the most effective, but that doesn't mean we cannot create a conception and structures that rely on this symbiotic concept. We could ask, how can humans and mushrooms associate? How are we interacting and participating of the forest ectomycorrhizal fungal networks?

## The life of rocks and volcanoes

AzkonaToloza (Azkona Goñi & Toloza-Fernández, 2022), in their performing arts work take a step even further. Following Lovelock's doctrine they ask, 'what if it is not even about what is alive and what is inert?'. In *Canto Mineral* (Mineral Song) they show to the audience one thing geologists often say: 'stones speak (if you know how to read them)'. In their performance they combine a critique to human colonialism (not only in human cultures but at a universal level through the exploitation —and objectification— of resources) with alternative narratives about the boundaries between organic and inert matter. And everything begins with a volcano.

Life, as we know it —and embody— today, is nothing else than the result of material flows between what is 'living' and what is not. The distinction between the bio and the geo is artificial as they interoperate (Braidotti, 2019). We come from geological process that transformed into biological processes and at its due time will be again geological process. These processes are interconnected, trees, fungi, bacteria modify the composition of the soil, the orography, landscape, water cycles, and at its turn the soil propitiates the development of some forms of life or others. But we also established new symbiotic relationships with the geo after our 'separation,' the development of human societies cannot be understood if not for the reciprocal relationships in indigenous and regenerative agriculture nor the exploitative relationships in carbon-based industry. Perhaps, we should honour volcanoes after all.



F4



F5

Figure 4. Symbiotic life in a post-human epoch as imagined by DALL·E mini

Figure 5. Volcanoes are one of the closest expressions of living-earth at a human scale. Imagined by DALL·E mini.

### Metauniverse

A digital layer of reality which creates an alternative reality. But the name metauniverse might not be that accurate as it is not a process, nor a higher or above level of 'reality' but one more embodied and interoperating in it.

### Ecuador Constitution

The Ecuador constitution from 2008 is the first official constitution in the world to include a biocentric approach to rights. That is rights are also granted to 'nature', who becomes a juridic subject.

## Living with Technology

At the 'opposing' extreme to nature we have technology — which is nothing else than another embodiment of this inter-operating materiality. The boundaries of technology and life have been far more popularly explored in science fiction, but in the last decades they have become very present among us. A whole part of our realities happen on a digital 'meta' layer of reality, but we constantly interoperate with servers and computers around the world. They extend our ability to do things and have functions and needs of their own (either energy, data, etc.). On airports a machine identifies us, on our phones Artificial Intelligence performs a multitude of functions under our orders (or even without) and we are seeing the development of networks where devices communicate among them to self-manage the system.

Through the functions they perform and the materiality they embody, these technological 'objects' become subjects. In fact, they are the very first reason because we have to prove our humanity (Braidotti, 2019), and even this is blurring; for example, CAPTCHAs are one of the most common ways to validate a user is a human on the internet. Yet, some AI algorithms can interact with CAPTCHAs in ways the program believes they are real humans. For the computer, that AI is an actual human. But this is not exclusive to computers; look if not to the figures 4 and 5 of this chapter. They are created by an Artificial Intelligence algorithm.

Therefore, using Braidotti's terms (2019), just as the bio and geo are these interconnected systems in a symbiotical relationship that sustains life, so is the tech.

## New Rights

As I was writing these pages, a court in California published an interesting opinion at the ruling of a case. In their rule, the court indicated that bumble bees are fish (ALMOND ALLIANCE OF CALIFORNIA et al., v. FISH AND GAME COMMISSION et al.). This Californian court arrived to this conclusion

after revising if bees could be protected and listed as endangered species under legislation to protect fish — Californian law doesn't allow to protect insects per se. This case exemplifies the ongoing debate around speciesism, and even more so around the nature rights movements.

As we engage in the subjectification of the more-than-human, we come across a structure that only grants the right of being a subject to humans (and enterprises). Hence, it becomes necessary to find new formulas to allow more-than-humans to be subjects in the system. Since the mid-20th century and especially since the Ecuador constitution in 2008, there has been a growing movement in favour of human rights (Serra, 2021) — in western legislation. These movements transform the narrative in legislation from the distinction between what had rights and what was to exploit to a new narrative of place with rights, or system with rights, and for which holosymbiotic relationships are required to ensure life's inherent right to existence, and begin to get close to ancient forms of organisation.

But as Braidotti (2019) warns, this must not mean humanising the non-human, nor dehumanising the human, but finding new forms and narratives of subject that transcend the old dichotomy human/non-human.

## Room 4: Ancient and Modern rituals: looking for new spirits

The mutual relationship between beings in this planet should not end in new legislation. In fact, it could even challenge if legislation as we know it is a good form of organisation in the new posthuman and posanthropocentric era. This doesn't necessarily have to do with a legislation that doesn't work, but in metanarrative of legislation as the only way to rule a place and the experimentation for the sake of learning and trying new things.

Indigenous peoples around the world have turned their practices into rituals and mythologies, whereas in the west we lost the association of practice and culture or mythology and we separate between that we do to as members of a society —work, entertainment, obedience of laws, etc.— and what we do as folklore, void of actual value. Watson (2017) gives us the example of the Anishinaabe nation (Canada) who have a mythology around the lightning-ignited fires which, under the appearance of destruction, are regenerating the land and forest, and which they imitate by using pyrothecnology. We could ask, what new mythologies we could link to the (bio)regional management practices of the more-than-human?

In  $\infty$  {*Infinite*} (Robert & Cole, 2022), the dance company Humanhood invites us into a journey of aware sensing the energies of movement and matter. In a moving portrait where there is no elemental distinction between forest, water, soil and fire embodied in human materiality, the theatre becomes a sacred space, a pure place, without boundaries, where the presence in the unknown is the only that counts. Robert and Cole accomplish to create a new spirituality and define spirit of movement, of flow, energy as the basic compound in the living universe. Now, how do we translate this into feeling the place or a method to governance?

### Bioregion

Is a model of regions that instead of following political limits and borders maps the areas with similar ecological dynamics. The bioregions highlight what areas should be holistically managed.

## Room 5: Time and Space, Entwined living

In the new conception of holosymbiotic life, everyone holds a unique position. As I highlighted the importance of not humanising the more-than-humans, it is also equally important to not harmonise ourselves into being the *same*. We might strive for equality, but we are all different, we come from different places, we lived differently and we have different entwining timelines (Braidotti, 2019). Of course the journey of a cyanobacteria is not the same as the one of a volcano, but neither are yours and your neighbour's. Life is a fabric of time-scales with which we can engage from our own positions and sensing.

It requires to take in the diversity of positions, and while evolving towards life-attuned cultures ensure their diversity of stances, practices and beliefs.

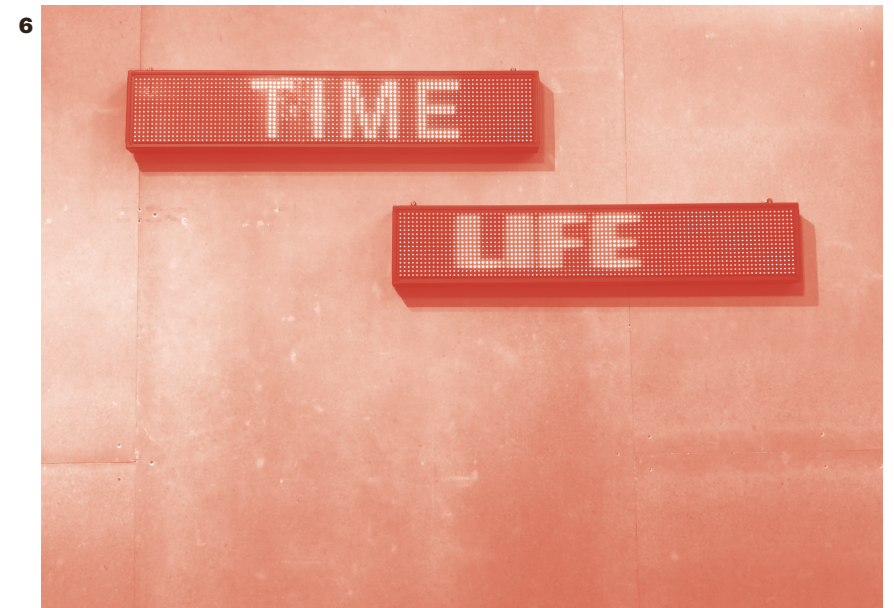


Figure 6.  
Image from the art installation by Jaime Serra, Time-Life-Time. Barcelona: CCCB, 2021. Photo by Jan Ferrer i Picó.

Possibly one of these stances is neomaterialism (Braidotti, 2019), which has been present over this part of the chapter as I talked about how existence is linked to materiality. Neomaterialism transgresses the current materialist culture by attributing value to material as a the basis of the universe and life. Matter is no longer under the possibility to be exploited, instead is the essence under which everything organises through material processes and embodies life, knowledge, and culture. Our mind is nothing else than matter, and so is the internet, and every human and non-human. Neomaterialism opens to door to even broader considerations in rights (e.g. material rights).

Ultimately, the important thing is that not only we need new worldviews, but that we are already creating them. Still, as pointed out before, we need far more awareness and honesty of our positions to be able to engage with these debates and contribute with the creation of new stances in a life-affirming, life-promoting way.



# A foundation for WAHT and new ontologies

## The Integrative Worldviews Framework

Hedlund-de Witt (2013), did extensive research on the different western worldviews models in their regard to sustainability. Her framework (the Integrative Worldview Framework) describes four recurrent worldviews in western society (mainly the USA and The Netherlands). These worldviews which comprehend from the Traditional Worldview (based on high religious values, structures, and morality) to the holistic Integrative Worldview, point to an evolution in western values that portrait many of the current structures and behaviours. The worldviews defined by Hedlund-de Witt are the before mentioned Traditional and Integrative along the Modern (industrial, mechanistic and reductionist) and the Post-modern (post-industrial, activist and in struggle between idealism and nihilistic tendencies). Nonetheless, in the last 10 years there have been considerable discursive changes that are amplifying and broadening the possibilities of new mainstream worldviews. On one side, the popular movements of denounce, recently capitalised by movements like Fridays for Future or Extinction Rebellion and the pessimism in praised mainstream Billie Eilish's work (Cliff, 2020) point to a wounded generation, while the exploration of new cultures and visions in pro of life also soars (Bradotti, 2019), as we have seen in the previous pages. In my opinion, this calls for revisiting the framework and adding some nuances to it. I propose a simplified variation towards an iteration of the Integrative Worldviews Framework based on insights from interviews and conversations done for the chapters 1 and 3 of this work and reflexions from my own journaling. The changes I propose focus on pessimism, transitioning into Integrative Worldviews and bringing the Integrative Worldview beyond the western conception. Nonetheless, a proper revision would require a more accurate methodological approach, with international interviews, questionnaires

and multi-researcher and practitioner autoethnography as well as, at least, a revision of the data and the framework by two researchers.

### 1. On pessimism, nihilism, and a new post-modern profile.

The same way I had to cover my ears when someone talked about the world, I had to cover them when someone talks about climate change. When we were watching documentary films at class, I had to leave home because I would get anxious, I know this is very Gen-Z. [...] It is so depressing. Don't talk to me about the North Pole because I will cry. I will spend all day in bed crying. I have to be very careful for general things not to affect me. I'm sure it happens to many people, but I don't know...

(A dialogue group participant)

Nature is unreachable, is like God. I don't get it. I haven't been taught to be in relationship with it. I see it like Romantics did, 'nature versus the man...' I fear it. Man and nature are opposed (in western society). [...] There is a car, and a scooter, and the road, and a dog watching the man on the scooter fall, but what does the dog understand? Nothing. It is asphalt. [...] How can be watching the moon and a Tiktok? [...] I laugh of those who hug trees, but I would like to be able to do it, to feel it.

(A dialogue group participant)

Possibly my friends are quite pessimist, but these comments don't sound out-worldly in the technologically mediated world we live in. It is an era of fatigue (Braidotti, 2019), depression rates are higher than ever and we live constantly under the pressure of social projections spread through the internet, media and mainstream culture, we face a sustained uncertainty about governance and politics, with a continuous flux of concerning news (new wars, economic recessions, inflation, loss of rights —e.g. most recently the prohibition to abort in many U.S.A. estates—, and a long



etcetera). We live under discourses of fear, but so also many positivist and 'good news' that make us live in an emotional roller coaster, and we end the day tired. So much so, that the tiredness accumulates day after day. Moreover, in the times of climate change, neoliberalism and a decaying capitalism, everything seems contradictory (Ziegler, 2016), the scope of any decision is unknown, and we can never be too sure we are not doing things against our own values.

I would argue the postmodern stance in the current times is one of tiredness and being overwhelmed, it is oppressive and pessimistic, if not in some instances nihilistic. Contrarily, more affirmative stances require a different categorisation. When affirmative positions are taken, the worldview changes. An affirmative stance is not possible under a a conception of fragmentation if there isn't a glimpse or a hope of integration. A cautious from of being is not enacting change either, to be affirmative it requires to become transformational.

## **2. On aiming to be integrative but stepping on a minefield**

But as a postmodern worldview takes an affirmative stance it comes across a minefield. Stepping into an integrative position requires being far more aware, humble and to extend one's horizons. This is a minefield because it comes across the dangers of feeding negative feedback loops that want to be avoided. If a Modern worldview might be paternalist by definition and a postmodern doesn't have to worry about it because is rather passive / objectified, the integrative by trying to step out of it might still behave as such. In my journaling practice, one day I wrote about the essential things:

In the *Petit Prince* we learn of the importance of feelings: the essential is invisible to the eyes. And yet, I wonder how often we forget of one of the greatest pieces of wisdom literature has gifted us. Through this journey and especially my previous ones I found myself in the mental framework of working with seeds: "we want to

put the seeds for new forms of thinking, doing, etc.," but it is not it. Just look around, there are plenty of seeds. In our fast-paced society, like in reflective nature, a continuous flow of events is generating and releasing seeds. It is easy to pick them up, or bury them down. They are important, but not what we lack of. Instead, like the solid touched up by humans what are missing are the conditions for these seeds to develop into trees and mature ecosystems. And just as we can heal soil by promoting the conditions for growth, we should be able to heal society by creating the conditions for different thinking and doing.

(Personal journaling)

I was trying to take an affirmative approach by the creation of exits when I realised, or remembered, it was about the conditions to enact changes, not artefacts that are supposed to convince you to enact these changes. This is one of the pitfalls one might encounter along the way. As one gains an affirmative view and begins to see different ways, one might be tempted to try to force changes around towards these 'better' understandings, but this is not what an Integrative worldview should be about, especially when we require diverse epistemologies and ontologies and these should not be forced under a multicultural 'metaculture' (Braidotti, 2019; Gielen & Haq, 2020).

As I was working on the tool presented at the end of this work, I had to decide what sort of stories I would be including in it (more on it in chapter 3).

A researcher proposed fables for the short stories. They have a morale, but I'm not sure I should be providing with one, since I don't want to provide an answer to the questions users might come across, rather them to find their own answers.

To overcome the saviour solutionism one can suggest a way (in a sort of guide) as an example but leaving it open to everyone to modify to their own living lab (and per-

sonal) needs and struggles.  
(Personal journaling)

So, I ended up formulating a way not to fall in this 'solutionsim' that worried me which mainly consisted in providing answers and absolute solutions. But the main point behind these reflexions is that when you aim to be integrative (and values might very well be within the integrative worldview) the behaviour might not be or face may resistances and concerns to be it. This is a position that the current Framework doesn't include and that might be valuable to acknowledge since can help generate awareness that embodying these positions is something that requires (endless?) development.

### 3. Transgressing the integrative worldview into the new indigenous

On the other side, as these capacities of being attuned with the environment and promoting the right conditions are consolidated behaving might not be as much a minefield anymore (and I am speculating as I don't have any first hand experience with it). At this point, one might become a sort of 'future indigenous' (Brewer, 2022), where beyond Hedlund-de Witt's Integrative Worldview, non-western worldviews are also included.

These could involve philosophies like the 'Tri Hitta Karana' from the Subak people in Bali (Watson, 2017), which conform a system of sacred and performative that connects spirituality with place management. For these people, the spiritual guides the ritual, and the ritual is tightly associated with the management of the landscape and rice cultivation. The future indigenous, creates a new narrative of spirituality that integrates the other worldviews, but that also has powerful new narratives and rituals connecting place, soul and people.

Table 2.1 & 2.2.  
A Simplified Integrative Worldview Framework with the proposed nuances in Post-modern and integrative worldviews.  
Adapted from Hedlund-de Witt (2013).

	Traditional	Modern	Post-modern	Towards Integrative	Integrative - Future Indigenous
<b>Ontology</b>	Religious/metaphysical monism. Reality as singular, transcendent.  Transcendent God is separate from profane world; dualism  Nature as embodiment of meaningful, imposed order (e.g. God's creation).	Secular materialism. Reality as singular, immanent.  Material reality devoid of meaning, intentionality, consciousness; dualism, disenchantment.  Nature as instrumental, devoid of intrinsic meaning and purpose. Resource for exploitation	Post-materialism. Reality as pluralistic, perspectival, constructed.  Reality as discontinuous and fragmented; anti-essentialism.  Nature as constructed through a plurality of cultural values, meanings, and interests	Integralism? Reality as multiplistic, transcendent and immanent.  Extrinsic and intrinsic reality co-arising and interdependent; unification. Dwell with a fragmenting view  Nature as constructed and intrinsically valuable. Frequently seen as divine force that humanity is part and expression of	Integralism? Reality as multiplistic, transcendent and immanent.  Extrinsic and intrinsic reality co-arising and interdependent; unity in diversity.  Nature as constructed and intrinsically valuable. Seen as divine force that humanity is part and expression of
<b>Epistemology</b>	Naïve realism; epistemological emphasis on concrete-literal interpretations of religious doctrine (literalism, dogmatism).	(Post-)positivism; emphasis on reality as objectively knowable, (empiricism, reductionism, scientism).	Social constructivism; emphasis on reality as constructed (pluralism, relativism).	Critical realism, pragmatism; emphasis on reality as knowable through integration, special emphasis on social construction	Critical realism, pragmatism; emphasis on reality as knowable through integration

	Traditional	Modern	Post-modern	Towards Integrative	Integrative - Future Indigenous
<b>Anthropology</b>	Humanity in managerial stewardship role vis-à-vis nature	Humanity in promethean control over nature	Humanity in cautious relationship to nature	Humanity in unity and transformational synergy with nature	Humanity in unity and transformational synergy with nature
<b>Societal View</b>	Traditional and religious authorities and values are looked at for solutions to societal and environmental problems.	Technological optimism: science and technology will solve societal and environmental problems.	Scepticism, pessimism, idealism: emancipation of marginalised voices through 'deconstruction' of power dynamics as	Integrative imposing vision: emancipation of the masses through guided consciousness growth and a synthesis of interests and perspectives will solve problems	Spiritual Integrative vision: emancipation of the masses through consciousness growth, synthesis of interests and perspectives, deep awareness and ritualistic performances will provide a harmonious co-existence (honest loving?)

T2.2

## The Levels of being – as seen in the Living Labs

Frameworks such as that of Hedlund-de Witt (2013) do a good job at portraying the existing western worldviews, but are not meant for the reflexion about our own worldviews. They are too academic. But also, in the Knowledge-Practice-Belief Complex we saw that we cannot think of worldviews by themselves alone, but they must be understood with the systems they extend to and embody. With that in mind, and the purpose of change and self-actualisation, Ken Wilber proposes the four quadrants of change (Wilber, 2000, as cited in Brouwer & Woodhill, 2016). These four quadrants propose that change happens on an individual-collective level and on an exterior-interior level. These serve as axis for the four quadrants that focus on (1) the spiritual and psychological being, (2) the behaviour and interaction with other people, (3) the culture and shared values with other people, and (4) the structures and institutions.

Wilber's four quadrants can be related to the insights acquired from the case studies. For example, the first quadrant corresponds to the self-awareness we have been talking about since the beginning and which is seen in the living labs by the different positions and interests everyone holds, what they assume is best and so on. The second quadrant relates to the interactions between stakeholders, the levels of participation and co-creation and good communication, which we identified as problematic in some cases as there wasn't an agreed level or different expectations. The third quadrant is about what they collectively embody and aim to (do), which we saw in some labs was already agreed on, but in others it wasn't. Finally, the fourth quadrant is about the institutions, and hence the forms of organisations they embody in relation to their worldviews, in this specific topic we saw conflicts between different forms of organisation for how they were considered and understood by other stakeholders. Nonetheless, as pointed out in the initiated lab, we should not limit

the understanding to the inner and human-to-human relationships — and we extensively saw alternatives to it in this chapter. Hence, we possibly should consider a third level beyond the interior and exterior-(human) which could be called exterior-(world). In this new layer of the framework we should include the interaction between the individual and the more-than-human, and then the generic structures and dynamics of the more-than-human. This modification is necessary in the case we want to give importance to the whole dimension of existence, as we saw through the Knowledge-Practice-Belief Complex.

All these components conform a map that can represent and express worldviews in an embodied and perforative context which might ease their mappings. The Integrative Worldviews Framework and this iteration of Wilbert’s quadrants conform different pieces that help to reflect on worldviews as the quadrants serve as a foundation for worldviews thinking and Hedlund-de Witt’s provides the archetypes to map and give contents to the worldviews structure.

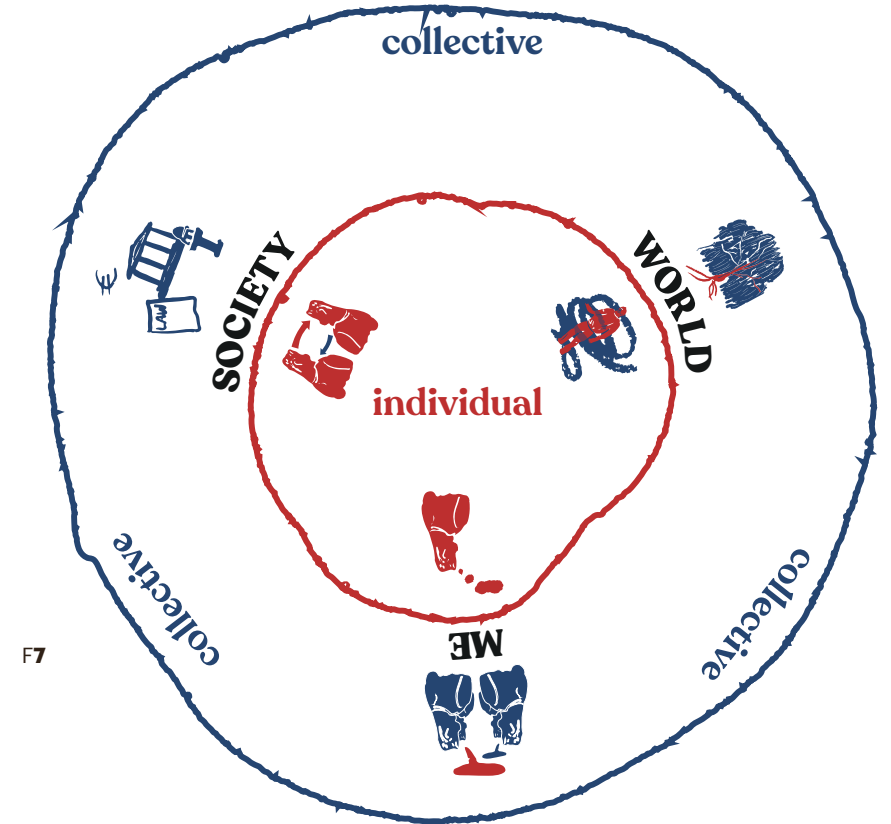
## A cartography of being

Moreover, Wilbert’s quadrants open the door to wider reflexions about worldviews as it doesn’t limit it to Hedlund-de Witt’s terms and specific profiles. In my view, the modification of the quadrants, beyond being a framework defining change, propose a cartography of what it means to be (or become) subject in an embodied and affirmative way, moreover with the possibilities of describing non-affirmative worldviews in it. For example, through the interactions with humans it can be expressed the aim to have an ‘emancipation of marginalised voices’ (from the Integrative Worldview Framework, Hedlund-de Witt, 2013) and how is that accomplished (or not), opening up to questions that might allow the person doing the reflexion to question their own role and impact — and shift behaviour accordingly. On the other hand, it can also highlight the disconnection between personal values and the behaviour in society to sustain a certain system, or rise the awareness of a lack of reflexion about the relationship between humans and non-humans, and hence so of the assumptions behind it.

This cartography of being is represented in a more engaging way than a simple matrix. Especially since the matrix doesn’t allow to engage with these reflexions unstructuredly beyond the quadrants to explore different connections.

Figure 7. The Cartography of being. Adapted from the four quadrants of change by Wilbert (2000, as cited in Brouwer & Woodhill, 2016).

Table 3. Explanation to the Cartography of being. Adapted from the four quadrants of change by Wilbert (2000, as cited in Brouwer & Woodhill, 2016).



	Individual	Collective
Me	Includes those reflexions about the perception of oneself. Answers the question ‘who am I?’ It might enclose knowledge, skills...	Includes those reflexions about the collective values and beliefs. Answers the question ‘who are we?’ It might enclose discourses, language, goals...
Society	Includes those reflexions about individual (social) behaviour. Answers the question ‘how do I interact with other humans?’ It might enclose characteristics of interpersonal relationships.	Includes those reflexions about social behaviour and structures. Answers the question ‘how do we organise?’ It might enclose social arrangements, norms, embodied and structural values and assumptions...
World	Includes those reflexions about the individual behaviour as living beings. Answers the question ‘how do I interact with the World?’ It might enclose considerations, understandings, and relationships between us and the non-humans.	Includes those reflexions about the World’s behaviour and its structures. Answers the question ‘how does the World organise?’ It might enclose understandings of science and philosophy (energy, materialisms, immanence...).

# Chapter 3.

## A dialogue group as a learning field

The first day I said:

*Imagine* !  
and people laughed.

The second day I said:

*Discuss* !  
and people talked and talked and talked.

The third day I asked:

*Listen, what do you see* ?  
and people looked at themselves.

This poem is inspired by the iterative, but also accumulative, process of engaging in worldviews, and getting to view and observe them. In three acts, people were proposed different ways to analyse and gain awareness of assumptions, and each provides some insights.

But the importance is not only the iteration, it is the self-development that one might acquire while exploring what it means to be *in dialogue*, because, perhaps dialogue will only emerge with yourself.

In this chapter, first I introduce what is Bohm's dialogue and then I present four experiments around narrative-design to guide people be aware of the worldview, communicate it and collectively transform it into something new. And, although the result is not so poetic, it provides with the necessary insights to move forward into the development of a tool for WAHT reflexions.





## Methodologies for this chapter

This chapter identifies the best practices to engage in [Bohm's dialogue](#) (1996/2014) to realise the self worldview and assumptions and define new positions from the conversations held in the group. For it, I organised a (flexible and ever-changing) focus group of 3 to 5 participants — researcher included, that participated in four experiments as part of a (narrative) design led research. Each experiment took a different practice to help dialogue emerge and guide it. Yet, most of them focused on narrative practice as they are central to worldviews construction.

The first experiment consisted of **personal interviews** with the participants of the focus group aimed at knowing their profiles and being able to facilitate more sensibly the upcoming sessions as well as track the evolution of their thoughts, which I expected to change during collective sessions.

The second experiment focused on the participants' realisation of assumptions from given characters in **impossible decisions**. I presented three characters in situations where their values entered into conflict (e.g. see David Victori's work). Participants had to develop the narratives for every possible decision the character could make and identify their judgements from the stories.

The third experiment proposed a **cartographic game** based on the board game 'A quiet Year' by Avery Alder (2019). Participants were assigned the task of creating and managing a fictional community. Through the play, each player had to propose events and projects that would define the characteristics of the community and surroundings. Whenever a participant disagreed with something, we began a discussion to identify the root reasons for the discrepancy and get to a new position.

The final experiment looked at the power of given narratives to serve as a mirror for the reader and help realise one's assumptions (Bohm, 1996/2014). For it, I wrote two narratives (a human shot-story of manners and a fable) which were discussed with the researchers of Future-Proof Labs. With the insights, I developed four **fables** to be read in the focus group.

From each session, the participants' comments were registered — mostly by themselves — in sticky notes and complemented by personal reflection-after-experiment which I did. The combination of these two outputs is used to present the results and draw the main insights from the dialogue sessions.

## Bohm's dialogue and the overcoming of paradoxes

### Bohm and the origins and purposes of his dialogue

David Bohm was a quantum physics scientist born in a little town in Pennsylvania (Rickles, 2013/2014). He grew up in what would be called an unstructured family, with a violent father and a miss-diagnosed ill mother. To him, that was a context of fragmentation he would be dealing with throughout his all life, not only in the personal spheres but also in the scientific ones. He describes it this way:

One year, [Einstein and Bohr] were at the Institute for Advanced Study in Princeton, but they hadn't met each other. A mathematician named Herman Weyl said, "It would be nice if they got together. It's a pity that they don't." So he arranged a party to which Einstein and Bohr and their respective students were invited. Einstein and his associates stayed at one end of the room, and Bohr and his associates stayed at the other end. They couldn't get together because they had nothing to talk about. They couldn't share any meaning, because each one felt his meaning was true.

(Bohm, 1996/2014)

Growing up in that little town would also push him to develop a very simple and understandable language for physics as he had to defend taking an intellectual career in a place where physical capabilities were preferable (Rickles, 2013/2014). In consequence, he fought the idea that 'nobody understands quantum mechanics' and he tried to deal with the ontology rather than the epistemology of the mechanics. So while most scientists focused on describing the physics through the data from the experiments, he tried to give importance to the interpretation of these experiments,

**Bohm's Dialogue** is a conversational long-term form of worldview making based on the collective unguided dialogue which focuses on the development of self-awareness, deep and active listening and assumptions suspension. It has its origins in Bohm's observed discussions in the field of physics and indigenous governance practices.

### Dialogue

from Bohm's perspective dialogue should be understood as a flow of meaning, not just a mere exchange of messages as is usually understood. He exemplifies that the 'dialogues' existing in places like the United Nations are in fact negotiations, which are radically different from dialogues.

combining physics and philosophy, which made him an outsider within the field. It is precisely in *On Dialogue* (1996) where Bohm tries to offer a reconciliation method, a way for '*chaos and fragmentation to synchronise into pattern and agreement, and from which a new order emerges*' as Rickles defined it (2013/2014, p. xvi).

These circumstances, but also the political context of his life (WWII and the cold war) had a huge influence. He was a known communist, for which he was forced into exile in Brazil and later in the UK (Rickles, 2013/2014). This context pictured a state of increasing interconnection among states and peoples but also where communication was in crisis. Bohm (1996/2013) argues that in current society everyone wants to get their message across, but that we fail to meet and listen. As a result, the society organises in small bubbles that are interdependent but that don't generate meaning together. We are in a context where people hold discussions, but not dialogues. There are underlying ideas that never get discussed, and because discussions only lead to position trade-offs, no new meaning is created and only existing systems are sustained. Hence, the purpose of Bohm's dialogue is to have a 'flow of meaning' where creative outputs can emerge.

When in the living lab we identified the need for worldview awareness, honesty, and transparency, and when in chapter two it was argued that we need new ontologies and epistemologies to transition towards more sustainable forms of existence, having this sort of dialogue is what was called for. By Bohm's definition we shall be aware of our meaning and that of others, share it and generate new outputs, new positions that transcend any prior position participants might have.

## About fragmentation and release

For dialogues to happen, people who participate in them should not hold very dearly to their ideas (Bohm, 1996/2014). This is in opposition to the usual conversations where people feel their interlocutor has a blockage. This blockage is the unawareness of one's assumptions. In dialogue, we need to archive a state where we can identify these assumptions and suspend them. But that is not easy. It requires observing our thought process, but also our reactions. Just like in some conversations we are mind and body, together as one, participating in the conversation, so do our mind and body when reacting to the environment and, for example, to situations where our assumptions are questioned. That means we have to be observing our reactions. Yet, the most natural approach is to define an observer and an observed. When that happens we are distancing ourselves from the observed, we create a distinction between *me* and the *other*. Nonetheless, we also apply this distinction when we observe our emotions or our thought, but such separation is fictional as when we think of our thought and emotions we are influencing them, and in turn, our emotions also influence our thought. Hence, we should reach a stage of connivance where the observed and the observer are one and the same.

It is when we do this separation that things begin to go wrong. If we were to follow the process of fragmentation we would end up observing our thought. I believe we all can recall a moment when we told ourselves 'I should not be thinking this, it is wrong,' but in these cases, we still have an observed and an observer, and who does observe the observer? The point Bohm makes with this is that much often we produce thought artefacts but without acknowledging they are a product of our thought, when in fact all is. Hence, we generate ideas and opinions that we believe to be facts. We try to hold dearly to them, but they might simply be nonsense arguments. He exemplifies it in the following way:

### Meme

Is a piece of information or idea that spreads horizontally (in opposition to the verticality of genes) and is broadly accepted and integrated in a society. Religion, ideologies, cultures are memes.

### MEPs

Members of the European Parliament (EU).

### The Mind

is a game developed by Freudenreich & Warsch (2018) which consists of a set of cards numbered from 1 to 100. Players should randomly distribute the cards equally among them (beginning with one card per participant) and, without explicitly nor implicitly indicating which numbers they have (nor showing the card), they should scale the numbers in the correct order. After each successful round, the number of cards per player is increased, and when the players fail to show the cards in the correct order the game shall begin again. Also, there is a tongue-tied variant to play.

Thought is creating divisions out of itself and then saying that they are there naturally. The divisions between nations are regarded as being “just there,” but obviously they were invented by people. People have come to accept those divisions and that made them be there.

(Bohm, 1996/2014, p. 6)

This idea of fragmentation is the same as Wahl’s (2016) Culture of Separation. Since this defines the current social order, we feel obliged to keep it this way as it to avoid disrupting social consensus — although this is a form of violence on its own—, this consensus is too often understood as truth, when in fact it is a meme (Bohm, 1996/2014).

I would like to give a personal situational example that illustrates the very same idea about the imposed consensus of states. When, back in 2019, there were European elections and MEPs took their seats in Strasbourg there was a demonstration before the parliament to support the Catalan MEPs who were denied their seats due to a (politically motivated) detention order. Back from that demonstration, a man began to talk to us on the trolley. He asked whether we were there to partake in the demonstration, after our affirmative answer he made us know of his disapproval. ‘You want to break a country,’ he said. One of the people in our group replied him asking where was the problem with ‘breaking a country’.

Behind that man’s criticism, there was precisely the idea that a country is an immovable division. That it cannot be changed. That is of course an absurd assumption, countries change their borders and emerge and disappear continuously. It couldn’t be defended any further. The response also had certain assumptions that could be questioned (e.g. why were we proposing a new border, which essentially builds the same fictional constituency), but the point of

this case and one to which Bohm gives importance is that when one idea is more valid than another, call it more rational, logical, less paradoxical, it doesn’t need defence as the other idea cannot be rationally defended.

## From playing *The Mind* to having *One Mind*

To me, Bohm’s dialogue is analogous to the game The Mind (Freudenreich & Warsch, 2018). In *The Mind*, players have to reach a state of mind to communicate and synchronise their minds and bodies into ordering numbers with limited communication. It is essentially a game of awareness and senses. It requires employing the same tools of dialogue for a (similar?) purpose. Seemingly, Bohm writes on dialogue:

When people are in really close contact, talking about something which is very important to them, their whole bodies, are involved – their hearts, their adrenalin, all the neurochemicals, everything. [...] So in some sense there is established in that contact “one body”. And also, if we can all listen to each other’s opinions, and suspend them without judging them, and your opinion is on the same basis as anyone else’s, then we all have “one mind”... (Bohm, 1996/2014, p. 36)

In the case of the mind, this serves a very specific purpose (ordering numbers in their right order), but although in dialogue there might be no right or wrong it is also playing by the same dynamics. It is required to be *in*. In both practices, when there is the right dynamic, everyone knows when something is appropriate and whether an opinion is rational or not. And only through this awareness everyone can win, because when a player/participant goes only by their own assumptions, without dialogue, everyone loses (Bohm, 1996/2014; Freudenreich & Warsch, 2018). The game could be argued, to be like a miniaturised version of a dialogue, a companion or a warm-up. And although it might be simplified and have a clear purpose, it provides all the ingredients for developing the capacity of dialogue.

## A one-to-one conversation for the reflexion on worldviews

Bohm suggests that during the first sessions of a dialogue group there isn't actual dialogue, but that it takes a few sessions to appear. Instead, in the first sessions, people tend to chitchat and get to know themselves. Then, conversations can take completely different directions before there is the actual dialogue Bohm proposes. That's why there is a value in facilitation and explaining what dialogue is during the first dialogue sessions.

My dialogue group was rather small (5 people — Bohm suggests it to be of around 50 people) and we had known each other from before, which possibly eased the divergence of the conversation into completely unrelated directions that those expected from dialogue and restrained the emergence of dialogue in the time scope available for this research (around three months). Hence, I decided to accelerate the emergence of dialogue by facilitating and guiding certain discussions. But for that to happen, I needed to know where there were colliding assumptions. So, I began the research with control interviews from which I could identify the participant's assumptions in the field of study and interest in this project (the convergence of worldview awareness, and transitions to regenerative stances).

The interviews aimed to trigger my interlocutor to think about their worldviews in terms of ontology (human individual and collective), epistemology (world and reality) and axiology (values towards change). I developed 12 questions to be used as a guide for the interviews. Based on Braidotti's posthumanist work (2019) I brought up questions about the self and collective identity and whether or not it is relational or not. Then, participants were asked about the essence of being (e.g. Braidotti's neomaterialism or Wahl's interbeing) and drawing from the Integrative Worldviews

Framework (Hedlund-de Witt, 2013) they were asked about the principles in governance and their theory of knowledge (i.e. to identify if they had modern, postmodern, or integrative epistemologies and more or less anthropocentric visions). Finally, based on Bohm's work about the thought process, the realisation of assumptions, the violent nature of society and openness to change, I asked about how they lived these processes.

## Falling into a pit

I was waiting at the platform. The train was late. Suddenly, Tanit (anonymous name) was by my side. We were taking the same train to Barcelona. Our tickets located us in different cars. Upon arrival, we saw each other again at the station and walked to Mercat de Sants. We talked a bit about the different types of high-speed trains and our prospects in the Netherlands and we sat down in a café. There weren't many people at that time but while we were talking it got busy and empty again. The place was quite cosy, with warm light and wooden, white, and black metal tables and chairs. We ordered green tea and an American coffee. We looked a bit at the studies offered by the Erasmus University of Rotterdam and we began the interview.

(Personal journalling)

Often, the cosy or friendly environments where the interviewees invited me were a facade to the complex ideas in their minds. The responses pictured a diverse portrait of these people, although some agreements arose among all interviewees (e.g. a relational identity, social labels of place, gender, sexuality and body as the way for self-definition, distance and separation from nature, reality as constructed, etc.) which predominantly are aspects that would fit within the post-modern worldview of the Integrative Worldview Framework.



On the other side, the views tended to diverge when it was about change and the possibilities of the future as two sides emerged. The pessimist and the affirmative and what might be in between.

**I would say 'power for the people' and I'd like to trust in that, but there is nothing to be hopeful for. I see all political speeches as bullshit and I know this is dangerous, they are normal people and I don't think everything is screwed, but I don't see any [signs of a hopeful future ahead].**  
(A dialogue group participant, paraphrased)

These people who had a more pessimist-leaning perspective are the same that also had a rather anthropocentric view on governance. For this purpose, the term is ambiguous enough to be applied to humans or a more general concept of the 'ruling of the universe'. Those who were somewhat pessimist trended to picture society with a modern profile, hence seeing people as driven by hedonist values. Altogether, they talked about a need to be ruled, to be guided by some social structure on what to do and how to participate in the societal system.

These views, which were the most common, create general deception. They foster an interdependent conception of the society, hence an acknowledgement of the complexity of existence, but running away from the Enlightenment values they remove the agency of the subject rather than its individuality.

**Each of us is like a post. And when we are born we are this post, but this post is also how one sees it and takes a picture of it. It also is the pee a dog does in its base. It also is when someone removes a part of it.**  
(A dialogue group participant, paraphrased)

**I tend to let things go. I generate emotion and internal conflict, but not with the other. I get an inner rage and a sense of moral superiority.**  
(A dialogue group participant, paraphrased)

The post is a beautiful analogy of the still existing individuality of the person but of its loss of agency. The post is relational because it is defined by how others see it and interact with it, but has no capacity for reaction. This is further amplified with the other quote where the interviewee explicitly acknowledges that has no outer reaction to the surroundings and only generates inner violence and conflict. This immobility stops the creation of new discourses and only sustains the growth and dominance of narratives of collapse. We should elope these discourses and focus on the creation of alternative narratives (Brewer & Herndon, 2022; Braidotti, 2017; Haraway, 1997).

### **The scope and size of the pit**

Of course, the situation I might find myself falling into this pit of despair might be rather small. These people form a very small sample and with a very specific profile, and more affirmative positions might be found more broadly in other profiles: This might be worth more research, although it is not the topic nor scope of this work.

### **Leveraging the important things**

Looking back on these interviews, and especially on the non-affirmative stances of the interlocutors, one of the things I regret the most is not engaging myself in these conversations. I tried to embody the very same separation I advocate against in research just to not influence my 'object' of study. 'I want to know your vision on these matters [...] I'd rather have a conversation,' told one of the interviewees. Nonetheless, this very same situation allows for this reflexion and insights, which otherwise wouldn't have been possible.



I think naming these interviews as such is unfair to the experience of those who lived them. At times, I felt the deepness was more comparable to a confession.

**I liked discovering my own opinions on matters that weren't clear to me. [...] I know it sounds like I have no hope, but I felt very well because I could communicate about it and see there is a space for talking [about my points of view and worries].**

(A dialogue group participant)

I believe this quote highlights the power of asking such out-of-usual questions to people. Many times we might think—or avoid thinking—about these very same topics but don't dare to communicate them. Asking opens the door to some level of worldviews self-awareness and transparent communication about these topics, although not engaging in a conversation stopped the co-creation of new understandings. This is especially important because it allows us to slow down. 'The times are urgent, let us slow down' says Bayo Akomolafe (2022). It lets us honour and worship each other, which is essential to develop better sensitivities and responses to what's around us. That is not to say that we can just ask philosophical questions and already be creating this space. The participants of a conversation should foster this aura of sharing, safety and vulnerability, and that involves suspending the judgements and being genuinely curious (Bohm, 1996/2014; Dragt & Timmer, 2020).

**I felt I was imposed your vision, essentially because there was a constant need to rephrase the questions, and silences in the answers, so it was like there were basic concepts for which we didn't have a common understanding...**

— (A dialogue group participant, paraphrased)

The point I want to make is, regardless of the views one might have, nihilistic or radically affirmative, we all need space and pause to talk about our worldviews, reflect on them, feel heard... and not be judged or constantly counter-argued. All visions, opinions, feelings and fears are legitimate, and having the space to acknowledge them is the first step to transforming them into the affirmative posthumanist and postanthropocentric positions we require. Here, questions appear to be a good starting point, a good way forward, which substantiates What's (2016) argument that we should not focus as much on the answers as on the *appropriate* questions; that we should 'live the questions.'

## Impossible decisions, wine, and jokes

I held the first introduction to these dialogues in my flat. I recognise it is not a neutral space, but we were only three people, and I wanted the conversations to happen in an informal space. In the Future-proof Labs research, one of the topics often discussed was the distinction between informal and formal spaces. My assumption from the interviews was that a person is more disinhibited and open to exploring oneself in a casual context. I planned to do the exercise with [calçots](#) and wine as an effort to create this space of informality.

To explore the assumptions, I took some of the conflicts identified in the interviews and invented three characters who had to make a decision in a situation where their values conflicted. These situations where either possible decision goes against one's values are somewhat ironic as they question the personal values and societal dynamics (Bohm, 1996/2014). From them, unexpected decisions and behaviours can emerge (e.g. those

**Calçots** are traditional Catalan onions with a long white stem. They are eaten from mid-winter to the arrival of spring. Calçots are usually cooked on fire. To eat them, people remove with the hands the burned peel and dip them in sauce. They are usually eaten in social informal gatherings, mostly with friends or family.

explored by David Victory in his films, a theatre direction student, personal communication, 2022). Yet, they can also be powerful ways to project completely alternative visions and situations where the previous dichotomy doesn't exist — as with dystopias (Dunne & Raby, 2013).

But creating stories to make irony of assumptions might not be easy:

**The challenge was to come up with situations that would propose these assumptions and help the reflection around them while identifying other personal assumptions. The conflict is: what makes a story better or more effective than another? Out of a never-ending circle of doubts, I took the pragmatic path and simply came up with three stories, the session would tell what worked and what did not.**

(Personal Journaling)

Assumption	People seek to belong in a community	Nature as a god, grand and inaccessible. (Spiritual and Epistemological)	Nature as a god, grand and inaccessible. (Spiritual and Epistemological)
Story / Dichotomy	Ramon has grown up and lived in the city. But recently, they feels the city is a constrain to himself, they feels oppressed by the city. Lately they has been thinking of leaving all society behind, but feels unable to sustain itself outside the city.	Àlex has always considered herself very rational, mathematician herself. But she just had a vision, she felt her foot were becoming roots. She was tree. Her hair became water. She was water. Now she is wondering if to follow the rational thinking telling her it is absurd, or flow with the vision.	Maria is an engineer on sustainable technologies. She became it because she believes there is a way for humanity within nature knowledge. One day she is asked to work on a massive project for sustainable energy in a hotspot.

T4

## Too much wine and laughable assumptions

The underlying idea behind those 'impossible situations' was to see how assumptions emerged from the participants when they dealt with them. The assumptions we identified were aligned to our narratives, but not necessary to the main topic. The story that involved rationality versus grandiloquence of nature quickly revealed the assumption of opposition and incompatibility of nature and rationality. Yet, it also allowed other assumptions related to the story to emerge. It was proposed that once the character has the 'spiritual' vision, she changes the direction of her life and goes to 'yoga festivals,' 'has a veggies garden,' and 'takes drugs and cooks Ayahuasca'. These revealed a few assumptions such as a 'prejudice against non-normative interpersonal relationships,' or that 'non-normative forms of being require drugs.' The reasonable logic behind these ideas and assumptions would be that rationality is then seen as 'normative,' but other assumptions didn't suggest this either: 'he will want to rationalise everything to hide his experiences which will turn him nuts'.

F8



Table 4. The four characters and their situations proposed to the participants of the first dialogue experiment.

Figure 8. The narrative-creation session.

As is visible in the examples, often, the cases were brought to the extremes and turned into parodies, even jokes about people and places we knew. It might be somewhat closer to the irony Bohm (1996/2014) called for, but it also limited the analysis to the associations rather than exploring the underlying conflicts. In fact, more than assumptions, what emerged might be considered clichés.

Could that have been a way to avoid talking seriously about some stuff, or was it just a side-effect of the alcohol? Did the fact that we also knew each other help to dive into the discussions but stay at only the surface? Or was it because of a lack of habit in these introspective reflexions?

(Personal journal)

While we explored our stories again and identified the ‘assumptions,’ we also developed a new narrative for each character that didn’t have such assumptions. Then we found ourselves writing intermediate paths between the previously explored extremes. Following the previous example, we portrayed the character holding to being a mathematician while integrating spiritual practices in her personal life. The *funky* and funny stories became mundane stories, also with many new assumptions. But regardless of the alcohol, the jokes, and my plans to allow the emergence of dialogue, the greatest learning from that session happened at the end.

To me, one of the most relevant moments happened after finishing the guided activity; when there was space to talk without ‘a purpose.’ From the story of natural and societal separation, an open conversation about pessimism, positivism, optimism, and doubt emerged. I think these are the moments I want this work to enable. Still, we were missing that step of

how to move forward from the common assessment to the common position, understanding, and vision. I’d like to explore this further in the upcoming sessions.

(Personal journal)

This section shows how much influence a common background and the environment where dialogue is supposed to happen has on the possibilities of dialogue itself. We have seen that there is some potential in dichotomies, but that it is possibly somewhat limited (more focused research should be done) since the lack of guidance opened up the most interesting debates about underlying assumptions that were identified in the interviews. This supports Bohm’s argument that dialogue should happen freely and from the same position of all participants.

## Fictional cartographies and the foundation for free discussions

### Coming across *The Quiet Year*

One day, my flatmate’s boyfriend brought a board game at home: *The Quiet Year*. That night we played the game in a ‘rush’ version as it is a long game and we had work to do. During that game, we drew a map of a community and got to invent a bit of their story. Playing that game was a bit of a ‘eureka!’ moment for me. These days I was reading Braidotti’s *Posthuman Knowledge* (2019) where she repeatedly uses the concept ‘cartographies of being’. Her ‘cartographies’ are equivalent to the terms ‘worldview’ and ‘metanarrative’ in this work, but I come from a family of geologists and that word triggered me. While ‘worldview’ is a very abstract term and ‘metanarrative’ is rather literary, ‘cartography’ holds a graphical and performative imaginary. Cartographies can be used to picture and visualise all sorts of data and narratives, such as in geography to study the interactions of affect and place (Nogué & De San Eugenio Vela, 2018; Bueno

**The Quiet Year** is a board game by Avery Alder (2019) which consists of defining and managing a fictional community and its surroundings during a year after their liberation and before the arrival of a mysterious character. Players act as ‘gods’ deciding what happens and how the community reacts. Through the play, collectively, the players might develop all the ingredients for a narrative of the community: a map of the location, story and history, culture, traditions, practices, some characters, and events they have to deal with.

**Geology** is the study of the soil. In their practice, geologists might use different types of data to describe the characteristics of the soil, but often they employ cartographies to indicate the interplay of different materials, their origins, or behaviours.

de Mesquita, 2017), or in Transitions Design the interactions of time, culture, place, and behaviour (Ferrer i Picó & van den Berg, 2022; Iwabuchi, 2018). Because of the power of cartographies and *The Quiet Year* example of community mapping, I saw an opportunity to adapt this game to think about the worldviews of the group, map, and analyse and dialogue about our assumptions. Here is how I planned for it:

**Reconciling force** is the emergent vector of a conflict caused between an affirmative force and a receptive force in the Rule of Three (Bennett, 1950, as cited in Lopes Cardozo, 2021).

To facilitate the emergence of debates during the session we will play the game with a few modifications necessary to readdress the goals of the original game. If Alder's proposal seeks to show the conflicts in communities and their rules, I am more interested in how we can turn conflict into a reconciling force. Therefore, I am replacing those actions in the game that require suppressing conflict for spaces of dialogue. (Personal journal)

To begin with, the set-up will consist of a big table all covered with paper to draw the map on it. Then, the surrounding walls of the room are prepared with sticky notes to keep track of the resources of the community and their abundance, the names and stories of the people, the social norms, structures and organisations, and finally the debate arguments and identified assumptions. The construction of the basic geography where the action happens is decided through a commonly agreed location, three iterations of added-up proposals, and a debate on how is the place composed and what it means. That is, this way the location is further defined and more time can be spent on the dialogues. Then the game is played normally, but after each round (week, in the game), anyone will be able to open up a debate. This debate instead of following the game rules will be unstructured and only end once all participants agree to it. When opening a debate they will be able to suggest a topic or choose a pre-suggested topic. The pre-suggested topics articulate questions regarding the social

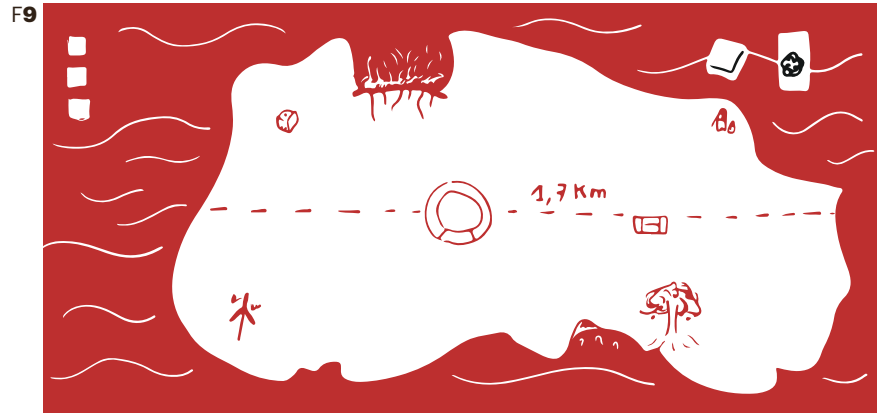


Figure 9. Cartography of the co-created fictional island that served to play *The Quiet Year*.

structure of the society, their values, narratives, and worldviews. Besides, during a debate or at any other time of the play participants will be able to pick up a 'discord' token. Whenever this happens, the person who picked it up must explain their emotions and collective must identify the assumptions involved in the conflict. Once again, the importance is not the assumptions themselves, but how the group dialogues and debates to find them.

(Personal journal)

## Making a long game longer

If the original game consisted of 52 weeks (rounds), we only managed to do six rounds with the new iteration. Albeit each round was quick enough, the whole game slowed when someone proposed a dialogue. I intended it that way; there was space, and participants used it.

(Personal Journal)

The first thing my notes from that day highlight is that we went through only a few rounds, which limited the capacity of the participants to build the world and different artefacts of the community we were mapping. On the other hand, there were lots of free space for open discussion. To some degree, the combination of the two was essential to raise conversations. At one point, a participant proposed to build housing for the community. This proposal opened a major discussion about how these buildings should be and how they would embody the family model of that community. These things weren't yet decided. Then that same participant proposed to have the buildings designed for mono-parental families, which transformed into a debate on whether this family model was appropriate or not. In this dialogue, some assumptions and interests emerged as the need to get rid of traditional gender roles, or that smaller family groups would mean more consumerism because 'mono-parental families are about individualism'.

These dialogues happened after proposals, and after those proposals, others would counter-argue. We could identify some assumptions from the clash of positions, and from the underlying values think of new constructions. But not always. In the case of the mono-parental family, the family model didn't change, simply a new definition of what it means to live in community and family emerged. The situation was even trickier when dialoguing about the governance of the community as 'we got stuck at the same discussions and arguments communists and anarchists had' (participant of the dialogue).

I cannot help but notice that we barely got to look into the actual underlying reasons for what we defended. Or the model and its consequences. I see this as the result of an unstructured analysis of the thought. This no-structure reflected in how we played, which failed to give space to every step: there was a rush to get into the next one and advance. On the other hand, I also felt I tried to hold too much control of the situation, and maybe that was a limiting factor. [...] We were uncomfortable with the space open for things to emerge. We had to figure out the universe of those people right away.

(Personal journaling)

Using a cartography tool on a fictional community allowed us to have proposals and explore ideas beyond the current societal dynamics and our assumptions and opinions through the opposing forces behind our proposals. But it also appeared obvious that these discussions require time and the embrace of whatever might emerge from it; including not following the original plan. This is (once more) a call to embrace uncertainty (Wahl, 2016), release one's darlings and be aware of the thought process (Bohm, 1996/2014).



# From *Costumbrism* to fables and the power of ambiguity

## Back to the narratives

Last February, I met a friend in the Netherlands. One of the days we spent together, we had lunch in a restaurant at the beach. It was a cold and windy winter day (as it usually is there). We were drinking tea when she took a game called *We are not Really Strangers* from her bag, which we played for a long while. At a certain point, she said: 'take this mirror out from in front of me'. A mirror generates awareness.

Bohm also mentions mirrors when talking about suspending our reactions and looking at ourselves:

*The point of suspension is to help make proprioception possible, to create a mirror so that you can see the results of your thought. You have it inside yourself because your body acts as a mirror and you can see tensions arising in the body. Also other people are a mirror, the group is a mirror.*

(Bohm, 1996/2014, p. 29)

This mirroring might be essential to allow the discussion of assumptions. During the interviews, it happened with the self but not in the group because, as I already said, I tried to impose a barrier, which was the opposite situation than in the restaurant. Then, the impossible decisions had the potential for it, but the characters were so simplistic that it was not possible, but it happened when we were ourselves, much more complex characters, with our own opinions on democracy, pessimism, etc. Perhaps, more complex characters and developed narratives had the potential for it, especially if these characters already mirror the reader.

To archive this effect, I made use of the variation of the Integrative Worldview Framework (chapter 2, adapted from

Hedlund-de Witt, 2013). I took the *integrative (future indigenous)* and made a *costumbrist* small narration. As seen with the first experiment, the mundane situations were the ones that emerged with far more seriousness, hence the ones which highlighted assumptions instead of stereotypes. At the suggestion of a Future-Poof Labs researcher, I also came up with a *fable* for the *postmodern* archetype.

## Fables are trouble, fables are ambiguous, fables it is

The researchers found the *costumbrist* story to feel inhuman. Through the habits, the day-to-day, there was no trouble. It was descriptive and didn't allow us to see how the characters reacted to circumstances and why they were in these situations. They looked at that character as a person whom they could come across, but who wasn't enough 'human' to empathise with. In case the stories got more action, there was fear of the stories being a too direct critique on the reader. On the other hand, the fable created much more empathy. They could see in the main character (a cat) situations they could understand, the characters were ruled by actual drivers and had interactions, although the emotions of the characters weren't very much transparent. In general, the fable served as a mirror and allowed for a certain distance, yet proximity to the reader. Fables have been long used to educate children and serve as a form of epistemic disobedience as they hold knowledge in an alternative to academic texts.

**I don't like the fables, I think the human stories will be better. The fables have a morality, they are judging the reader. They say 'this is right and this is not,' but this isn't the purpose of the tool at all. I want the users to find their right and wrong, discover alternative ways of being and formulate an ontology of their own in the living lab. I think the idea of the fable is still very colonialist, and European, in the sense that there is a *right* way and everyone should follow it. I don't want this.**

(Personal journal)

**Costumbrism**  
an artistic movement in Spain before the industrial revolution which portrayed usual scenes of the society as they were.

**Fable**  
is a form of fiction that uses humanised animals as characters. In these stories, the characters are usually flat and have simple experiences that give to the reader a moral lesson. Examples could be those of Aesop, La Fontaine, or works such as *The Animal Farm* by Orwell.

### **We are not Really Strangers**

is a question-based card game to get to know another person. It includes variants in some specific topics as racial equality or to play alone. It was developed by Koreen Odiney.

Rousseau did a harsh critique of fables (to those of La Fontaine), especially on the fact that often morals could be misinterpreted (Lewis, 2012). But his discourse focused a lot on children; to Rousseau, the problem relayed on children not having their reasoning ability developed enough to detach from the story and identify the appropriate moral in them. Nonetheless, as Lewis points out, Rousseau's work *Emilie* acts also as a fable with the same characteristics he was criticising of La Fontaine. Lewis finishes by suggesting that these forms offer indeed trouble to the children, who might not be capable of understanding the signs, but that also positions the rest of us far away from the adult position of emotional and rational balance as truth and fiction merge. Since the product of this work is not aimed at children, and there is value in this ambiguity, fables might not only be an appropriate asset from the opinions of the FPL researchers but also from an educational philosophy perspective.

This ambiguity between fiction and truth allows for multiple readings of the same work. One example would be that of Cecilia Valdés, who through her work does a critique of slavery and a (Cuban) pro-independence discourse. Yet, she is so ethnographic about it that ends up with a narrative of emancipation entwined with a narrative of colonialism (Jiménez, 2016). Although Jiménez criticises this ambiguity for the lack of referents it leaves, I believe that if a narrative has the right characters—and possibly the right questions too—, the multiplicity and contradictory readings can become a force of creation of new referents and imaginaries: new ontologies, epistemologies and consequently behaviours and structures. That is, it is under ambiguity that we become open to the *other*; being comfortable with ambiguity implies we become comfortable with the different, even when that challenges us (Gielen & Haq, 2020). Under these conditions, the 'colonialist' architecture in fables that worried me loses relevance. Besides, these multiple readings of the same story

could increase if all the different archetypes are presented in one single narrative in an interplay of narratives, mirroring the dynamics of conversations with multiple assumptions and worldviews.

### Insights from the dialogue group

I ended up writing a fable for each archetype. When iterating on the narratives, I gave much more importance to the emotions of the characters as it is something that readers kept suggesting should be more present. But also, because expressing emotions might include a metanarrative of importance about being conscious of them, which we already saw was important in chapter two and Bohm defines as the way to identify our reaction when assumptions get in conflict (1996/2014).

But in that session diverse understandings arose that were completely unrelated to the original archetype and moral of each story, suggesting there was indeed an ambiguity that allowed for multiple readings. For example, one of the fables which focused on the avoidance of making decisions was perceived to be about freedom (which was exactly Rousseau's worry). But those very same readings turned into a completely new meaning when the different stories were read by all participants together. As participants, we spontaneously began to identify each character as being analogous to a political party and how they made their decisions and ruled.

There are two reasons why I think this happened. First, the stories highlight the complexities of society and systems. Hence, people look for analogies to the dynamics presented in the stories so they can integrate the insights they perceived. Secondly, politics was our common context of reference. Most participants are familiar with politics and have strong opinions. I would say that the context of the people talking together about the stories has a huge influence. I had never thought of comparing the charac-

ters to political parties before when thinking about the stories, and nobody else I shared them with did either, instead, they related them to other contexts they were familiar with (e.g. secondary education). Hence, I would suggest that the stories are the most useful when they are read together and that they might also benefit from some guidance (i.e. questions) to direct reflexions in specific directions. In fact, in our conversation, guidance existed as I asked participants what they felt identified with the characters or what they felt was insightful to them.

## A summary of practice for Dialogue

In this chapter, I explored four practices to identify and become aware of assumptions. These included one-to-one conversations led by questions, a narrative building exercise, a collective cartography building practice, and a conversation based on fables. Through the practices, it has become evident the role of questions towards self-awareness, as well as the need for open, unguided discussion space to challenge the assumptions. Moreover, we have seen how fables can ease the conversations in groups and, if built appropriately, trigger a diversity of readings and open the possibility to explore ambiguousness and alternative ontologies. Precisely in these conversations, we saw that two contrary arguments offer an exploration of some of the different assumptions behind them and allow for new understandings to emerge.

I see these insights illustrate a sort of 'path of dialogue' or, even, subjectification. This path begins with 'sensing,' which is the stage to develop an awareness of our reactions to the narratives we come across. Being open to seeing how our emotions, frictions, doubts, and questions emerge allows us to

identify the assumptions (e.g. when I tried to keep pushing for the activities I had planned instead of accepting the emerging dialogues). The second step is 'challenging.' We would question the values and reasons behind these assumptions. Following the previous example, this would be challenging if everyone has to participate equally, or if we must follow an exact procedure to have reasonable insights. Maybe there are other valid approaches and possibilities, although they would not be in western society. Finally, the journey ends with the 'embracing' of new positions, such as the integration of auto-ethnography in research practice, or that I should allow people to participate under their terms and accept their proposals, as happened in the last session. But because the process of becoming should be understood as a never-ending journey, the sensing-challenging-embracing triad shouldn't be seen as a linear practice but more like a loop.

F10

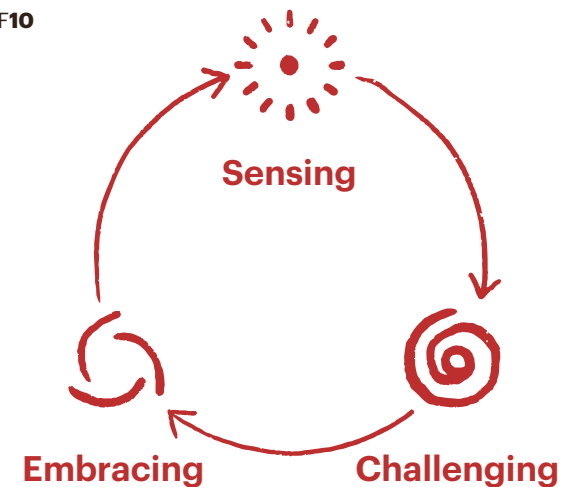


Figure 10.  
The Sensing-Challenging-Embracing Loop

# Chapter 4.

## An autoatongraphic narrative game (for Living labs)

A farmer who had just acquired a beast went to a Zen teacher to complain that the horse had ran away.

'Who knows if this is good or it is bad,' replied the teacher. The farmer left disappointed and sad.

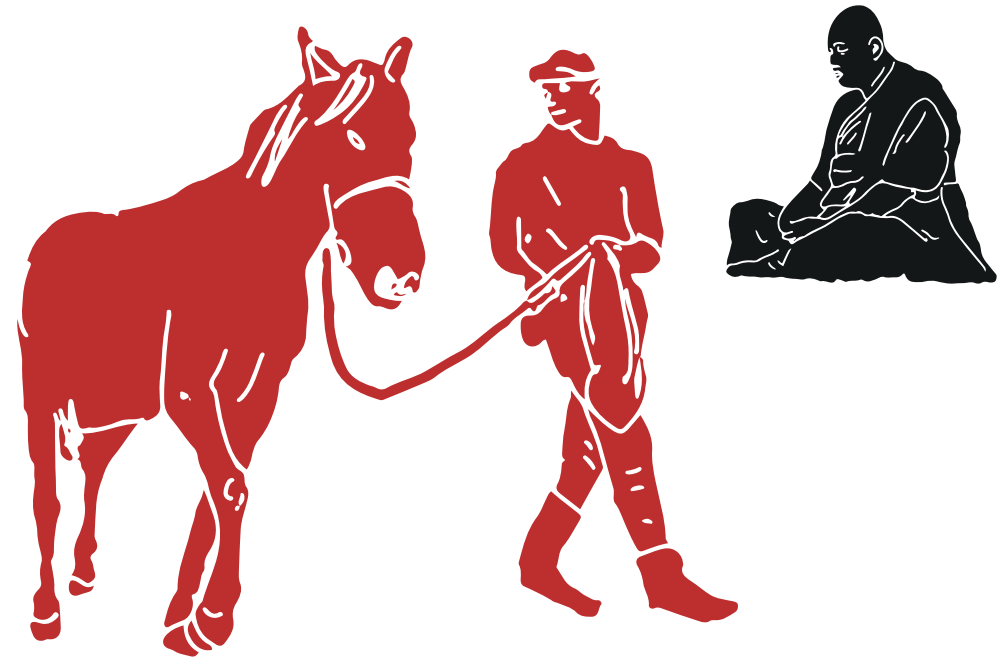
A couple of days later, the horse came back with two mares. Happy, the farmer went to see the teacher and explained the news to him.

100 'Who knows if this is good or it is bad,' replied the teacher. The farmer left joyful.

A few days later, the farmed visited the teacher again because his son had fallen from a mare and broke his back.

'Who knows if this is good or it is bad,' replied the teacher. The farmer left boasting in tears.

The following day, a group of soldiers passed by to recruit young people to go to war, but they couldn't take the farmer's son because he was unable to fight.



This is a Zen short story that arrived to my hands through Marta Millà's Zen tales anthology (Millà, 2014). It brings up the difficulty to discern and understand the scope of an event in simplistic terms. When I face a dilemma, an intricate situation where I fear the consequences won't be those I expect—or when they actually are the ones I don't expect—, I always think about this story.

This chapter is about the doubts and explorations I dealt with while trying to figure out how a tool has to be to cultivate worldview reflexions in from the respect, the understanding, comprehension and free of judgments. Perhaps my 'user' won't know like the Zen teacher if what they reflect about and realise is good or bad, but neither do I.

Through the chapter, the description of the tool entwines with the narrative of its development, my thoughts, my worries, what I was proposed along the way, and the decisions I ended up making. I hope they are 'good', but who knows?

## Picking up the insights

The first chapter highlighted the need to dwell with worldviews to archive radical innovation for transitioning to new paradigms. Through some case studies, it was suggested this could be archived by promoting worldviews awareness, honesty and transparency. In the second chapter we saw how we need not only to gain this awareness but also challenge the current states and propose new worldviews that redefine what it means to be human, or even alive, and to reconsider how we interact with other fellow beings, especially to advance towards new sustainable paradigms. We called this process of going from the 'awareness' to 'new forms of being,' *subjectification* (after Beista, 2021). Besides, I proposed a framework or cartography (based on Wilber, 2000, as cited in Brouwer & Woodhill, 2016) to identify the different aspects through which we define ourselves in a relational form and, therefore, the parts of our Knowledge-practice-belief Complex we can challenge and rethink. Then, the third chapter gave us some insights on how to become aware of our worldviews and challenge them into these new forms of being through Bohm's Dialogue. These insights included the importance of inquiry to develop self-awareness, the role of fables in combining self-analysis and critique, and the possibilities of unguided discussions where discrepancy occurs to create new shared meaning of the world. Also, a 'process' to guide the subjectification journey is proposed as the Sensing-Challenging-Embracing Loop.

At the convergence of these insights appears '**Stories from Watertown**' narrative-based game to engage in worldviews. In this chapter I explain how I have been developing the game through a conversational-led design practice. Finally, I address some of the critiques I made myself to the proposed tool.

## The Game

### Structure

The artefact of this work is proposed as a form of tool/game to aid and guide reflexions about worldviews in an attempt to help transformational innovations emerge (in living labs). The importance of these reflexions relies on the need for worldviews awareness (i.e. knowing consciously what is my understanding of the world), honesty about the self, capacity and power (i.e. knowing what's the impact of my position and behaviour, my intentions and interests, and being aware of the possibilities and potential I have), and transparent communication (e.g. communicating to others the knowledge from the previous to increase trust and facilitate better collaboration)[in chapter 1]. For the first aspect, the tool draws from the insights of the third chapter, which proposes to use questions, conversations, and fables, whereas for honesty it relies on the just mentioned and adds the cartography since it also engages with the interaction of the self and structures. Finally, for transparent communication, the tool suggests to leverage the need for conversations to gain better awareness but also to challenge current positions.

To combine these different elements, the tool is presented as a collection of five stories (fables) along with a set of sixteen question cards and a cartography of being template (the one from chapter 2). In the tool, four more cards are included with a visual of Watertown and the instructions for three playing modes. These instructions guide the player(s) to first discover the fables from the fictional town and then reflect on them with the help of the questions. Moreover, they also suggest combinations of solo and collective play to focus on awareness and honesty, or transparent communication.

Nonetheless, some parts of the tool as the cartography were initially thought as a theoretical background and introduction or justification to the use in living labs. In fact, the first prototypes could be understood as a collection of



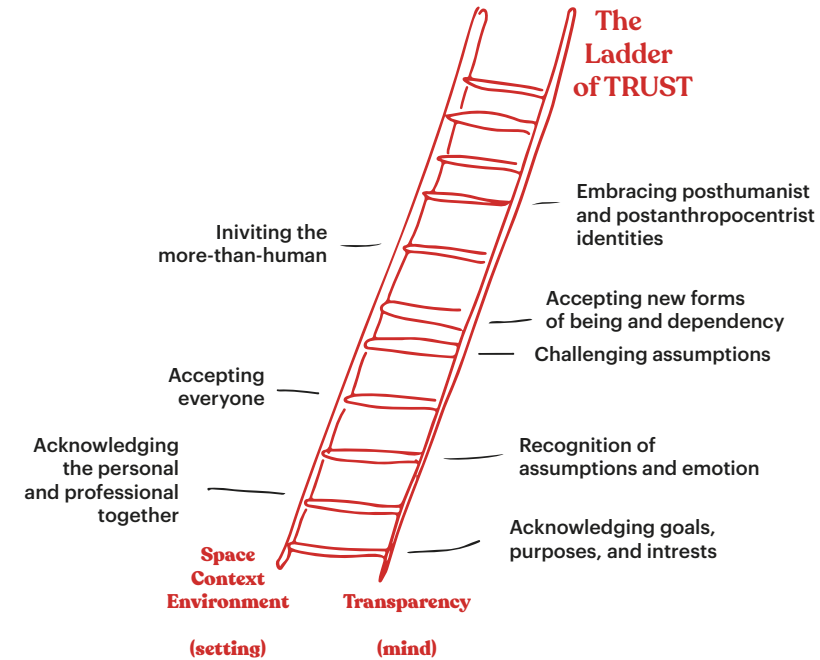
**Solutionism** is the position from which is believed and acted as if a technical solution could be provided to every problem [and other solutions and approaches are no longer acceptable]. I would extend the meaning to any fixed solution.

tools bundled together with different purposes: identification of the state [of the living lab], acknowledgment of one's assumptions, alignment of the individual, alignment of the collective, and alignment of the collective with the rest of the world. These were based on an early-in-research identification of the Sensing-Challenging-Embracing Loop and the cartography of subjctification in the context of living labs.

This set of tools consisted of the cartography itself with some explanations and four decks of cards which combined short stories and question cards. But this conception was extremely linear and ignored that becoming is not. This process, as seen in chapter 2, might have the beginning at the moment consciousness is acquired, but has no end. There is no moment when you can state 'there is no more space for me to improve, I stop' — although other limiting factors and reasons might exist. Hence, having a linear expression suggests there is a destination. But this linear conception also creates a misconception that one first has to begin with the individual and then move to the collective and so on when that's not true either. Moreover, it proposed that there were only certain valid combinations (individual-individual, individual-collective, and collective-world) but ignored other possibilities (most notably, individual-world). Actually, because of the multiplicity of time positions individuals have (Braidotti, 2019), different participants might need to begin at different points and engage with the reflexions in different order. This is essential to make the tool more flexible and easy to engage for different people, with different past experiences with self-reflexion and to avoid giving to the tool (and attributing to myself as author) a paternalist and neocolonialist attitude (somewhat solutionist) which would contradict its initial purpose.

These issues in the tool were highlighted through conversations, and from themselves a new approach to

F11



F12



**Alignment**  
How do personal and life values align to action and work? Is there a values misalignment? Can it be addressed?



**People's integration**  
How do you integrate other people's perspectives, ideas, and needs in decision-making and acting?  
How are different participatory abilities dealt with?



**More-than-human integration**  
Are non-humans affected by our actions and thoughts?  
How are their needs and perspectives integrated in decision-making and acting?

F13



Figure 11. The first theoretical models behind the game combined the cartography of being and the Sensing-Challenging-Embracing Loop in a linear fashion under the goal of enabling trust with the goal for the living lab coordinators to identify their position.

Figure 12. The steps of self-alignment, self-collective alignment, and collective-world alignment were also expressed linearly.

Figure 13. Conceptualisation of the decks of cards going along the cartography.

develop the prototype emerged. The line was discarded and the circle already represented the Sensing-Challenging-Embracing Loop, but there was a third possibility of a flower-like framework which allows to pick any path between their petals (e.g. that of the biomimicry thinking framework, Biomimicry 3.8, 2015).

F14



The new model for becoming was centrepiece to the tool development. In fact, the development of the current combination of stories and questions emerges from the overlaying of the flower-like cartography of being and the Integrative Worldview Framework. As result, the characters of the fables, each represents one archetype of the (modified) Integrative Worldview Framework, and the questions are aimed to allow the identification and mapping of the self from the characters. Then, with the fables serving as 'mirrors' of the archetypes and the reader, and the cartography being included to allow the mapping of the self (or a collective if used with other people), the questions take a role of reflexion activators, as a guide to self-identification, and the instructions of the playing modes as a hint to those using the tool for the first time who might not want to explore it from their own intuition.

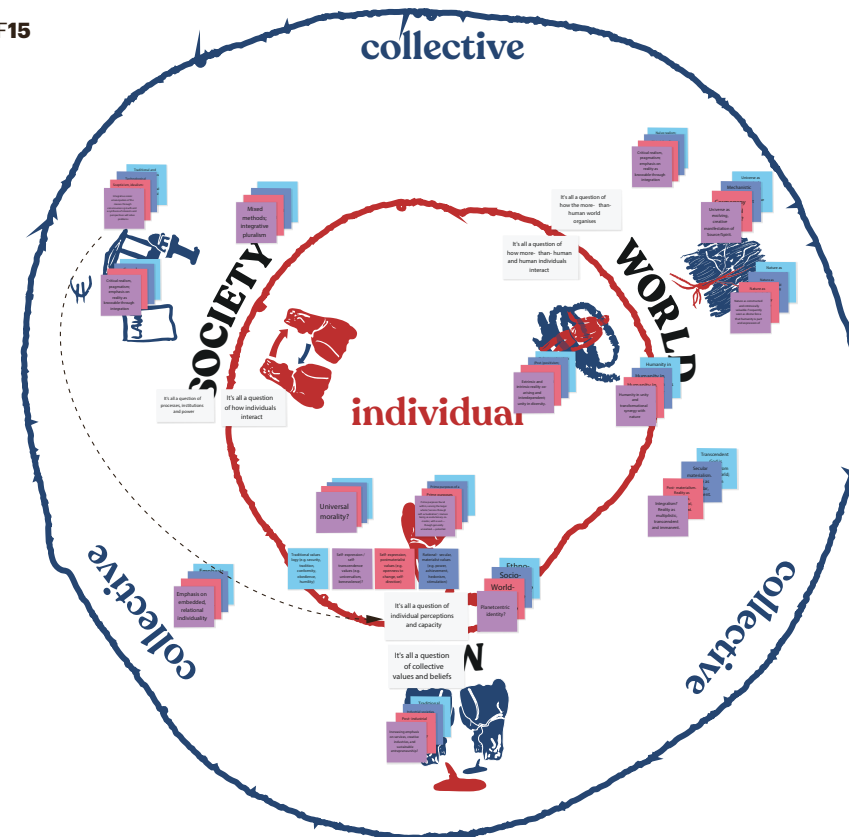
## Stories

During the development of the tool, stories were proposed earlier in the process under the thesis that from narratives with dichotomies people could engage in discussions to identify their assumptions and explore alternative forms of

Figure 14. The linear, circular, and flower-like models for a process. Each of them depicts a different way to deal with steps: origin to end and in one direction, repetitive steps or flexible process.

Figure 15. The original Integrative Worldview Framework by Hedlund-de Witt (2013) overlaid with the cartography of being.

F15

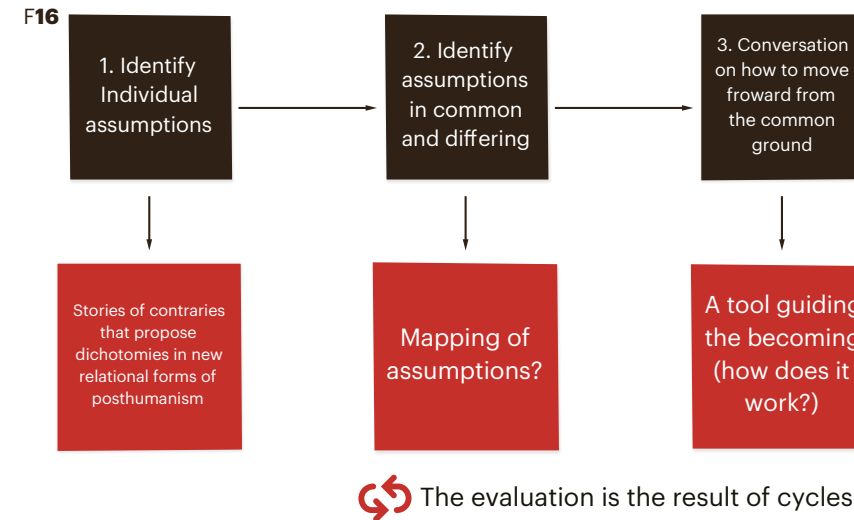


being (individually, collectively and on general existence). Yet, in the experiments on dialogue, some possible limitations were identified with the use of dichotomies (e.g. the lack of serious exploration). It was more relevant that people brought in discrepancies in conversations. Hence, stories were then ideate to serve as a show of different ways to engage with the world based on the Integrative Worldview Framework archetypes.

Jane had just arrived in the village. It was the first time she had been there. She immediately sensed it wouldn't be the last. She was supposed to meet Monica in a square next to an old church of one of the neighbourhoods. When she arrived, an old men approached her 'You are Jane, right?' He asked. Jane felt in that men a welcoming energy that reminded her of Monica. 'Monica is at the neighbourhood meeting right now, so she asked me to guide you to her place to leave your bags and then bring you to the meeting, I'm her father, by the way'. Jane followed him to a small house he opened and asked her to leave her stuff at the entrance. Then, he brought her to what seemed as an old factory, inside there were a group of people, mostly women and girls, talking seemingly randomly, about themselves and food, and accessibility, and water... A young woman from the group made a sign to Jane to join them. 'I'm Monica,' she said to her when Jane was close enough. 'Feel free to intervene, we are talking life' (Prototype narrative)

Yet, the development of the stories was left aside until more insights were acquired from the dialogue sessions. At a certain point it was even suggested to drop them and focus on questions, but as stories (especially fables) emerged as a tool to be used to mirror the reader's archetypes and offer a variety of readings from their ambiguity, I explored them again. This new engagement of the stories would also consider the new cartography that no longer linearly divided

the process and hence opened the possibility to make more engaging stories as there were more complexities in them. The number of the stories was then defined by the amount of archetypes (5, following the modification of the Integrative Worldview Framework).



Besides, with narratives focusing on showing the different archetypes and their behaviours, the insights from the living labs could also be included, which provided the tool with new nuances, increase the interpretations, and make it more relevant for the target group. As is explained in chapter 3, fables were found to be a relevant form of stories because of the ambiguity and multiple interpretations they can offer. Nonetheless, I designed each fable from a moral as they are meant to be at the core of fables. This use of stories is comparable to the use of personas in a design method; although, it goes a step further as it doesn't limit the character into a collection of assumptions about a user but animates them and adds dimensions to the character as it has to engage with the world or certain situations. Moreover, engages in (re)establishing new epistemologies in the western context (Temper et al., 2019), especially in fables that contain numerous symbols and lessons (e.g. see if not Rousseau's *Emilie*, which is in itself a fable, Lewis, 2012).

**Figure 16.** The initial tool proposal included stories to introduce dichotomies as a way to identify assumptions. It also proposed to them make the assumptions common to a group and discuss new positions. A similar procedure has been also included in the final tool.

	<b>Fox (1)</b>	<b>Man (2)</b>	<b>Cat (3)</b>	<b>Mice (4)</b>	<b>Pond (5)</b>
<b>Worldview archetype in relation to transitions</b>	Has an absolute immovable [moral] compass. There are right and wrong things that don't ever change. (worldview immobility)	Every challenge can be broken down into problems which have a [technical] solution. Having a specific methodology always provides the answers.	Relational human existence. Awareness of the complexities is overwhelming. Lack of agency in acting.	Acknowledgement of complexities. Action and equalitarian values to resolve challenges. scalable and universal solutions.(paternalist)	Embrace of complexities and differences in beings, adaptation to circumstances and sensing (honest loving?)
<b>Living lab (stakeholders) practice</b>	Assuming inner drivers, values, judgments, and intentions	Developing and testing only technical solutions	Lots of talking and no doing	Proposing 'best' solutions without ensuring everyone is included and properly integrated	Holding meetings, encounters and different forms of participation where everyone can participate from their position
<b>Case study</b>	Cross-case	University	Municipality	Business	Citizens
<b>Moral</b>	Assuming a universal moral leads to self-misconceptions	Breaking up problems to have tiny solutions doesn't solve things (more holistic approaches and understanding might be needed)	Dwelling in doubts and fear doesn't solve anything	Generalisations and assumptions of false equality generate bigger inequalities	Listening and sensing, embracing the uncertainty is the best policy.

T5

Each of these profiles is then the main character of a fable. Because it was important to make them comparable (i.e. that the reader could ask what their reaction would be in that situation) and, ultimately in Living Labs, the goal is to focus in system interventions (transitions), all characters were placed in the same setting and to be facing the same problem. Hence, in each fable there is a different perspective of the situation. Because of that, regardless of the archetype a reader might feel more familiar with, they will identify the complexity of systems and working in multi-stakeholders settings.

## Questions

Questions were keystone from the beginning of the design of the tool. As mentioned before, they are essential to enabling conversations and reflexions. But getting with the right questions is not easy. In chapter 3, a set of 12 questions was elaborated, but they were intricate questions; often, interviewees needed reformulations or some explanations to contextualise them. In an interview you can create a journey, add follow-ups, be actively listening and shape your behaviour and responses accordingly to the direction the two people take, etc. That's not possible in cards as there is no control over the journey nor context of the player. Cards are closed and questions cannot be changed unless the player does it themselves. Each question is then like opening new chapter.

The first idea drew from the ladder of trust in living labs and the four card decks. So, the proposal was to have questions tailored to each cluster and the included stories. The questions of these clusters would be like 'What are others to life?'. But these questions were the exact kind of questions that didn't work in the interview and needed to be rephrased. They were too abstract and ambiguous. Moreover, it became evident that these clusters didn't work and as a new model emerged, the questions had to be rethought.

Table 5.  
The main characters of the fables and their archetype and behaviour in relation to the living labs.

To rethink the questions I began from the first draft of the fables and linked questions the behaviour of each character and the Worldview archetype that defined them. Besides, because my understanding of the stories was very limited to their development and how I thought them, I also relied on the topics that emerged in the dialogue group when exploring the potential of fables. For example, from my own understanding, the character two gave background to ask 'What beings do you consider as equals and what others as superior/inferior? Do you disregard or discriminate them?', while someone else proposed for character three the topic of freedom, 'How does your freedom and decision-making power affect others and the system?'. But these questions were very targeted to specific charters, hence they had to be associated with a specific character and would make using the tool more complicate and less intuitive (e.g. different numbers of questions, order of the stories and the questions, etc.). Instead I believed that every question could be used on any story. Using the cartography of being and the Integrative Worldviews Framework over it, I mapped the questions to find the overlaying characteristics of each character that related to each question. From it, three types of questions emerge based on if they were substantiated by the behaviour of the characters, if they were more philosophical and abstract, or if they were aimed to think about how to enact change.

Nonetheless these questions are quite complex and require of some experience with reflexion, systems theory and background. Although accompanying explanations added some clarity, they make the interaction with the tool feel very complex. 'What am I expected to respond to these question?', one of the researchers asked as they were presented one of the prototypes of the tool. This conversation suggested that reflexions should be far more open and allow everyone to explore the stories and their worldviews at the level they are comfortable with and capable of. Under this new conception, the questions should

**Level**

I refer to the deepness of (implied) meaning and value. For example, it is different to reflect about the structures in which we organise (united nations, supranational institutions, economic systems, etc.) than the implied meaning in these structures (human-exclusive governance, world-wide normative systems, power based on economy instead of ecology)

Type	Sample Question	Reasoning
Behaviour	How behaviours, structures and systems embody our rights?	The way we organise embodies some very basic rights that many times are taken for granted. Seemingly the characters in the fables did so too. The mice understood that because they had access to something they had a right over it, and all had the same right and the right to the same. On the other hand, the man took the right to intervene in the system and decide the best allocation for what he provided, including forcing the system to obey his decision.
Abstract	What are the working dynamics of the universe?	We all have different ways to understand and think of the universe. Some would say it is a creative spirit, others could say it a mechanical system of matter, or that there is a mortal and celestial reality.
Change	How do I listen and include the more-than-human?	To transition towards posthuman stances one also has to attune to what has been separated from humans in humanist terms (not originally included).

T6

Table 6. Sample questions regarding to behaviour, ontology, and enacting change along their descriptions. From the first prototype with included questions.

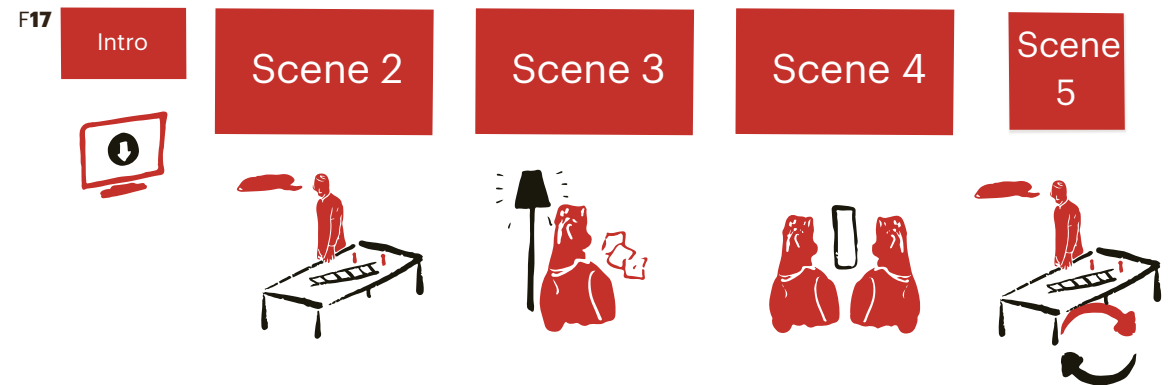


not be telling what to reflect on and at what level, but asking to reflect. Moreover, the cartography already offers a somewhat more advanced and tailored space to deepen the reflexions. They were proposed to be something like ‘how close do you feel to character x?’ But this ‘feeling close to’ ignores that the first assumptions arise from the judgement (as seen in chapter 3). Therefore, to close the gap, questions to call for an analysis or judgement of the stories are also included. These questions can look like ‘which character had the strongest moral?’ or ‘which character was in best terms with the others?’ and they can quickly allow to realise some inner values, especially when used collectively, as people might propose different interpretations of the stories. In total 8 reflexion questions and 8 interpretation questions are included.

## Playing modes

Through the development of the tool, one of the key requirements that emerged was that the tool had to be used intuitively. In fact, I already explained how that was considered when developing the structure, the stories, and the questions. Nonetheless, throughout the dialogue group we have seen the potential of individual and collective reflexions, and also that the cartography combines the individual and the collective into a single model. Because the process of becoming happens ultimately on the individual level — whether or not it is also happening on a group — (Bohm, 1996/2014), there is potential to use the tool alone and with other people. Under this principle, with the early prototypes, I proposed to combine the individual and collective reflexions to enable an ‘evaluation’ of worldviews over time. This user journey and use of the bundled tools suggested to begin mapping the situation of the living lab and the participating individuals in the ladder of trust. From these positions they would know which set of cards needs everyone to advance in their journey towards trust and new understandings of being by

the means of reflexions led by the stories and the questions. Once the group is aware of their states, it was proposed to use the stories in meetings to understand new stakeholders and know what worldviews they felt identified with. Finally, from the awareness developed over time of doing reflexions, the managers of the living lab could map again the projects, stakeholders and themselves in the ladder, and so on. This way, the lab would have track of its position while engaging in a worldview-changing journey. Indeed, reflexions, conversations, time, and experiences change people’s views of the world, the inner values and assumptions require to be re-evaluated. Nonetheless, as far as there is self-awareness (which this tool aims to help develop), this re-evaluation is already integrated into being ‘self-aware’ (Arnold & Schön, 2021).



Precisely because the requirements to journal the self-awareness of the individual or the group might change over time and as individuals (and the group) acquire the ability of being aware, it is necessary to offer a more flexible approach than a single way to use the (former bundle of tools) game. At the very end, the game is just a collection of stories and questions (along with a map), so user-cases might be very wide, and people might invent others depending on the purpose or previous experiences they had. Yet, it felt adequate to add some ‘pre-designed’ use cases to help their use in innovation settings and those who are just beginning with worldview reflexions. These cases separate the previously proposed

Figure 17. The first user-journey map at using the tool includes a combination of collective, individual and collective again activities.

uses so the holder of the game can decide with use is most interested in based on their purpose.

An individual case aims to provide an intimate experience with oneself thoughts in a guided way. It proposes to read all the stories and reflect on them using the questions (or not) and journaling these thoughts. Moreover challenges the person to apply the questions is provided to other narratives that might encounter (e.g. books, music, films...) so self-awareness is trained. Finally, it is also suggested to create a new narrative or story that highlights your individual reflexions, so it can be shared. It is precisely this individual practice the one I see as a backbone to any other collective practice as it allows to face situations with somewhat more awareness, take criticism affirmatively and shift behaviour. The following quote is actually extracted from my reflexions and expresses my individual engagement with other humans and epistemology (which would fall at the individual circle, between *me* and *society*).

**Like the fox, I tend to impose certain values and judgments of mine, yet I try to integrate –to somewhat degree– those of others (I'd like to be the pond). But sometimes I don't listen enough, either because I see a too technical approach or many pitfalls. Often, I fall for western approaches when I shouldn't. I am in a state of mess, thinking I'm not academic enough, accurate enough and trying to escape from it. I have a bit of complex of the man.**

(Personal reflexion, based on Stories from Watertown)

The second use-case focuses on exchanging the different ways two people might interpret the world, being especially relevant when getting to know someone (e.g. a stakeholder, collaborator...). It asks players to read together a couple fables and use the interpretation cards to share their view on the char-

acters and their behaviours. But of course, could be used more extensively if there is time available. That's the kind of activities I like to do with other people, out of curiosity to know their view of things — and what I regret not having done during the interviews (chapter 3).

The last use case proposed is that of using the game collectively and aims to allow in-depth conversations to emerge between people who might work together or collaborate often. It is far more aimed to have an assessment of the collective worldviews and be able to track the group's changes. For it, this case begins by asking users to follow the individual use-case, take notes and then bring them to an informal meeting where they will be shared. The purpose to the collective session is to map the different reflexions in the cartography and add new ones that might emerge on the spot. Hence it generates an open conversation that slowly can create a common worldview. It is recommended to do the exercise from time to time and even change the fables, so stories don't limit the possible understandings.

Yet, the uses can go far beyond those innovation contexts, I can imagine using it in the context of personal relationships (in family?, with a partner, on a date, with friends) or in other professional practices (a political negotiation, an educational project, etc.) Of course for these practices modifications might be required, but that is precisely the purpose; offer these stories and questions as a base, as a foundation. In fact, I don't ever follow the instructions myself, so why should anyone else?

## A critical look

In the current version the tool offers all the necessary elements to begin engaging in worldview reflexions and develop self-awareness, not only regarding the mind model but its interaction with individual and social behaviours and structures. Moreover, recommends practices that capitalise on this awareness and reflexions to allow transparent communication. Although it is targeted to living labs and follows the recommendations to explore other-than-managerial approaches, precisely because of this it also opens up the possibilities to be used in other contexts and new ways. I regard this as important since allows for further research and experimentation in other fields, but also because allows the game itself to stand for exploration, against the dichotomy of rights and wrongs, and western traditional epistemologies.

Of course these are also paradoxical, through this work and the development of the game there is a struggle of myself fighting against what I did not want to embody. Hence, the lack of clarity and my own paradoxes have found their way through to these pages and to the tool. Itself, calling it a tool or game, or having these pieces suggesting that if you play with the game you will reach awareness is contrary to the values I just described in the paragraph above.

When I did my bachelor we were often presented with some tools and methods and we were asked to implement them in projects. Then we had to prove we did learn that method, first with its straight implementation, then with an evaluation and tweaking it and finally proposing our own way. I sucked at the first, and I was often told I wasn't using the method or the tool right. I bet one could argue that is like learning to cut with knives, but it is not. Learning to cut requires attention, awareness, reactivity. It is not critical nor acritical. Instead, Stories from Watertown does not aim to be like those design or evaluation tools and methodologies, aims to be in this neutral point. There should be no judgement about its

use, but sensing. So, nothing further from the truth, this is ultimately a speculative artefact, tied to my context, and my assumptions of living labs, born from my auto-ethnography, and, hopefully, will be rendered outdated — if it isn't yet.

And I would argue it is outdated, because I cannot help myself but think that I engage in reflexions in far more complex ways, and that therefore there is much more space to explore all these different ways to engage with it, engage with the different forms and arts of becoming, transcending 'tools' (as seen in chapter 2), or exploring far more intricate and uncertain questions. In fact, there is growing literature in systems thinking, education, humanities and philosophy (and many other fields), knowledge in indigenous cultures and practices, and epistemological disobedience that could be looked at experimented with — and I am eager for it. Meanwhile, I will argue that this proposal is relevant enough to begin exploring worldviews and that possibly, if guided through design or research, by facilitators, in collective use-cases, this game could have even more potential than unguided.

## The future of Stories from Watertown

For now, the game Stories of Watertown will be tested in the form that is presented here in a workshop with people involved in innovation and living labs in July 2022, in The Netherlands. In this session, participants will be guided to discuss a couple of the fables in pairs and then share with the group what was their interpretation as a sneak peek to its use and possibilities. Hopefully from there, it might be picked up and used more extensively by someone else.

# Chapter 5.

## Closing

### Overall discussion

Through this work, various topics and their interconnect- edness are addressed with mixed methods. The result is the modification of some frameworks and the creation of a game which holds the potential to help reflexions about worldviews and communicate them with other people. But how these actual frameworks and tools work in real life has not yet been tested beyond my own autoethnographic use. Nonetheless, it points to a promising way in the use of nar- ratives as a means of reflexions, something that is already explored in other contexts (e.g. in primary education; *Progra- ma de competència social*, Segura, et al.). This product that now requires testing, could and should be considered as a tool for research-through-design, therefore its potential use as part of further research could unveil more insights on the way worldviews awarenesses, honesty and trust could be en- abled in different contexts. Through these iterations, I would recommend extending the theoretical framework behind the stories and the mapping of worldviews, as —although in this work there are only two main sources— a more extensive review of the cited authors and others in the field of social sciences, ecology, developmental awareness and education could provide a much more solid and useful foundation to- wards the practice of narrative-led worldviews transitions.

Moreover, in chapter two, posthuman and postantro- pocentric stances to life were explored, but the game doesn't hold strong relations towards these under- standings and practices beyond being at the foun- dation of how the tool should work. It was also seen that these metanarratives offer new understandings, but that often lack the connection the the practice and knowledge levels of the Knowledge-Practice-Be-

lief Complex — in the western context. This opens up another direction in research and creation of embod- ied new western mythologies that transcend the field of the arts and reflexion into the field of management and ritualistic practice. In that sense could be inter- esting to explore the convergence of reflexive prac- tices with these new mythologies and rituals, and the spaces this could have in innovation, education, science, industry, agriculture, politics, etc.

Following this direction, the emergence of journals as the *Journal of Awareness-Based Systems Change* or magazines as *Emergence Magazine* is promising in this emerging field of decolonising systems change for new sustainable (or beyond sustainability) paradigms.

### Conclusions

This work began with a statement on the need to design differently, of doing research differently, and hopefully this work has archived it — even if only a little bit. The four former chapters have structured a narrative about transitions and how these require the consideration of a rather disregarded worldview (Ives, t al., 2019), and from the practice of de- sign-research and autoentography slowly proposed a narra- tive framework to reflect in multistakholder contexts about the different ways an individual and a group understand the world and enact change.

In the first chapter, four case-studies were used to identify that for a trustful and effective innovation Worldviews Awareness, Honesty and Transparen- cy (WAHT) are needed. These three aspects were presented and understood as the foundation to the so-required mindset changes and, therefore, radical and transformative innovation towards overcoming the current paradoxes. Yet, no [evaluation] tools dealing with the facilitation of WAHT were found in the context of living labs. As a result, it was regarded as important to develop such artefact in the quest of

helping these platforms archive better collaboration and transformative innovations.

In the second chapter, I presented existing theoretical frameworks for worldviews and explored what it means to engage in what I have been advocating as necessary to have a new presence on earth and create and embody new mythologies and narratives of being. But more importantly, showed an explanation of how worldviews are deeply related to the performative and behavioural *else*. And through a critical look to Wilbert's change work (2000, as cited in Brouwer & Woodhill, 2016) and Hedlund-de Witt's Integrative Worldview Framework from autoethnography and the living labs case studies, a comprehensive cartographic template to map worldviews and their connection the behaviour has been proposed in the spirit of not restricting reflexions to existing archetypes. This 'cartography of being' proposes to map the understanding of the self, of inter-personal interactions and inter-being or world interactions as the level of the individual and of the collective, hence giving space to inner drivers and values but also the understanding of a community, systems and the universe's nature.

The third chapter focused on the conditions that enable the realisation of assumptions through a limited Bohm dialogue (1996/2014). It was found out that questions trigger reflexions while narratives, and especially fables, provide a base to reflect on specific ways to understand the world and behave according to some assumptions. Besides, I highlighted the importance of ambiguousness, especially in narratives, as it allows all sort of ontologies to relate differently with the same piece. On the other hand, ambiguousness on questions might be rather counterproductive as often it requires the formulation to change depending on the interlocutor. Moreover, challenging assumptions mostly happened in social contexts where opposing ideas emerged, which suggests that to advance towards new ontologies might be more effective to have group discussions as Bohm

(1996/2014) suggests.

Finally, the fourth chapter reviews a game design process integrating the prior insights. From a modified version of the Integrative Worldview Framework (Hedlund-de Witt, 2013) some behaviours of the living labs are associated with different worldviews and entwined narratives are proposed to allow reflexions on how these behaviours impact their environment. Questions are proposed as triggers for reflexion at interpretative levels and introspective levels. In this chapter some of the key reasons on why the tool is how it is are explained, but could be summarised as a search for an adaptive collection of items that doesn't restrict reflexions into a single process and hence embodies a respect for diversity and the promotion of conditions to enact change — without being forced into them. Also, a living lab evaluation use is proposed for the cartography of being. Finally, because of the openness in how to use the game it is also suggested that it could hold potential to be used in other contexts than living labs.



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# Stories from Watertown

## A story-based approach to familiarise with worldviews

MISSION  
ZERO

FUTURE  
PROOF  
LABS

THE HAGUE  
UNIVERSITY OF  
APPLIED SCIENCES



UNIVERSITAT POLITÈCNICA  
DE CATALUNYA  
BARCELONATECH



UNIVERSITAT DE  
BARCELONA



## Join me in Watertown

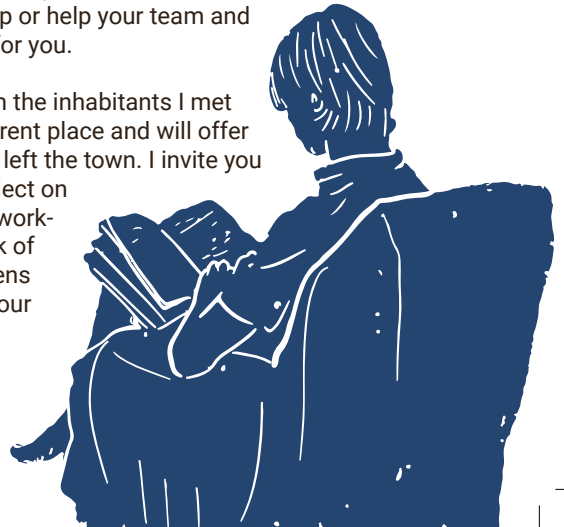
Hello there!

Let me introduce myself, my name is Jan, and I am a story lover. Why? I grew up in a home with books on every wall, table, and cupboard. Texts of all sorts: essays, scientific, short stories, fiction, etc. The books and I would have a date every night. And from chapter to chapter of *Le Petit Prince*, among *Les Aventures de Petit Nicolas* or of Tintin, and the foreign tales of *1000 Ans de Contes*, I became a story enthusiast. Stories have a special thing that allows you to look at things from many lenses, discover something new and imagine other realities.

But why is that any relevant, you might wonder? Narratives are at the core of how we look at the world around us and make sense of it. But as we grow up, we often forget their importance in allowing us to see things differently, understand different truths and listen wholeheartedly. The consequence of this loss of touch with stories as pieces of knowledge and wisdom is that we fail to recognise how powerful it is to understand where someone comes from. In fact, when we listen, immerse ourselves in a story and detach from our judgements, we can unlock a much-required empathy that will allow us to engage more honestly, efficiently, and creatively with those around us. Whether you got here to read stories, for self-discovery, to deepen a relationship or help your team and stakeholders to collaborate, this game might be for you.

I gathered five stories for you. They are tales from the inhabitants I met in Watertown; each character comes from a different place and will offer their perspective of what happened when the cat left the town. I invite you to learn from their stories, interpret them, and reflect on your interpretations and yourself. And, if you are working on a project with other people, you could think of Watertown as the space where this project happens and familiarize with worldviews in this space – your own and others.

Welcome!



# In this set



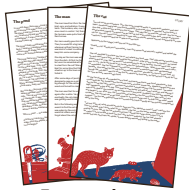
Introduction card



Town map card



3 instructions cards



5 story sheets



8 red interpretation cards

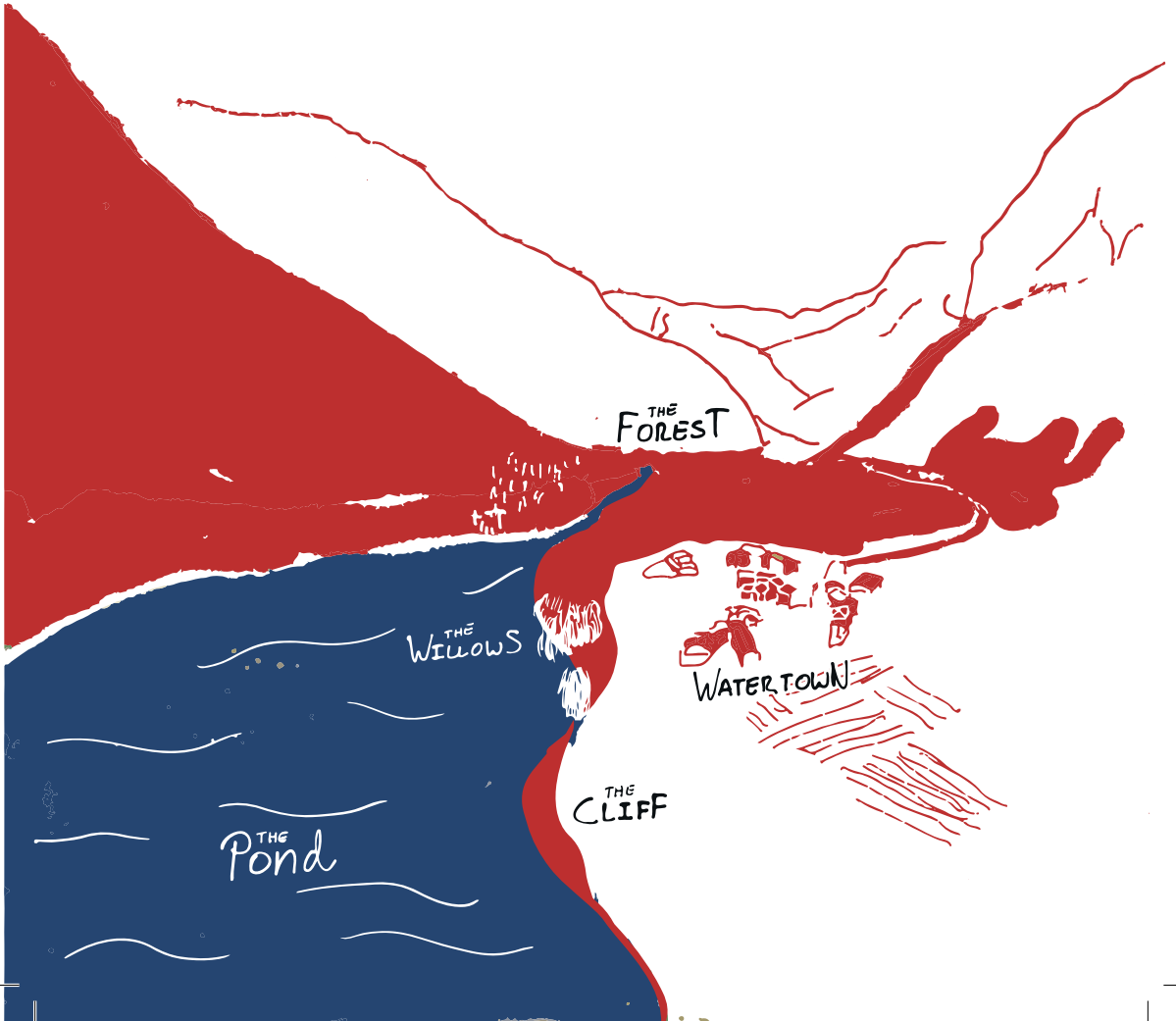


8 blue reflexion cards



Cartography template sheet

# Map of Watertown



# Mode 1

## Get to know yourself

Individual  
+30 minutes

This is a personal reflexion exercise, do it with calmness when you are not in a hurry. You will need a notebook and find a space where you can relax, feel comfortable, and be by yourself.

1



Read the five stories,  
there is no specific order

2



Think about the characters  
and their behaviours  
(red cards)

3



Reflect on how you feel identified  
with the characters and situations.  
You can use the blue question cards  
and write down your reflexions in a  
journal or notebook.

4



Try it out with other stories, fables,  
novels, movies, and songs... and  
come up with new questions

5



Dare to write a fable of your own that  
highlights your reflexions

**These instructions are for reference, use the contents of the package at your will**

## Mode 2

# Understand another person

2 - 4 participants  
+20 minutes

You have to meet someone you have to collaborate with. You might want to consider beginning this meeting with a short warm-up to discuss your assumptions over each other and learn from your positions.

1



Bring the fables to the meeting

2



Choose 1 or 2

3



Read them together or at loud

4



Discuss the characters' behaviours and what could have led to these situations (red question cards)

5



Share how you relate to the different characters and situations (blue question cards)

6



Be curious about the other people you are conversing with and avoid judgments

These instructions are for reference, use the contents of the package at your will



## Mode 3

### Map a collective's evolution

+2 participants  
1h individually + 1h collectively

Seeing how a group thinks and their thought evolves can be valuable to foster a sense of community and togetherness, define the best paths of action from the convergence of values, and glimpse the impact of their activities on the group's worldviews.

1



Get people of a group  
(coordinators, some stakeholders...)  
to have individual reflexions  
(as stated in mode 1)

2



Hold an informal reflexions  
sharing session

3



Allow people to share what they  
want from their reflexions

4



Place the reflexions  
in the included cartography  
following the description

5



Keep the discussion open  
and let people add to  
each other reflexions

6



Set a date for another session  
and plan for it  
(e.g. every 6 months,  
introduce new stories if necessary)

These instructions are for reference, use the contents of the package at your will

## The fox

There was a little red fox who got lost in the forest. After wandering among the trees for hours and looking for a place where she could settle, she found a small town between a forest and a lake. What a mirage! Maybe in that town, she could find something to eat and recover. The village didn't look very big from the forests; it was more like a bunch of houses built together by a pond. In the sandy streets were footprints of various shoes, even different animals. After walking along the paths for a while, the fox encountered a well-fed cat.

'Welcome to the village', the cat told her. But the fox was more hungry than anything and wasn't well prepared to have a conversation with an empty stomach. If the cat was courteous enough to welcome her, he would help her settle in, and they could become good friends. So politely thanking him, she asked where food was to be found. The cat stayed still for a few seconds, maybe a minute, and then turned around to show her the way. He didn't have any hurry, figured the fox. The cat got inside a house and came out a while after. The fox assumed the cat was arranging the food as they kept walking. A few corners further, the cat quickly turned towards a food plate and began to eat. There wasn't space for both of them, so the fox waited. When the cat left, he left some food remainings on the plate, which the fox understood were for her.

The fox had food on the plate every day. Days became weeks, and weeks became months. Soon, the fox grew up, and although she had food, she also complemented her meal with some rabbits she hunted. Yet, one day she found the portion on the dish to be extremely small. At first, she thought the cat needed more food that day, but it quickly became a habit. How could the cat be so greedy as to leave her with almost nothing? In her community, everyone used to share with other animals because it was the right thing to do. That didn't seem to be the case anymore in that town. The fox felt outraged by the loss of morality of her fellow villagers. Resolved, she went to see the cat. The cat was playing with some mice by the pond. So, she avidly approached him.

'Tell me, little cat. What should we do to stop you from taking so much food?' asked the fox before doing a little push to scare him off.

But the cat stood still. He didn't speak. He only moved his head to look at her and the cliff behind him. 'Could he not be aware of what he was doing wrong?' thought the fox. He had to be punished for his actions and lack of regret, and when she gave him a little push, the cat fell into the water. He was never seen again. From that time onwards, the fox couldn't find the cat food anymore and had to work harder hunting the mice taking over the village.



## The mice

There was once a village where mice and the town cat befriended. They would look after each other and play together. The mice saw the cat as a sort of town protector who would wander around. The cat lived inside the human houses and the mice underneath them. One day, as a mouse was in the forest gathering some food, he saw a little fox entering the village. He quickly ran to inform all his fellow mice.

The mice were altered for the news. They did not fancy another animal who could eat them in the town, but neither they knew if the fox was just passing by or wanted to settle in. So they decided to hide and see what happened. The days went by, and the fox still stayed in the town but hadn't made any effort to hunt mice, so the bravest began to go out again, and all the mice soon retook their lives. One mouse told the others he had seen the fox eating with the cat, and everyone felt safer when they concluded the cat had a deal with the fox so she would not attack the mice.

Over time, the fox grew, and although she wasn't hunting mice, they feared it could happen soon. Besides, it was also becoming a problem for the cat, who became skinnier, and the mice who hadn't any food leftovers anymore. They couldn't understand how the cat allowed that situation, so the mice called for a meeting to address the issue.

'It is unjust the fox gets more food than the cat, whom he looks after us' exposed a mouse.

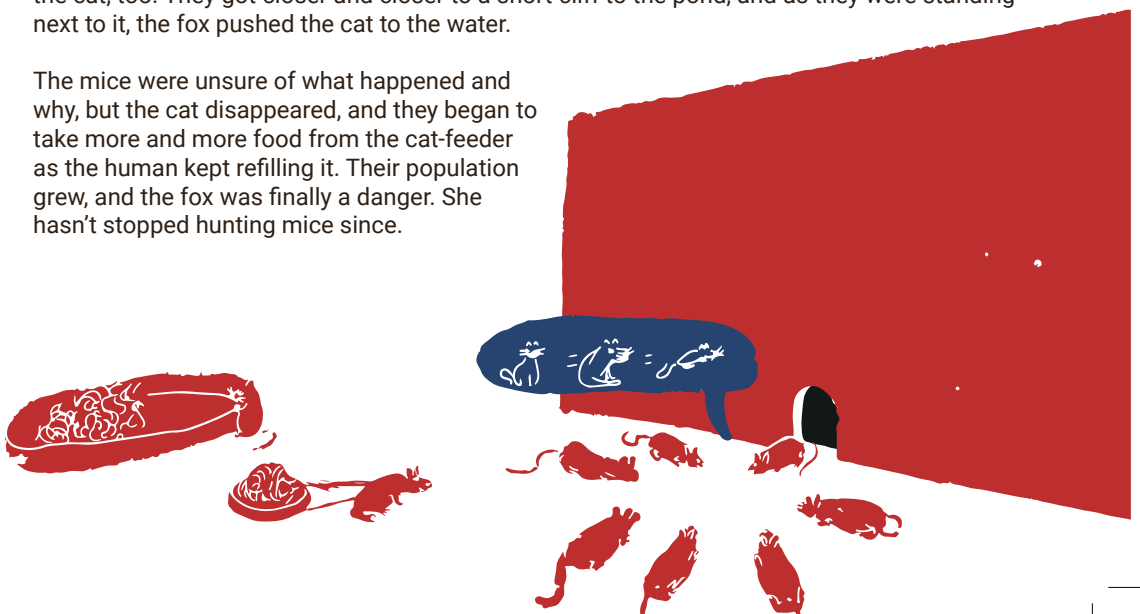
'Not only, because the fox is eating so much we don't have leftovers and will starve to death' complained another.

After long talking, one of them —who was praised for his ideas— proposed: 'since the food is not properly distributed and the fox is profiting from this unfairness and inequality for all, why don't we split the food in four? A part for the cat, another for the fox, one for us, and the fourth for visiting animals?'. The proposal seemed reasonable to all and was quickly accepted by all the mice of the village.

The following day, the mouse who looked after the cat the most went to where the human left the food and split the dish contents in four. He took one part and gave it to the other mice, then he took another and brought it by the pond where many animals passing by stopped to drink and eat a bit. And so they did for a few days, sometimes eating together with the cat, others at different times and places.

About a week later, while some mice were by the pond, the cat approached them. When he did, often it was to play, but this time the cat wasn't looking very friendly. He was rather aggressive and began to run after the mice right when the fox appeared and began to run after the cat, too. They got closer and closer to a short cliff to the pond, and as they were standing next to it, the fox pushed the cat to the water.

The mice were unsure of what happened and why, but the cat disappeared, and they began to take more and more food from the cat-feeder as the human kept refilling it. Their population grew, and the fox was finally a danger. She hasn't stopped hunting mice since.



## The cat

The cat could go anywhere. Over the roofs, jumping walls, in everyone's gardens and over trees. Freedom had given him the possibility to do everything he wanted, and he loved it. One day, a little red fox arrived in the village. That day the fox and the cat met. The fox was a small animal, barely the same size as the cat, but with a distinctive dark orange and brownish fur. The cat found it interesting to have such a similar animal around. Amazed by the new creature, he approached her to take a closer look.

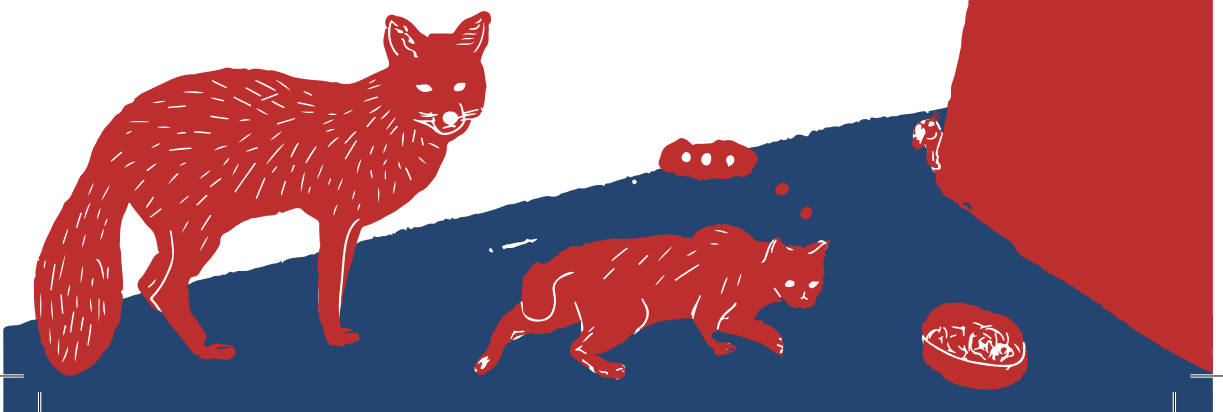
'Welcome to the village,' said the cat to the little fox.

'Thanks a lot. Would you know where I can find some food around?' replied and asked the fox.

The cat doubted if to show the fox or not where the food was. That little animal would grow up and need more food, so he would be left without. After giving it some thought, he turned around and let it be; the fox would find something to eat by herself. The cat went into a garden to zizz. As he left to eat a bit, he saw the fox following him. 'What does she want now?', he mumbled. The fox followed him until he arrived on a sandy street with whitewashed facades. She waited for the cat to finish eating, and then she ate too from the cat food. Although the cat didn't want to show the fox where his food was, he figured out it would be fine for now as there was enough food.

As the fox grew up, she needed more food, but because there was food abundance, they could both be fed. Sometimes the cat ate more, at other times less. Weeks passed, and one day, he found the food split in portions and other animals eating it by the pond. The same kept happening day after day. The food he was being left with wasn't enough, and seeing it was all an idea of the mouse, he ran after him to the pond. Suddenly, the fox also appeared and began to run after him. He found himself between the fox and the water, without any runaway. The cat had never got that close to so much water and he didn't know what would happen. The fox was getting close to him and didn't look friendly as she quickly complained about the food.

'Tell me, little cat, what should we do to stop you from taking so much food?' said the fox. The cat, afraid, didn't know what to do. Neither the fox nor the water seemed a good ending for him. Would the fox actually kill him? Would the water drown him? Could he swim? Could he attack back the fox? And before realising, the fox had already scratched him, and from her strike, he was deadly-wounded, falling to the water.



## The man

The man loved his life in the town, wildness living around and without the stress of human-kind, cars, and pollution. It was much different from city life. The village had a few inhabitants. The humans, who, over time, built the houses and reshaped the landscape, were the ones most in control. Yet, there also were other inhabitants. The cat was one of them, and the humans were quite fond of him. Everyone loved that cat and allowed him to go inside their homes.

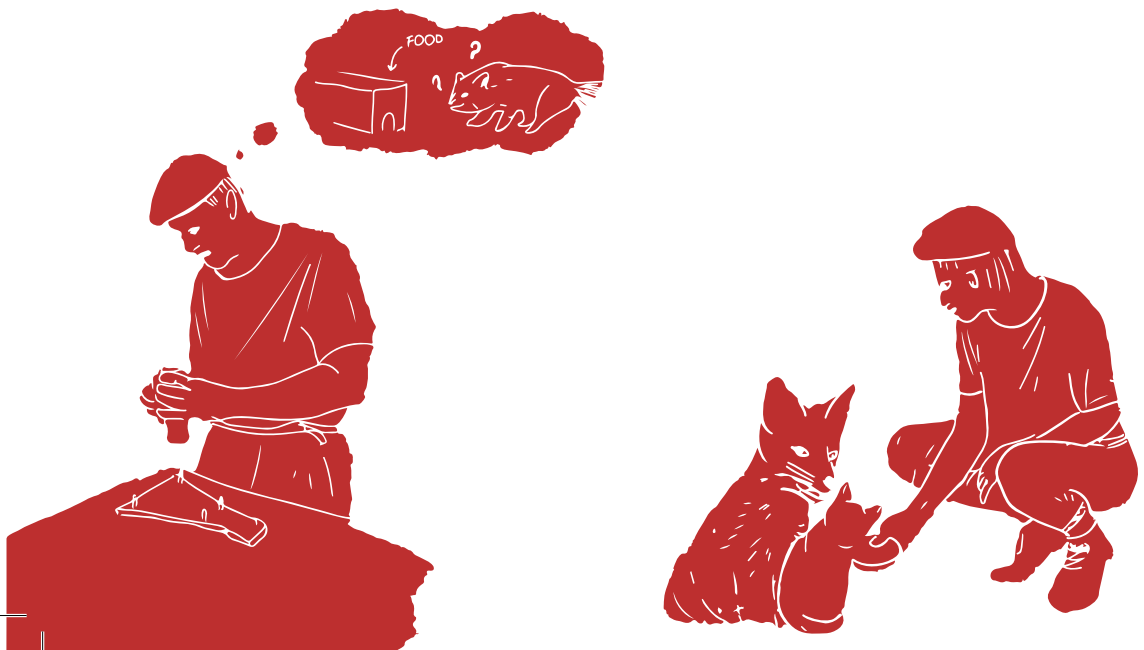
Our men usually gave him food. 'Food for himself and the food for the cat,' he often said. Then, he would fill a big terra-cotta dish with food and leave it outside, so the cat could eat whenever without having to get through the fence. He made a habit out of it. But for them it was kind of a deal: in exchange for the food, the cat would also spend time with the man and keep him some company.

One day as the man was walking where he left the cat food, he saw another animal eating from the dish. At first, he found it cute to have new creatures eating in Watertown streets, but soon he remembered he had left that food there solely for the cat. How did that fox dare to steal from the cat? Were not there enough mice and rabbits around? The man was troubled for some time that things didn't work as they were supposed to. He even brought the situation up to the town council. Anyhow, they discarded hunting the fox and killing it. Laws forbid it.

After some days of poorly sleeping, the man ideated a solution for the cat food problem. He designed a cage as a cat-feeder where the dish could be placed inside. The box opening was big enough for the cat but too deep for the fox to get in and reach the food. So he got some wood and turned his marvellous idea into a reality.

The man saw that for some time the cat took out the plate and left it inside the structure again after a while. 'He just had to learn and get used to eating inside.' Days went by, and eventually, the cat stopped taking the food out. 'Finally, he learned!' the man thought, as he was getting used to leaving the food inside the feeder.

But in the following weeks, the cat was nowhere to be seen. The town even organised a search to find the cat and know what happened regarding his disappearance. Yet, the food was eaten by the end of every day, so the man kept feeding the cat with the hope one day he would let others see him again. But as is often said, time heals everything; the inhabitants forgot about the cat and focused their worries on the growing mice population.





## The pond

In current days there was a pond that had a village built nearby. For thousands of years, the pond sourced its waters from a stream. The stream begins in the forests and moves through the planes and to the sea. Throughout its life, the pond has seen all sorts of creatures who lived among and around her body. Her surroundings had changed steadily over time. Nonetheless, it was since the establishment of the human community by her side —over six hundred years ago— that the whole landscape changed the quickest.

The pond's body would extend over a few hectares at the foot of a valley. She laid over a bed of sand and sandstone that allowed the waters to flow into the Earth. Around her, some willows would shade her and caress her surface with their sharp thin leaves. Among them, some rush forming dense mazes in the water.

The pond had a lot of tenderness for all the creatures around. They were like sons and daughters that kept relying on her generation after generation. She wasn't an easy mother to them; as much as she could give them water abundance from her body, she would also ask for the water back. Only under that condition, they would be, and life would blossom. And so did everyone. It was only fair for all she provided. The men usually took the water from the deepest of her body, from the soil-protected vessels. Sometimes this troubled her since only she could sense how much water they took; at times, they took so much that the wells got dry for a while. It hurt. Many other creatures with little options to move around also took it from below. Yet, they keep a constant cycle of giving and taking, far more stable and caring. Many animals passing by, or the well-established mice population would drink from her shore and a lively cat from the small puddles of the pond before the rush.

But one day, the pond hugged the cat as he fell from above the cliff into her body, and their waters blended while some torrents dragged the solid remains downstream and to the other side. The cat was one more on the list of those to become with water again, just like the ritual mandates. It was obvious: what they all shared wasn't enough to keep them united until they would be together again. The pond didn't judge. It was not her position to do so. She only cared about keeping the circle going and the rituals guaranteeing it. She was one of the guardians of life. Another creature would look at the situation in a new way, take different actions, and the existence would continue.

'Who is next?' — the water asked.

And the fox and mice kept going to the pond, the humans pumping water from the depths, and the trees quietly extending her body to the heights.



INTERPRETATION CARD

**Which character was the most egalitarian?**

INTERPRETATION CARD

**Which character had the strongest moral?**

INTERPRETATION CARD

**Which character had the best understanding of the situation?**

INTERPRETATION CARD

**Which character had the strongest will?**

INTERPRETATION CARD

**Which character had the highest possibilities to solve the situation if they acted differently?**

INTERPRETATION CARD

**Which character was in best terms with the others?**

INTERPRETATION CARD

**Which character was the most selfish?**

INTERPRETATION CARD

**Which character was the most affirmative?**

REFLEXION CARD

**How close do you feel  
to the cat?**

REFLEXION CARD

**How close do you feel  
to the man?**

REFLEXION CARD

**How close do you feel  
to mice?**

REFLEXION CARD

**How close do you feel  
to the fox?**

REFLEXION CARD

**How close do you feel  
to the water?**

**or**

**What is the water in you  
and your surroundings?**

REFLEXION CARD

**What is the food  
in your story?**

REFLEXION CARD

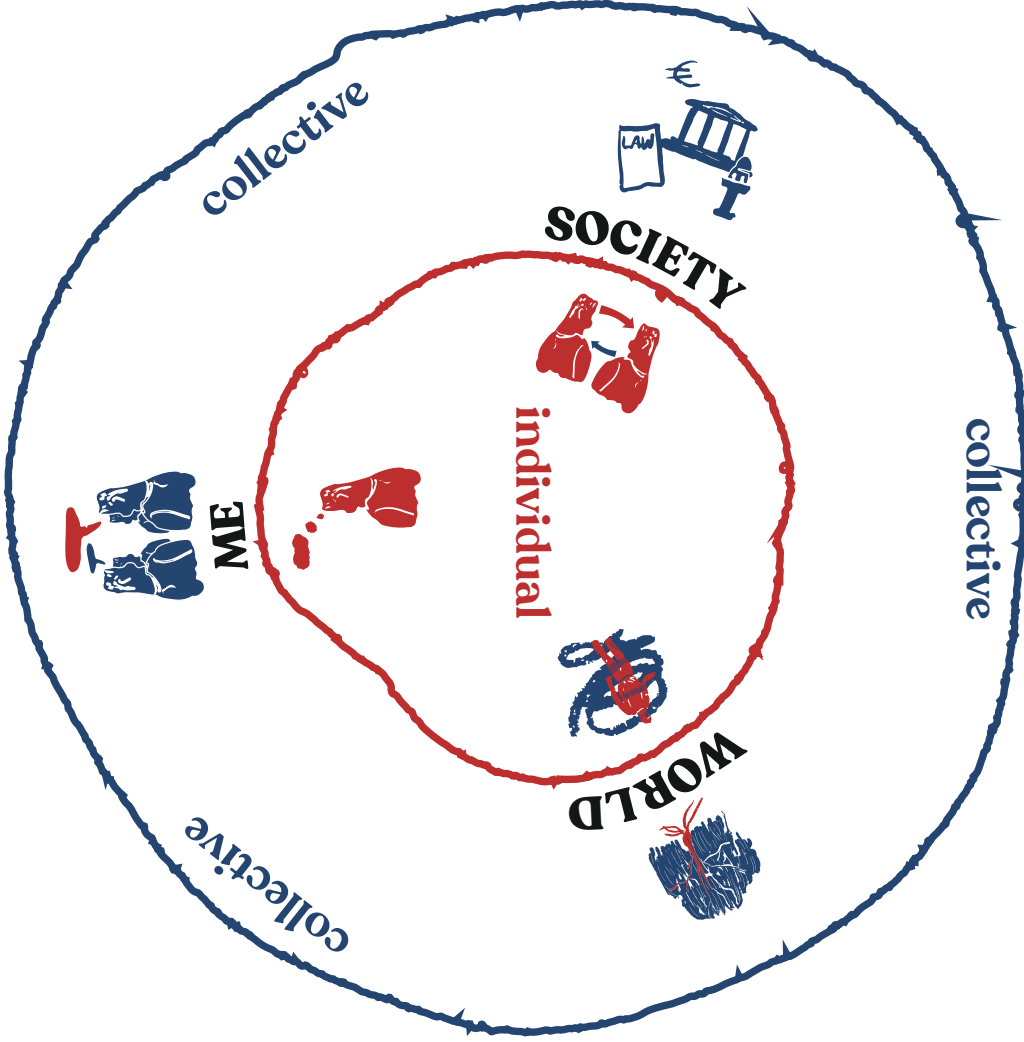
**What cat-feeders  
are you building  
or using?**

REFLEXION CARD

**What character  
do you strive to be?**



# Cartography template



The stories and questions in this set open up to multiple understandings and interpretations. Possibly your reflexions are very different from someone else's. This cartography can help you classify your reflexions or even deepen them with topics you didn't consider. Also, having a thematic classification can help you discuss these personal reflexions in a group, create a collective picture, or track changes in mindset over time in an organised manner.

	Individual	Collective
<b>Me</b>	Includes those reflexions about the perception of oneself. Answers the question 'who am I?'. It might enclose knowledge, skills, ...	Includes those reflexions about the collective values and beliefs. Answers the question 'who are we?'. It might enclose discourses, language, goals, ...
<b>Society</b>	Includes those reflexions about individual (social) behaviour. Answers the question 'how do I interact with other humans?'. It might enclose characteristics of interpersonal relationships.	Includes those reflexions about social behaviour and structures. Answers the question 'how do we organise?'. It might enclose social arrangements, norms, embodied and structural values and assumptions, ...
<b>World</b>	Includes those reflexions about the individual behaviour as living beings. Answers the question 'how do I interact with the World?'. It might enclose considerations, understandings, and relationships between us and the non-humans.	Includes those reflexions about the World's behaviour and its structures. Answers the question 'how does the World organise?'. It might enclose understandings of science and philosophy (energy, materialisms, immanence, ...).