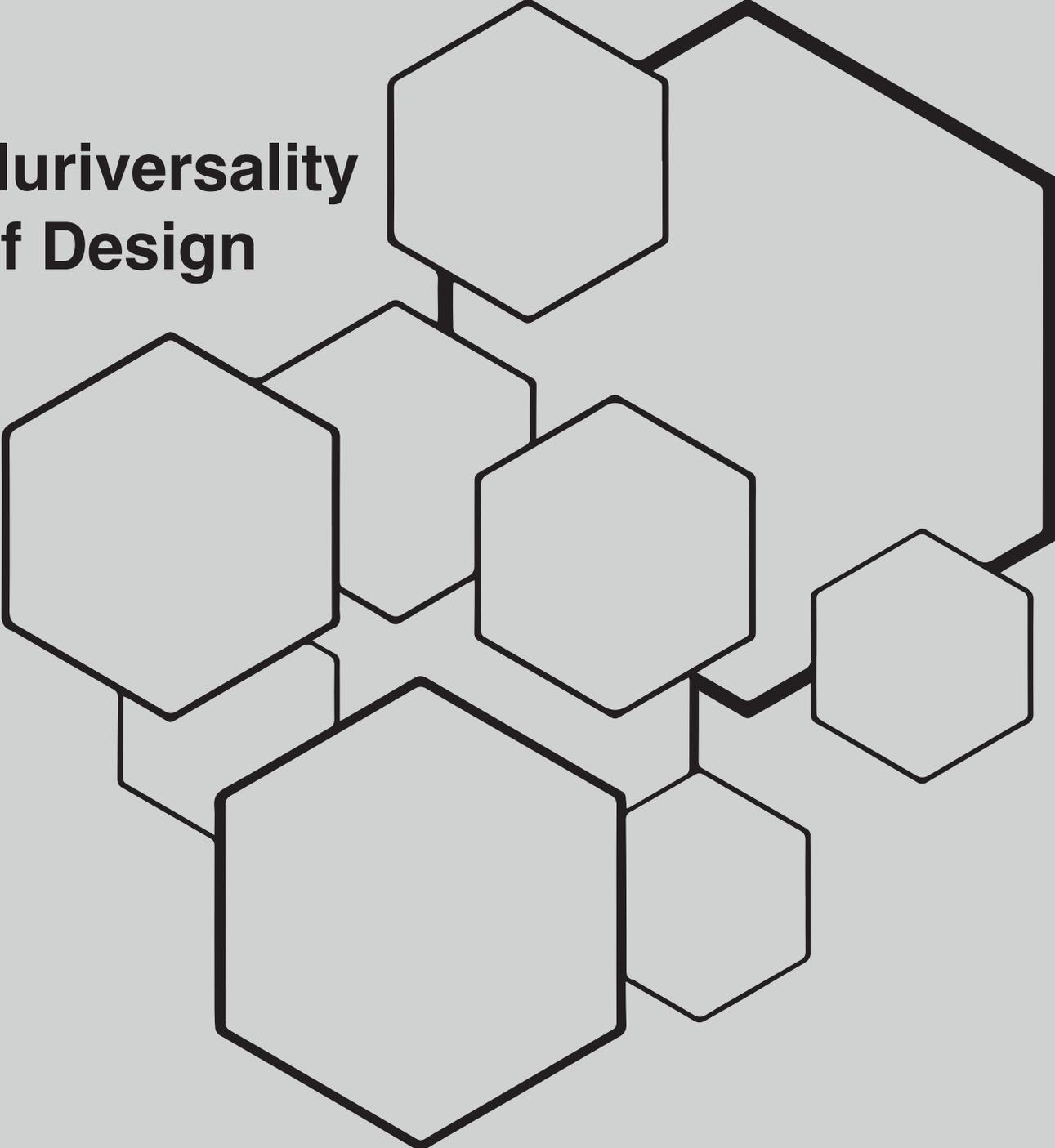


Exploring the Role of Pluriversality in the Transformation of Design



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Abstract

This report presents the exploration of how pluriversal principles can support a transformation of design to further advance a sustainable transformation of society. The outset of the project has been that contemporary design practices partake in the reproduction of the unsustainable and oppressive dynamics that can be combined under the header of ‘modernity’. By predominantly designing for the supposed ‘one reality’ of what Law (2015) calls the ‘One-World world’, contemporary design is actively reproducing the entrenched ways of knowing, being, and doing of modernity and simultaneously oppressing the plurality of realities that exist as alternatives to this ‘the one reality’.

The exploration was carried out by applying the methodological approach of participant observation in the development of a learning game as part of a project in the Danish environmental NGO of NOAH in the Spring of 2023.

Through this report, I will present how pluriversal principles have been applied in NOAH’s project to actively decenter modernity in the design process and to simultaneously indicate the alternative ways of knowing, being, and doing that are being enacted by communities and movements existing within realities ‘at the edge of modernity’ (Escobar 2018).

The application of the principles allowed the process to result in a learning game that seeks to challenge the destructive and oppressive nature of modernity while also indicating the sustainable and non-oppressive approaches that are being enacted throughout the multiple alternative realities of the world. The game and the insights that I have gained through my participation thus constitute my contribution to the transformation of design.

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1 Introduction

The foundation for the thesis has been the position that the current, dominant design practices partake in the reproduction of unsustainable aspects of society. These aspects of society can be combined under the header of ‘modernity’ that can be described as “entrenched ways of being, knowing and doing” (Escobar 2018, p. 19). The continuous reproduction of modernity is by many researchers considered the main driver behind, not just the current environmental and climate crisis, but also Global North hegemony over the Global South (Alimonda 2015; Escobar 2018; Fry 2017; Taboada et al. 2020). Design is a constituting factor in upholding modernity through its preoccupation with market-based perspectives that are “tied to the networks of profit-making, human-centered, and technocratic objectives” (Taboada et al. 2020, p. 142). This entanglement of design and modernity means that “design practice, at its contemporary state, contributes to replicating a homogenizing ontology that subjugates aesthetic, functional, and cultural values of non-Western design” (p. 141).

The acknowledgment of the role of design in the reproduction of modernity has led researchers to call for a transformation of design (Escobar 2018). The intention of this transformation is for design to diverge from its current role in the reproduction of modernity, and instead take on its role in the required transformation towards a truly sustainable and just society.

Through my thesis, I have explored how such a transformation of design can be supported by an approach based on ‘pluriversality’ (Escobar 2018). The notion of pluriversality entails “a world in which many realities exist” (Barcham 2022, p. 5), and should be viewed as a challenge of the ‘universality’ of modernity that posits that the world is made up of one reality. It is this ‘universalizing’ aspect of modernity that has enabled the entrenched ways of being, knowing, and doing that constitutes the ‘one reality’ of

modernity, to dominate and oppress realities that are constituted by alternative ways of being, knowing, and doing,

My exploration of how design can be transformed has been possible through my participation in a design project in the Danish environmental NGO, NOAH, during the Spring of 2023. The project was called ‘Creative Connections’ and aimed at illustrating the injustices and environmental destruction happening throughout global value chains. I engaged the project as a ‘participant observant’ and the exploration was undertaken by applying what I have called ‘pluriversal principles’ to the design process. The principles are meant to represent the core tenets of pluriversality and are based on pluriversal literature as well as literature on political ecology. My research has been guided by my research question:

How can pluriversal principles support the transformation of design in order to advance a sustainable transformation of society?

The term ‘transformation’ regarding design is used instead of e.g., ‘transition’, to avoid conflation with ‘transition design’, and to illustrate the scale of change that is needed. Regarding society, ‘transformation’ is used to illustrate the point that we should not disband the society that we currently have and move towards another, but instead, engage with the realities that we inhabit and seek to transform them.

In this report, I will present how the pluriversal principles were applied in NOAH’s project to transform the design process to ensure the transformative potential of the outcome. This report should therefore be read as a case study on how pluriversal principles can be applied to transform design processes to strengthen their critique of unsustainable dynamics and structures and enhance their ability to indicate alternatives.

The outcome of NOAH's project was a learning game that was aimed at challenging modernity while simultaneously emphasizing alternative ways of knowing, being, and doing. The learning game itself, and the insights I have gained based on how pluriversal principles were applied and on how their application affected the process and the outcome, constitute my contribution to the transformation of design.

In this report, I will in section 2 motivate my research question by elaborating on my positions on sustainability and design. In section 3, I will present the theoretical approach of my project and in section 4 I will introduce NOAH and their project. In section 5 I will present the methodological approach of my project and through section 6 I will present the experiences from my participation in the project. In section 7 I present four key insights that, together with the outcome of the design project of NOAH, constitute my contribution to the transformation of design. A discussion and reflection on the potential limitations of my thesis are presented in section 8, and finally, I provide a conclusion on my thesis in section 9.

2 Perspectives on Sustainability and Design

To motivate my research question, I will elaborate on the positions upon which it is founded. I will in this section present my view on the dominant approach to sustainability, how I believe sustainability is best conceived, my conception of design in this project and the role of design in the required transformation of society.

2.1 The dominant approach to Sustainability

This thesis is to be read in the context of the global environmental and climate crisis, the consequences of which are becoming ever clearer with the increasingly frequent extreme weather phenomena, like droughts and floodings, and what has been called the '6th mass extinction' (WWF n.d.).

The foundation of the dominant approach to sustainability, and thus the dominant approach to engaging with these issues, was established in 1987 with the definition of 'sustainable development' in the Brundtland report as development that "meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland 1987, p. 16). In this conceptualization, sustainability is coupled with development to usher in "a new era of economic growth" (Brundtland 1987, p. 7). This approach to sustainability is thus firmly rooted within modernity and its neoliberal agenda that emphasizes continuous economic growth as the foundation for the progress of society. Therefore, while the notion of 'sustainable development' may seem admirable and benign, it should be recognized that it rests on two normative assumptions, 1) that sustainability and development (conceived of as economic growth) are mutually achievable, and 2) that 'development' is what society should strive for.

To assess the consequences of the approaches to sustainability originating from this definition, I will draw on literature on pluriversality and political ecology to illustrate how ‘development’, understood as societal progress based on economic growth, is inherently linked to the ‘project of Development’ (now with a capital ‘d’), understood as the Global North export of modernity, ‘civilization’ and the neoliberal agenda to the Global South (Escobar 2018).

‘The project of Development’ can be seen as a corollary to colonialism (Alimonda 2015) and gained prominence in the aftermath of WWII amidst a wave of Global South countries gaining independence. It is exemplified in Harry Truman’s inaugural speech from 1949 where he states that: “we must embark on a bold new program for making the benefits of our scientific advances and industrial progress available for the improvement and growth of underdeveloped areas” (The American Presidency Project n.d.) and from the United Nations 1951 report ‘Measures for the economic development of under-developed countries’ where it is stated that “There is a sense in which rapid economic progress is impossible without painful readjustments. (...) large numbers of persons who cannot keep up with progress have to have their expectations of a comfortable life frustrated.” (United Nations 1951, p. 15). These two examples highlight how the project of Development entails the implicit production of what and who is ‘underdeveloped’. In line with this, Escobar (2018) argues that this project of Development, currently disguised as ‘development work’ performed by Global North governments, corporations, and NGOs, can be seen as a project aimed at maintaining power over the former colonies, where the labels of ‘developed’ and ‘underdeveloped’ establishes a hierarchy that essentially determines what kind of knowledge is valid, how and by whom this knowledge must be produced and how this knowledge is best applied to shape reality.

It is upon this hierarchical structure that the dominance of modernity is presupposed as Kothari (2005) argues: “Development has become a technical process of intervention that maintains the legitimacy and authority of Western modernity and the dominance of the neoliberal agenda” (p. 443). Similarly, Alimonda (2015) sees Development as one of the constituent elements of modernity and of how modernity hegemonizes issues such as race, sex, labor relations, human relations to nature, etc., in society.

Therefore, while the discourse in the Global North, spearheaded by the UN, continuously emphasizes the need for (sustainable) development it is important to keep in mind that development (the emphasis on economic growth) is one of the cornerstones in the ‘project of Development’ (the export of modernity and the neoliberal agenda). In this light, the Global North's emphasis on ‘sustainable development’ can be seen as a way to hegemonize approaches to sustainability, and as a way of suppressing alternative approaches that do not adhere to the neoliberal agenda of modernity.

By evoking the notion of ‘sustainable development’ the Brundtland report is thus activating a very specific conception of how to best approach the environmental and climate crisis. My intention here is to illustrate how these assumptions have significantly affected the way we comprehend and approach the environmental and climate crisis. The essentialization of ‘development’ regarding sustainability has set the stage for approaches like the aptly named ‘weak sustainability’ (Martínez-Alier & Muradian, 2015), where the decrease in one capital (e.g. natural capital) can be justified by the increase in another (e.g. monetary), and the more resistant, yet still problematic, notions of ‘green growth’ or ‘green economy’ (UNEP 2018), to which Escobar (2018) has noted that “the notion of a green economy corroborated critic’s view that what was to be sustained with sustainable development, more than the environment or nature, is a particular capitalistic model of the economy” (p. 43).

What has become increasingly apparent over the last decade is that these dominant approaches to sustainability are inadequate, as is exemplified by the most recent IPCC assessment report that summarizes how “despite progress, adaptation gaps exist, and will continue to grow at current rates of implementation” and even how “maladaptation is happening in some sectors and regions.” (IPCC 2023, p.8).

2.2 Alternative conception of Sustainability

My contention is not that the idea of development should be abandoned altogether, but instead that it would be beneficial to at least detach it from our conceptualization of sustainability. An alternative and more nuanced way of conceiving sustainability is through the framework of ‘Planetary Boundaries’ (PB), presented by Rockström (2015) and Steffen et al. (2015). Instead of focusing on how or if sustainability interferes with our assumed need for continuous development, the PB framework focuses on the preservation and maintenance of “the Earth system (ES) in a resilient and accommodating state” (Steffen et al. 2015, p. 736). The framework focuses on nine biophysical processes that together uphold the functioning of the ‘Earth System’. Each process is equipped with a quantifiable boundary which, if transgressed, might result in a severe destabilization of the entire system.

While the PB framework delivers a nuanced way of looking at sustainability from an Earth System’s perspective, and while it allows for policymakers to adapt the quantifiable boundaries in policy reforms, what is evidently missing is the social aspect of sustainability.

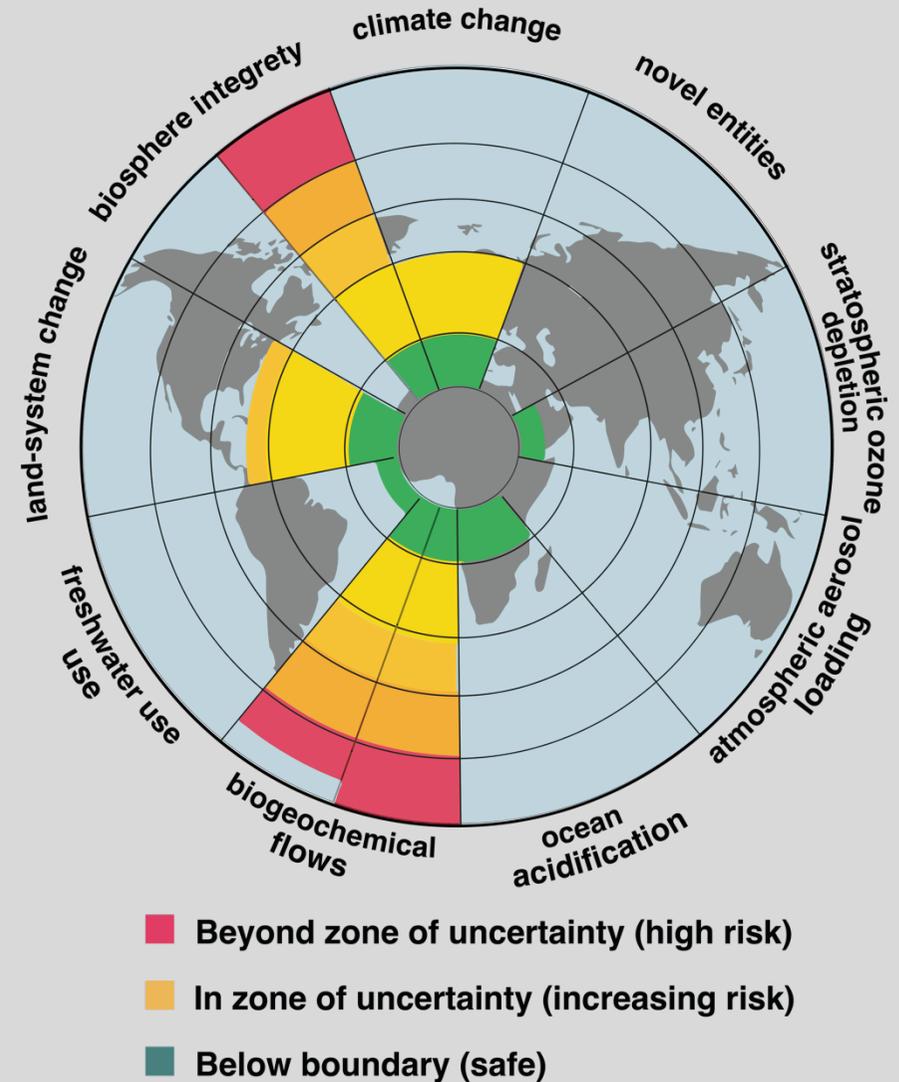


Figure 1: Planetary Boundaries. Adapted from Rockström (2015).
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With the ‘Doughnut’ model Kate Raworth delivers a strong and useful way of combining an Earth System’s perspective with a focus on environmental justice (Raworth 2017). The model consists of an ‘ecological ceiling’, made up of the PBs, and a ‘social foundation’ made up of 12 dimensions of minimum social standards derived from the 2015 Sustainable Development Goals. The model defines the space in between this ‘ceiling’ and ‘foundation’ as “an environmentally safe and socially just space in which humanity can thrive.” (Raworth 2017).

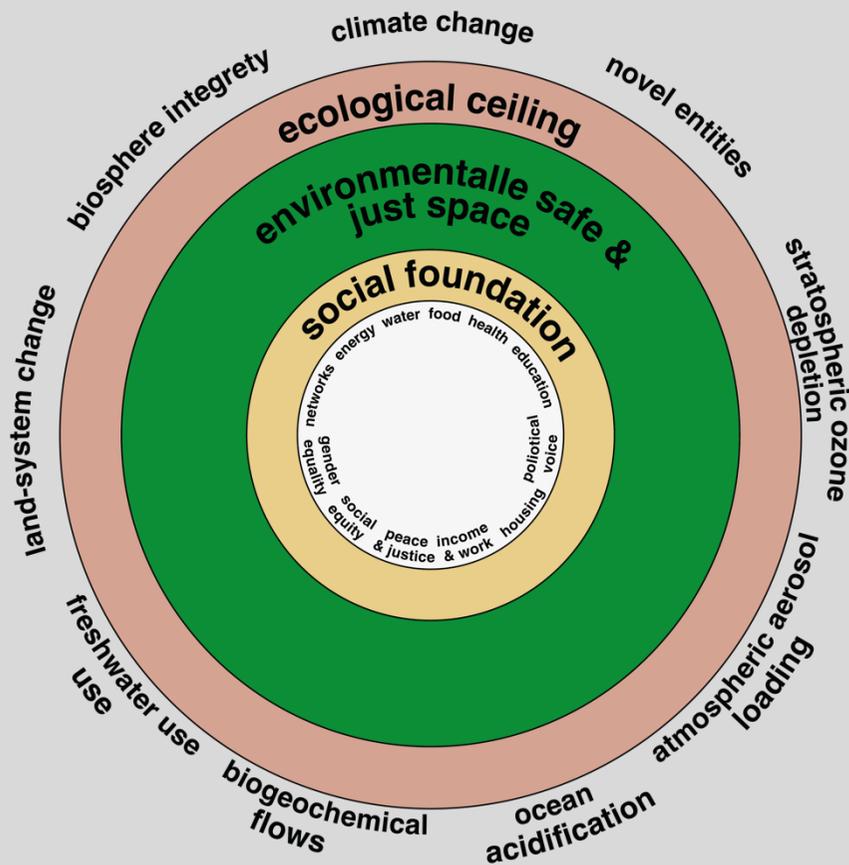


Figure 2: Doughnut-model. Adapted from Raworth (2017).
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The strength of the Doughnut model is in its coupling of the social and environmental aspects of sustainability. However, I will posit that the 12 dimensions of the social foundation are based on specific conceptions of what ‘social life’ looks like that might not apply to all realities within the world. Not all realities are for instance inhabited by communities that base their livelihoods on ‘income & work’. To articulate my view on sustainability I will therefore draw on the notion of ‘flourishing’. Flourishing, regarding sustainability, denotes “*the possibility that humans and other life will flourish on the planet forever*” (Ehrenfeld 2009, quoted in Escobar 2018, p. 122, emphasis in original). This perspective on sustainability is derived from Environmental Virtue Ethics, where the idea of ‘flourishing’ for instance has been propagated by Sandler (2007). Sandler argues for the rejection of what he calls “environmental monism” (p. 4) and instead emphasizes the need for a pluralistic approach to environmental issues that is based on the physical, emotional, social, environmental, and psychological flourishing of all life.

It is by combining the framework of Planetary Boundaries, the Doughnut model, and the idea of flourishing, that I have reached my articulation of sustainability as the intentions and actions that seek to preserve and enhance the integrity of the Earth System and the flourishing of all human life especially marginalized groups and those disproportionately affected by the environmental and climate crisis, as well as all other forms of life. I contend that approaches to sustainability based on this articulation would result in policies, initiatives, and actions that respect the biophysical integrity of the Earth System while simultaneously nurturing the multiple ways of ‘flourishing’ present in the multiple realities of the world.

2.3 What is ‘Design’?

Finally, I want to comment on the role of design in regard to (un)sustainability. Initially, I find it important to elucidate my conceptualization of ‘design’ in this project. In describing my view, I will draw on Terry Irwin’s (2015) ‘Continuum of Design Approaches’. From this position, design is not a single coherent field or profession but instead constituted by a continuum of approaches ranging from the mature disciplines, through developing disciplines to finally the emergent disciplines. Through this continuum, the “scale of time, depth of engagement, and context expand to include social & environmental concerns” (p. 231). A presentation of the continuum can be seen in Figure 3.

While Irwin excludes product design from his continuum, I will argue, based on experiences from the courses in my educational program, that the mature design disciplines, which are situated within existing socio-economic and political paradigms, are currently dominated by product design and service design. The developing disciplines, however, challenge these existing paradigms and engage in design for social innovation. Finally, transition design is situated within radically new socio-economic and political paradigms and represents the emerging disciplines of design. While ‘design’ should thus not be conceived as a uniform endeavor, I argue that most current design practices, or what I will call ‘contemporary design practices’, are still situated within the mature disciplines that work within, and even reproduce the current unsustainable socio-economic and political paradigms.



Figure 3: Continuum of Design Approaches. Adapted from Irwin (2015). Made in Adobe Illustrator.

2.4 Design for (un)sustainability

In outlining my view on how contemporary design is reproducing the current unsustainable dynamics of society, I will draw on the ‘Multi-Level Perspective’ (MLP) as presented by Geels (2005). While the MLP was originally developed to describe socio-technological change, and while it has been criticized for its approach to socio-technical systems as ‘knowable wholes’ (Valderrama et al. 2018), I find it useful to illustrate how change, transitions, and ‘development’ can be conceived in terms of design. I will thus use it to emphasize how our society and the crisis that we are in, are not a product of unconnected or random events but is a consequence of deliberate design actions and decisions, taken by real people, and how these actions continuously produce and reproduce the ‘dynamic stability’ of the systems that constitute our world. It is important to note, of course, that not one actor or social group alone is responsible for upholding the dynamic stability of any given system, and that “actors in these social groups act in the context of social structures and formal, normative and cognitive rules.” (Geels 2005, p. 449)

However, the main point that I am trying to make is, as Geels writes, that “the elements and linkages of socio-technical systems do not exist autonomously, but are created, (re)produced and refined by social groups” (p. 449). From this position, society, and the global crisis that we are in, are not a product of random occurrences, but have indeed been designed and are continually redesigned. A corollary to this view is the agency of design in the required transformation of society towards sustainability; if the unsustainable society of today is a product of design, then the sustainable society of tomorrow can indeed also be designed.

However, for design to actively support this societal transformation towards sustainability, design itself needs to be transformed. Currently, modern design has what design theorist Tony Fry calls ‘defuturing effects’ (Fry 2017). This ‘defuturing’ is to be understood as “[modern] design’s contribution to the systemic conditions of structured unsustainability that eliminate possible futures.” (Escobar 2018, p. 16). One aspect of defuturing is modern design’s embeddedness within the rationalistic tradition of science and how modern design is often predicated upon the for-profit, neoliberal agenda that constitutes modernity (Taboada et al. 2020). Another aspect is how modern design plays a vital role in the spread of the idea of the ‘One-World world’ (OWW), coined by Law (2015). The OWW rests on the assumption that there exists a single real “to which there correspond multiple cultures, perspectives, or subjective representations.” (Escobar 2015, p. 18). While this ontological position might seem harmless, the fact that this one ‘real’ has been dominated by the perspective of the Euro-American experience and has, through design, been exported to and forced upon the Global South through colonialism, globalization, and Development, has resulted in the defuturing of any other futures than the one propagated by the modernity of the Global North. While Escobar (2015) describes the OWW as the “underlying process” of the “model of social life that has become dominant over the past few centuries.” (p. 14), he simultaneously proposes a distinct and powerful alternative: ‘pluriversality’. I will expand upon the idea of pluriversality in the following section, but the fundamental idea is that there exist multiple reals related to the multiplicity of worlds that people inhabit and enact all over the globe. This position should not be conflated with constructivism or general subjectivism but should instead be seen as the insistence on the existence of multiple realities that are enacted through different ways of knowing, being, and doing. The strength of the notion of pluriversality lies in its critique of the OWW and its partition to displace the centrality of modernity in design, thus opening up a transformation of design.

2.5 Summary of Positions

The ‘transformation of design’ is, thus, at its core, an attempt to decenter modernity in design practices to advance the further development of design disciplines along the continuum of design. This transformation can be seen as similar to Ceschin & Gaziulusoy’s (2019) call for design to focus on ‘socio-technical-ecological systems’ that are Earth-centric and “operate with consideration of the future of not only existing humans but also of non-humans and future generations” (p. 164). A transformation of design will enable design to support a sustainable transformation of society, which entails the required break from the dominant unsustainable socio-technical systems and socio-economic, political paradigms, towards a society that preserves and enhances the integrity of the Earth System and the flourishing of all human and other forms of life.

3 Theoretical Approach

In this section, I will expand on the notion of pluriversality and its critique of modernity, which I will support with concepts and examples from the field of political ecology. Then I will illustrate why pluriversal design is a promising alternative to contemporary design practices, and why pluriversality has been an appropriate theory for my thesis. In the end, I will summarize a set of aspects and elements of pluriversality that I will call ‘pluriversal principles’, and briefly exemplify how the application of them have affected the process.

3.1 Pluriversality, a critique and an alternative

Fundamentally, pluriversality is a critique of ‘universality’, which is presupposed by the idea that the world may be comprehended differently by different cultures and societies but is nonetheless constituted by a single reality. Conversely, pluriversality is based on the idea of “a world in which many realities exist” (Barcham 2022, p. 5). While pluriversality may thus be regarded as an ontological position, or a more general approach to what constitutes ‘the real’, its inherent critique of patriarchal, capitalist modernity establishes it as a critical theory, or vantage point, from which one can analyze different aspects and dynamics of society.

The pluriversal analysis of modernity reflects that of political ecologists, in that modernity is seen as a product of coloniality (Alimonda 2015; Escobar 2018). Coloniality is structured around dualisms and while dualisms are not inherently problematic, the dualities of ‘developed/underdeveloped’, ‘civilized/uncivilized’ and ‘us/them’ that coloniality rests upon allowed for the “categorization and hierarchical classification of differences” that has led to the “suppression, devaluing, subordination, or even destruction of knowledge and being that do not conform to the dominant form of modernity” (Escobar 2018, p. 94). It is thus modernity and its oppressive nature that pluriversality seeks to challenge.

According to Thomas Berry (1999, referenced in Escobar 2018) modernity is kept in place by four pillars of society: governments, corporations, universities, and organized religion. These four key establishments of society continuously reproduce modernity through decisions, actions, programs, and discourses that are based on what Escobar (2018) calls the “four fundamental beliefs” of modernity (p. 83); the belief in the individual, the belief in the real, the belief in science and the belief in the economy. In the following, I will present these four fundamental beliefs of modernity, and use these presentations to illustrate the alternative positions of pluriversality.

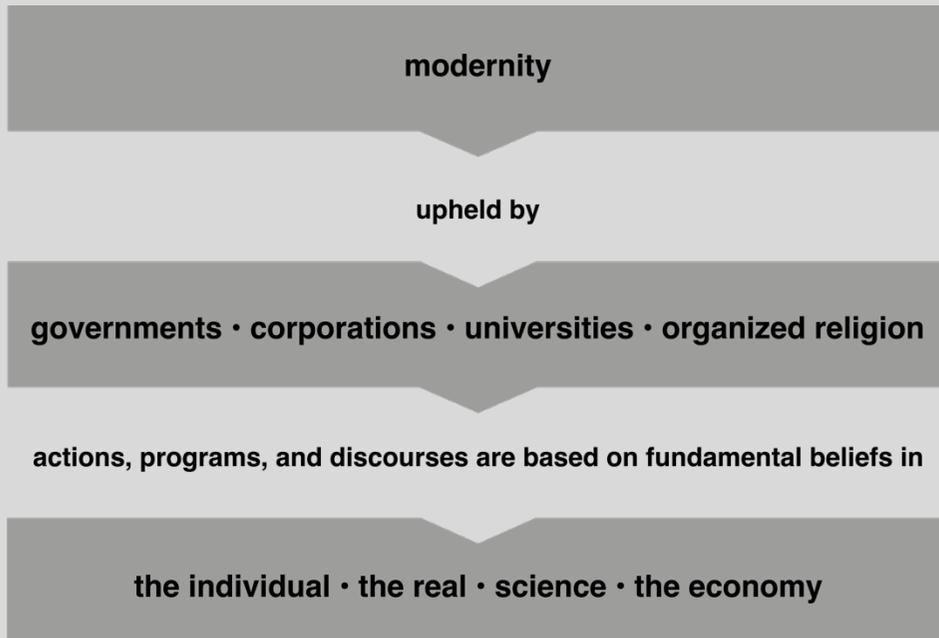


Figure 4: Illustration of the four key establishments and four fundamental beliefs upholding modernity. Made in Adobe Illustrator.

3.1.1 The Individual

The modern belief in the individual describes the notion that we all exist in this world as separate, autonomous individuals. This notion “entails a veritable cultural war against relational ways of being and the imperial imposition of the cultural regime of the market-based individual” (Escobar 2018, p. 83). The idea of the individual as an entity, independent of its surroundings and environment, has thus paved the way for human-over-nature discourses, for the exploitation of humans and non-humans alike, and for the neoliberal, market-driven agenda to become dominant. The pluriversal alternative to this belief is that of “strong relationality” (Escobar 2018, p. 212), which is a position “*without* subjects, objects, and processes that are inherently or intrinsically existent by themselves” (p. 212, emphasis in original). In a pluriversal perspective nothing, including humans, thus exists independently but is instead constituted by their relations.

3.1.2 The Real

The modern belief in the real describes the universalist perspective that there exists one single reality. It is this belief that has led to the suppression of any other ‘real’ than the one propagated by the Global North, and thus the establishment of what Law (2015) calls the ‘One-World world’, which entails the patenting of ‘the real’ by the Global North. By arrogating itself the right to determine what constitutes reality, the Global North thus holds the right to decide what kind of knowledge production is valid, who can produce knowledge, and how to best (re)design reality. Another core tenet of the modern belief in the real is that it exists “*outside* us and we are *contained* inside it” (Law 2015, p. 126, emphasis in original), which echoes the previous belief in the individual by similarly stating that things, including humans, simply exist independently of their relations. The pluriversal alternative to this position is that of a world consisting of multiple realities each of which is enacted by the relations that constitute it, and each of which is not an inanimate shell to be ‘occupied’ but “a world that is alive” that is ‘inhabited’

by beings, humans and non-humans alike (Escobar 2018, p. 87). In a pluriversal perspective, no single reality can account for the multiple realities existing in the world, and no single reality should be allowed to dominate and suppress any other reality.

3.1.3 Science

The modern belief in science describes how modern science is viewed as the only valid foundation for knowledge claims (Escobar 2018). This belief undermines any form of knowledge production that does not adhere to Global North standards of modern science, thus effectively silencing the multiplicity of traditional, indigenous, and ecological knowledge of communities and cultures around the world. The pluriversal alternative can be described by what Santos et al. (2007) call an ‘emancipatory, non-relativistic, cosmopolitan ecology of knowledges’. This ‘ecology of knowledges’ entails the realization that “*the epistemic diversity of the world is potentially infinite. There is no ignorance or knowledge in general. All ignorance is ignorant of a certain knowledge, and all knowledge is the overcoming of a particular ignorance*” (Santos et al. 2007, p. XVII, emphasis in original). Additionally, the non-relativistic aspect of the ecology of knowledges covers the idea that while all knowledge is valid, not all knowledge is equally valid for a specific situation, which emphasizes the point that a ‘single knowledge’ cannot sufficiently cover all situations or realities in the world.

3.1.4 The Economy

The belief in the economy is first of all a belief in the existence of ‘the economy’ as a “separate domain of thought and action” (Escobar 2018, p. 90). Further, it is the neoliberal belief in the ability of this ‘economy’ to guide society towards a desirable future and a belief in the central role of economic growth as the driver for change and progress. These modern beliefs have established ‘the economy’ as a central aspect of society that should be valued and kept afloat above everything else. As Tony Fry writes, this has resulted

in “the future being butchered on the slaughter bench of economic growth” (Fry 2015, cited in Escobar 2018, p. 90). The pluriversal imperative is, as Escobar (2018) writes, “decentering the economy from social and ecological life” (p. 90).

3.2 Modernity and Design

As mentioned in the introduction, Escobar (2018) sees the contemporary environmental and climate crisis as a result of the “entrenched ways of being, knowing and doing” of modernity (p. 19). Taboada et al. (2020) argue that design plays a central role in the reproduction of modernity as “design practice, at its contemporary state, contributes to replicating a homogenizing ontology that subjugates aesthetic, functional, and cultural values of non-Western design” (p. 141). The reason for this is that design is predominantly preoccupied with market-based perspectives in which “processes of creation, innovation, and production are tied to the networks of profit-making, human-centered, and technocratic objectives” (p. 142). This way of designing is what has aided the establishment and dominance of the One-World world idea and several political ecologists provide examples of what the dominance of the One-World world looks like in practice: Nightingale (2005) demonstrates how ‘scientific forestry’ has supplanted indigenous and traditional knowledge in development projects in Nepal, resulting in activities that “cannot produce the kind of forest the user group really wants and needs” (p. 599). Davis (2005) illustrates how indigenous knowledge of range ecology has been wrongfully subverted by ‘expert’ claims of desertification made by international NGOs and academics and by the government in Morocco. Similarly, Forsyth (2003) explores how claims of environmental degradation are often related to ‘environmental orthodoxies’, which describes how explanations of environmental problems are usually presented as ‘objective truths’ while they are in fact a result of intentional political decisions that usually disfavor indigenous knowledge and traditions. Lastly, Benjaminsen & Bryceson (2012) illustrate how such environmental orthodoxies are

utilized by rent-seeking state officials, fund-seeking transnational conservation organizations, and tourism companies to justify the dispossession of local communities and their land in favor of wildlife sanctuaries aimed at eco-tourism.

It should thus be clear, that design that reproduces the One-World world narrative has far-reaching consequences, and that communities existing at what Escobar (2018) calls the ‘edge of modernity’ are engaged in ‘ontological struggles’. These ‘ontological struggles’ describes the process of “problematization of the universalizing ontology of the dominant forms of modernity” (p. 66) and are expressed by everyday acts and decisions that constitute the life of alternative realities. Pluriversal design should thus support these struggles to engage in the enactment of ‘a world where many worlds fit’ as the Zapatistas of Chiapas put it (Escobar 2018). However, as Taboada et al. (2020) argue many design approaches currently prescribe to modernity, and thus lack the ability to change the status quo given modernity’s “investment in maintaining the world that created it” (Escobar 2018, p. 19). It can therefore be stated that “we are facing modern problems for which there are no modern solutions (p. 34).

I have found the theory of pluriversality appropriate for my project as it entails an inherent critique of modernity through its call to decenter it from design practices and because of its emphasizes on the existence and struggles of alternative ways of knowing, being, and doing. I see these two characteristics of pluriversality as compatible with my positions on sustainability and with my view on the limitations of contemporary design practices and believe them to be key in the required transformation of design.

3.3 Pluriversal Principles in Design

To summarize, any design project that wishes to change the status quo and target the current environmental and climate crisis must fundamentally engage with and challenge the four key establishments that uphold patriarchal, capitalist modernity, and the four fundamental beliefs upon which the actions, decisions, and discourses of these establishments are predicated. This is the core tenet of what I call the ‘pluriversal principles’. Through the transformative potential of pluriversality, design based on pluriversal principles will promptly be situated within the emergent discipline of design that engages with radically new socio-economic and political paradigms.

The principles presented below do not encapsulate the complete nuance of pluriversality but have been constructed based on what I believe to be the core tenets of pluriversality.

3.3.1 The Principles

Pluriversal design entails a decentering of the rationalistic tradition and the dualisms that are engrained in modernity, it entails a challenge of the neoliberal agenda and Global North hegemony over Global South, and further an emphasis on relationality and the existence of multiple realities.

This principle was applied by countering ‘dualisms’ with ‘pluralisms’, by challenging the perceived benefits of competition, and by highlighting the struggles of the alternative realities that global value chains interact with.

Pluriversal design should illustrate how modernity leads to defuturing practices and ecological breakdowns and simultaneously emphasize the multiple realities of the world and their alternative forms of being, knowing, and doing.

This principle was applied in the illustration of the destructive consequences of current global value chains, and in the engagement with alternative ways of producing and consuming.

To decenter rationalism and challenge modernity is not meant as a romanticization of tradition or as an anti-technology position but entails a call to address the destructive capacity of technology.

This principle was applied through the attempt to not neglect the emancipatory potential of technology in the indication of alternative value chains.

Academia needs to diverge towards more inclusive and diverse epistemologies and should engage with communities and organizations engaged in realizing multiple and various realities, as “new paradigms continue to be explored by people who poke at the edges [of modernity]” (Escobar 2018, p. 48).

This principle was one of the main reasons for engaging with NOAH as an organization that ‘pokes at the edges of modernity’ and was thus part of the foundation for the project.

Realities are enacted in countless places around the world, and transformation takes place “in the process of enacting other worlds/practices” (Escobar 2018, p. 99).

This principle was key in the realization of NOAH’s situatedness within the Global North and the decision to include NOAH’s sister organization, Heñói, in the design process.

These are the principles that have been applied in the design process. Additional aspects of pluriversality that were not included here but could be useful for other projects are ideas of ‘cosmopolitan localism’ (Manzini 2015), ‘decolonial imaginary’ (Barcham 2022) and Pullanikkatil & Hughes’ (2023) approach to ‘Socio-Ecological Systems and Decoloniality’.

4 Introduction to NOAH

The decision to collaborate with an organization was taken based on the wish to explore how pluriversality can be enacted in practice by an organization to substantiate my contribution to how design and society can be transformed. This thesis should thus be considered as a case study on how to work with issues and principles that are usually left out of the framing of the dominant, neoliberal, modernist agenda. In this section I will introduce NOAH as an organization, the project that I participated in, how my role in the project was defined, and the value of collaborating with an organization like NOAH when working with principles of pluriversality in design.

4.1 NOAH, an activistic grass-root organization

NOAH is Denmark's oldest environmental NGO and was born after a very dramatic and chaotic happening at the H.C. Ørsted Institute in Copenhagen in 1969 (Nielsen 2019). Throughout the 1970s NOAH worked to influence the then-nascent public environmental debate and they played a significant role in the implementation of the first Danish Environmental Protection Act in 1974 (NOAH n.d.a). Today, NOAH is the Danish member of Friends of the Earth International, the largest international federation of environmental grass-root organizations with 73 national member groups (FOEI n.d.). NOAH consists of several 'working groups' that work on their own topic (Forests and biodiversity, green education, EcoGender, Degrowth, etc.). All work performed by the working groups is guided by the fundamental vision of NOAH to "enhance the living environment by actively fighting against environmental destruction and its causes – and by indicating alternatives" (NOAH n.d.b, p. 1). The working groups usually consist of 4-6 volunteers and while NOAH has a secretariat, its function is entirely administrative, and each working group has full autonomy to work with whatever and whoever they want.

Additionally, all organizational decisions are taken during the biannual meeting where every volunteer is welcome, and where everyone has an equal voice in the decision-making process.

NOAH receives financial aid from its members and funding from a list of organizations (ERASMUS+, European Climate Foundation, Civilsamfund I Udvikling (CISU), Ministry of Culture, etc.) but only the three members of the secretariat is employed at NOAH. Whenever a project is launched in a working group, funding is usually applied for, and if the budget for the project allows it, the volunteers might get paid a small amount for their participation. The payment is usually not enough to provide a decent living standard in Denmark, and volunteers might therefore have another job on the side or supplement with unemployment benefits (pers. comm., February 6th, 2023). Furthermore, as all the working groups are volunteer-based, anyone can choose to join a group and engage in setting the agenda and political direction for the group.

4.2 Why NOAH?

The reason for working with NOAH is that they are positioned 'at the edge' of the dominant system upholding the dynamic stability of our unsustainable society. Unlike the actors, structures, and paradigms that are reproducing the modernist, neoliberal agenda and dominance, NOAH's work is based on principles that are comparable to those of pluriversality. First of all, NOAH approaches the environmental crisis as a consequence of a larger system: "Environmental problems and -crises must, from our view, be understood in combination with a larger system of social, economic and global issues" (NOAH n.d.b, p. 2). Second of all, they have a focus on environmental justice: "NOAH's activities must both aim at improving social, economic and environmental equality and justice" (NOAH n.d.b, p. 1). And finally, through their analysis of the current crisis, they reach a similar conclusion to that of Escobar (2018): "The global economic and political reality that we inhabit

today is strongly influenced by a neoliberal discourse and dominance” (NOAH n.d.b, p. 4). The systemic approach to the crisis is reflected in their work where they for instance have facilitated a debate on how Danish colonialism is related to the current climate crisis (NOAH 2023a) and have created a podcast on seed sovereignty with their sister organization in Paraguay, Heñói (Haukeland & Brix 2022). It was also exemplified in a discussion with Mads Lange who is employed at the secretariat of NOAH, as he stated: “Our critique of the system is one of the reasons why mainstream media, who is a part of the system that we are criticizing, might hesitate to look in our direction” (Mads Lange, pers. comm., May 23rd, 2023). It is, however, precisely because of this systemic critique of the dominant system, and because of their view on the destructive force of the dominant neoliberal agenda that NOAH is an interesting organization to collaborate with. I have thus approached NOAH as an organization that is ‘poking at the edge of modernity’ (Escobar 2018).

4.3 The Project

The project that I participated in is called ‘Creative Connections’ and is run by the working group on Economic Justice which consists of 3 volunteers, Sarah, Anna, and Emmeline. The project is funded by CISU (Civilsamfund I Udvikling) and is running from February 2023 to December 2024. The formal purpose of the project is: “to inform about concrete global value chains between Denmark and the Global South, how these affect people and the environment, companies' responsibility and the roles that people have at each end of the chains” (NOAH 2023b, p. 3), and is aimed at students between the age of 14-18 in the municipality of Holbæk in western Zealand. Additionally, the intent is to illustrate the different worlds that people inhabit throughout global value chains and to connect the currently disconnected people that inhabit each end of the value chains (Sarah Strunge, pers. comm., February 6th, 2023). I found this project interesting as ‘illustrating the different worlds people inhabit’ was to me a way of emphasizing the existence of different

realities, which is one of the core principles of pluriversality, and exemplifies how NOAH engages in the ontological struggles of the realities existing at the edge of modernity.

The project entails activities within three different categories (‘Learning Course and Game’, ‘Exhibition and Event’, and ‘Dissemination and campaign’) where each category is aimed at a specific target group. The project is divided into five phases. An illustration of the timeline, the specific target groups, and the activities within each category can be seen in Figure 5.

The aim is to develop course material and a learning game that is to be used in educational courses held with students (the primary target group) at ten different schools in Holbæk throughout the Fall of 2023 and Spring of 2024. The courses held during the Spring of 2024 will culminate in volunteers from NOAH’s sister organization in Mozambique (JA!) (<https://ja4change.org/>) coming to Denmark to participate in an exhibition that the students have created based on the courses that they have had. The initial exhibition is to be held at Holbæk Library and a second exhibition will be held at the festival ‘Skvulp’ (<https://www.skvulpfestival.dk/>). The exhibition will be targeting the general public of Holbæk (the secondary target group). Lastly, NOAH will throughout the five phases promote the project by sharing bits of the educational material on their social media platforms as well as promote the festival. This final activity is aimed at the general public without association to Holbæk (the tertiary target group).

The decision to have students as their primary target group is because the age of the target group “is a meaningful time to educate, as the young people are at a place in their lives where they are open to new ideas and ways of thinking and living and are about to shape their attitudes and views” (NOAH 2023b, p. 1) and because from NOAH’s previous experience with projects “they [students] are already familiar with consumption and where goods come from

but have very limited knowledge of global consequences and most of them are neutrals when it comes to global issues.” (NOAH 2023b, p. 1) which NOAH wants to change with this project. The reason for choosing Holbæk municipality is that two volunteers from the working group live near Holbæk and have connections to teachers at the schools in the municipality.

My participation mainly revolved around the design of the learning game that was to be developed in the first phase of the project. This was decided for two reasons, 1) it was where the other volunteers felt they were lacking the most in experience and capabilities, and 2) the development of the game was an apt opportunity to explore how the application of pluriversal principles would affect the design process.

To elaborate on the second point, I want to note that while I saw NOAH’s fundamental principles as comparable to those of pluriversality, I wanted to

explore how more firmly articulated principles that were derived from the literature on pluriversality could enhance the design process.

The game will work as the first part of the learning courses, and the intention is that it should work as a primer to the concept of global value chains and to introduce the students to the value chains of four specific materials (tin, palm oil, textile, and soy). The game will be accompanied by four videos that focus on each of the materials. The videos will be produced by NOAH’s sister organizations in the countries where the materials are extracted/produced (Indonesia for tin and palm oil, Bangladesh for textile, and Paraguay for soy). The videos intend to illustrate the environmental and social consequences of the extraction and production of materials from the point of view of the realities of the Global South.

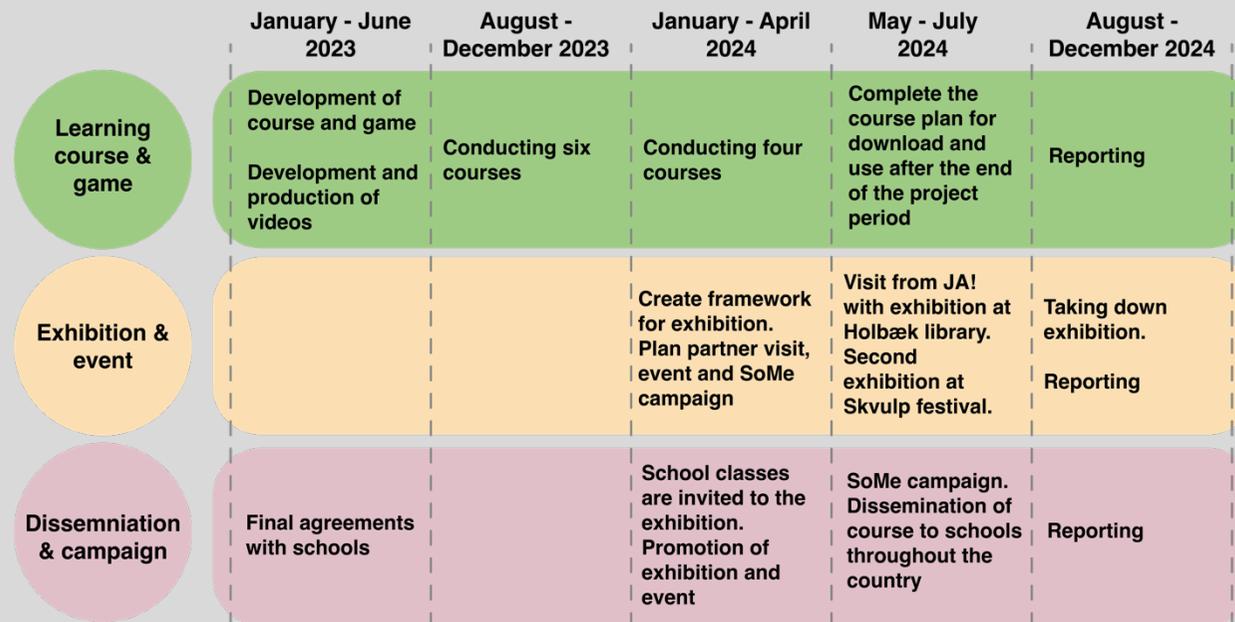


Figure 5: The five phases of NOAH’s project. Made in Adobe Illustrator.

5 Methodological Approach

The approach of my thesis can be described by what Pedgley (2007) calls “practice-led research in design” (p. 463). Practice-led research in design is a form of inquiry where the experiences and design work of the designer(s) is used to “elicit and communicate new knowledge and theory originating from their own design practices” (p. 463). I find this a suitable description of how I have worked with NOAH to contribute to the transformation of design based on the development of the game and my experiences and insights from the process.

The methodological approach I have taken to the collection of data is that of ‘participant observation’ (PO). As a ‘participating observant’ the researcher engages and participates in the everyday life of the subject under study (Jorgensen 1989a). PO is an exploratory approach, that seeks to explore the reality of the inhabitants, members, or insiders that the researcher is participating alongside with. The strength of PO is that by taking the role of a participant, the researcher is allowed to conduct “fairly *unobtrusive* observations” (Jorgensen 1989a, p. 5, emphasis in original). Furthermore, this world of ‘everyday life’ is in stark contrast to the fabricated and manipulated environment that constitutes e.g., experiments or surveys, and allows for a more coherent and comprehensive exploration.

The decision to apply the PO approach is based on Pedgley’s (2007) analysis of data collection tools in practice-led research. Pedgley finds that PO is one of the few suitable data collection tools for capturing one own’s design activity in practice-led research.

The criteria that Pedgley applies in his analysis are those of:

- **Designers account**
The possibility of capturing the designer’s account of the process.
- **Solo effort**
That data collection must be possible as a solo effort.
- **Endurance**
Data collection must be possible over long periods.
- **Subject delimitation**
The ability to delimit which aspects of the design activity to focus on
- **Mobility**
Possibility of capturing design activity in multiple locations.

All these criteria were relevant for my thesis, as I was interested in capturing *my* account of the process; since the process would last several months; as I knew it would be important to be selective in terms of what design activity to focus on since the process would entail many encounters; and since the locations of the design activities were not fixed. Since participant observation, according to Pedgley, satisfy all these criteria, I deemed it an appropriate method to apply. It is worth noting, that while Pedgley focuses on the ‘solo effort’ of a designer, the design process in this thesis has been a collaborative endeavor between myself and the volunteers in the working group. While it is of course still my account of it, the design activity that I have sought to capture has thus not only been my own but that of the entire team.

It should also be noted that PO is a demanding methodological approach as it requires an attempt to forfeit the epistemologies and ontologies of the researcher as “previous experience and knowledge may be inappropriate, somewhat slanted, or simply incorrect” (Jorgensen 1989b, p. 2). A further discussion on the potential limitations of PO is presented in section 8.1.

In line with the recommendations of Jorgensen (1989a), I have kept a diary of all the interactions I have had with NOAH, because as Jorgensen writes “it is extremely important that the results of participant observational study be recorded” (p. 11). After every meeting, workshop, or interview with NOAH, I have thus written an entry in the diary. A diary entry would usually entail descriptions of the setting (location, date, participants), a selection of interesting quotes, what was discussed and decided, what was not, and how I contributed. Some entries cover multiple days if the interactions of separate days for instance were related. Additionally, the entries also included my immediate reflections on what happened, including reflections on how the mood was, what problems we encountered and the assumed origin of them, how the discussions went, and how my contributions were received. A day or two after the interaction I would usually revisit the diary entry and add any further reflections that I had had during those days. Finally, the diaries also included photographs from the interactions and potential links to online material that was used in the interaction.

By applying the approach of PO, I was able to engage in the reality and everyday life of NOAH. I believe this allowed me to explore how pluriversal principles can be applied in the design process on a more fundamental level than if I had conducted experiments or surveys, as the design process has been influenced by the acts and decisions of everyday life. The design process itself can thus be seen as an example of the ontological struggles of realities existing at the edge of modernity. One of the volunteers did initially state that it might feel like “being watched” (pers. comm., February 23rd, 2023) when I originally presented my methodological approach, however, my presence quickly became very natural, and I was almost immediately viewed as an intern (of which NOAH has several) that simply participated alongside the other volunteers. At the end of my process, the diary consisted of 17 entries, which thus constituted a representation of my combined experiences from the project, and which has been the foundation for the insights I have gained.

6 Presentation of the Design Process

The purpose of this section is to present the empirical data that I have gathered through my participation in NOAH’s project. As described in the previous section, the data was gathered through the development of a diary. The full content of the 17 entries of the diary is too much to present in detail here and, therefore, I have combined the workshops, meetings, and interviews (henceforth referred to as interactions) that I have had in the project into four phases. Workshops should in this context be understood as situations where time was spent on the design of the learning game. These situations did not necessarily include a specific workshop format. The four phases are a construction made by me, and the idea is that they represent the evolution of the process of working with pluriversal principles. To best illustrate this evolution, the phases are presented in chronological order. The construction thus represents the overall process of the project, while simultaneously allowing for the presentation of specific important interactions. A presentation of the phases, together with a brief description of the role of the pluriversal principles in each phase, can be seen in Figure 6. In the presentation of the process, I will mainly focus on how the pluriversal principles affected the format of the game and the incorporation of different elements, and not much on the physical design of the game as that has not yet been a main focus of my participation.

At the end of this section, I will present the current state of the learning game. At the time of writing the learning game is not finished, and therefore the presentation will include some open-ended questions that still need answering.

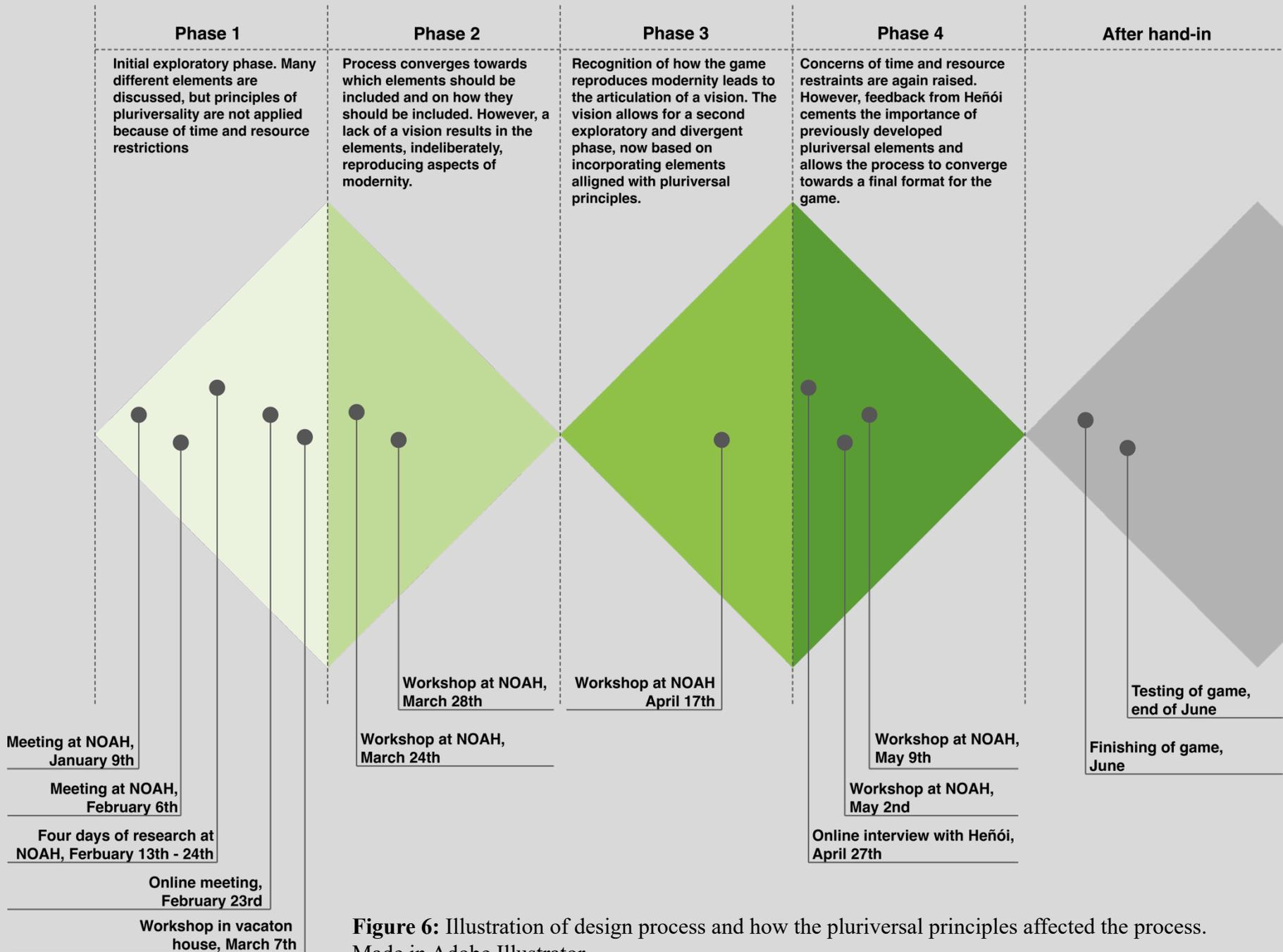


Figure 6: Illustration of design process and how the pluriversal principles affected the process. Made in Adobe Illustrator.

6.1 Phase 1 – Overlooking of Pluriversality

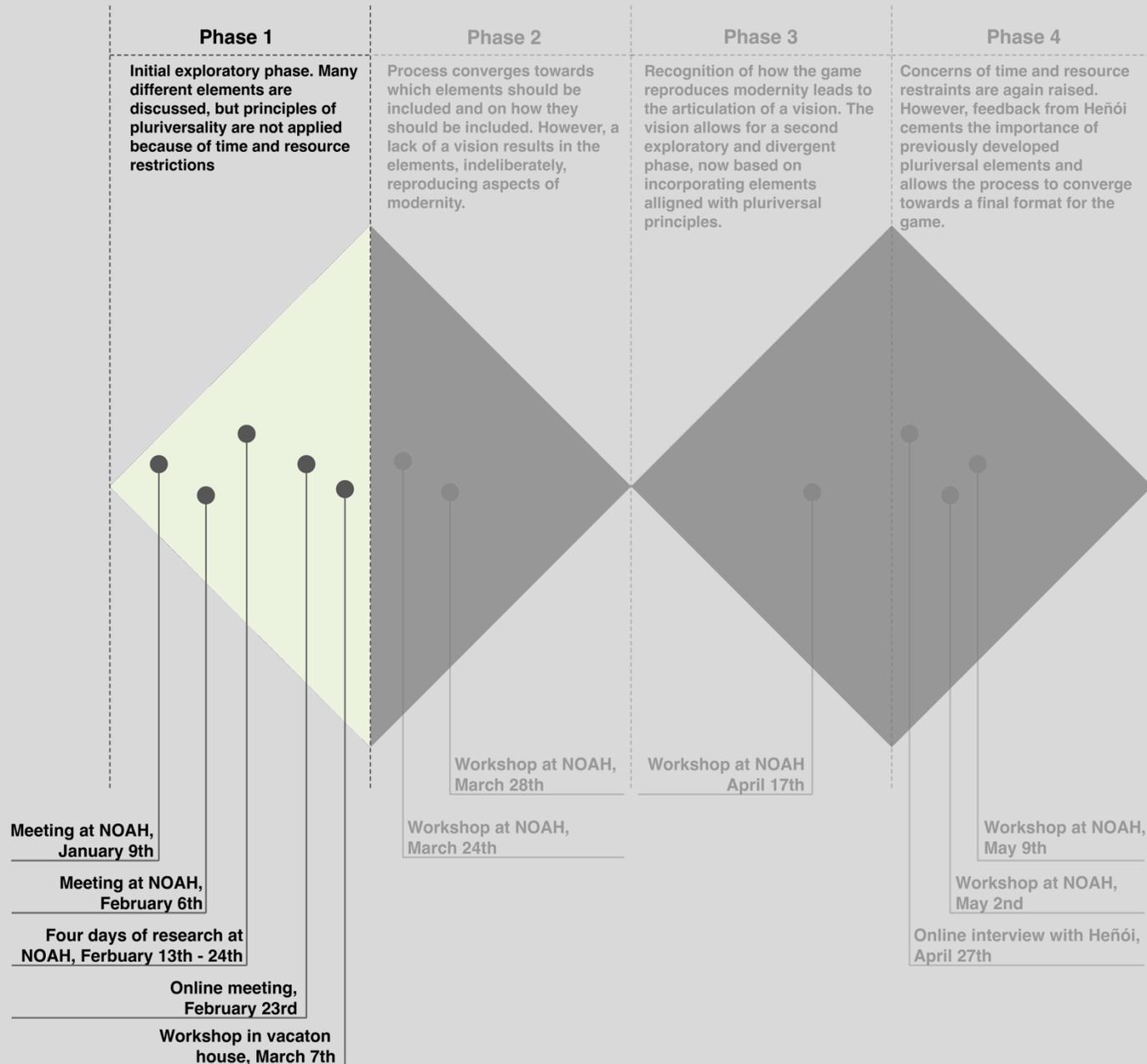


Figure 7: Phase 1. Made in Adobe Illustrator.

The first phase was by far the densest in terms of experiences and interactions, as it included the definition of my role in the project, my first glimpse into NOAH's organizational structure and way of working, as well as their approach to environmental and social issues. Additionally, it included the initial divergent and exploratory phase in the design of the game.

6.1.1 The Setting

The interactions in this phase included two initial meetings at NOAH's office in Nørrebro on January 9th and February 6th, four days of work at NOAH's office on the days between February 13th and February 24th, an online meeting with the entire working group on February 23rd and a workshop with the group in a vacation house near Holbæk on March 7th.

6.1.2 What happened?

Before the initial meetings, I had read the application that NOAH had sent to CISU to gain funding, and the application was thus used as the foundation for my inquiry into the project. From these meetings, I learned about the overall idea of the project, the project plan, and the intention of developing a game.

In these meetings, the project plan was used to facilitate a discussion about my role in the project. We agreed that I should participate in the design of the learning game. This decision was taken based on the notion that I should participate in activities where my capabilities would benefit the project the most, and on the idea that whatever I participated in should suit my inquiry into the application of pluriversal principles.

My initial participation in the project entailed two weeks at the office of NOAH where I participated in the research of the different value chains that were going to be included in the game. This initial presence at the office enabled me to establish myself as a participant observant that not only watched and listened, but also engaged in actual work.

At the online start-up meeting on February 23rd, I further inquired into the organizational structure of NOAH and the project plan. Through this inquiry I was able to explore how the working group had full autonomy to decide how the activities in the project plan were developed, including the game, but that the project plan itself was not easily changed as it was both the foundation for the funding received from CISU and a result of the time and resources available to the volunteers of the working group.

During the workshop on March 7th, the work on the design game was started. As I wanted to explore how NOAH structured their activities, I did not try to actively steer the workshop, but instead, let the other volunteers guide the process. The workshop did not have any specified format, nor articulated aim but was presented as an "opportunity to start the development of the game" (pers. comm., March 7th, 2023). It can best be characterized as a five-hour-long brainstorm. Due to the very loose structure of the workshop and the absence of any visions for the game except that it should introduce the students to the concept of global value chains, the brainstorm was very chaotic, and I found it very hard to make contributions based on principles of pluriversality. Drawing on Loorbach (2010), I am using 'visions', in this context, to denote articulated principles or wishes that should guide the direction of the actions of the project.

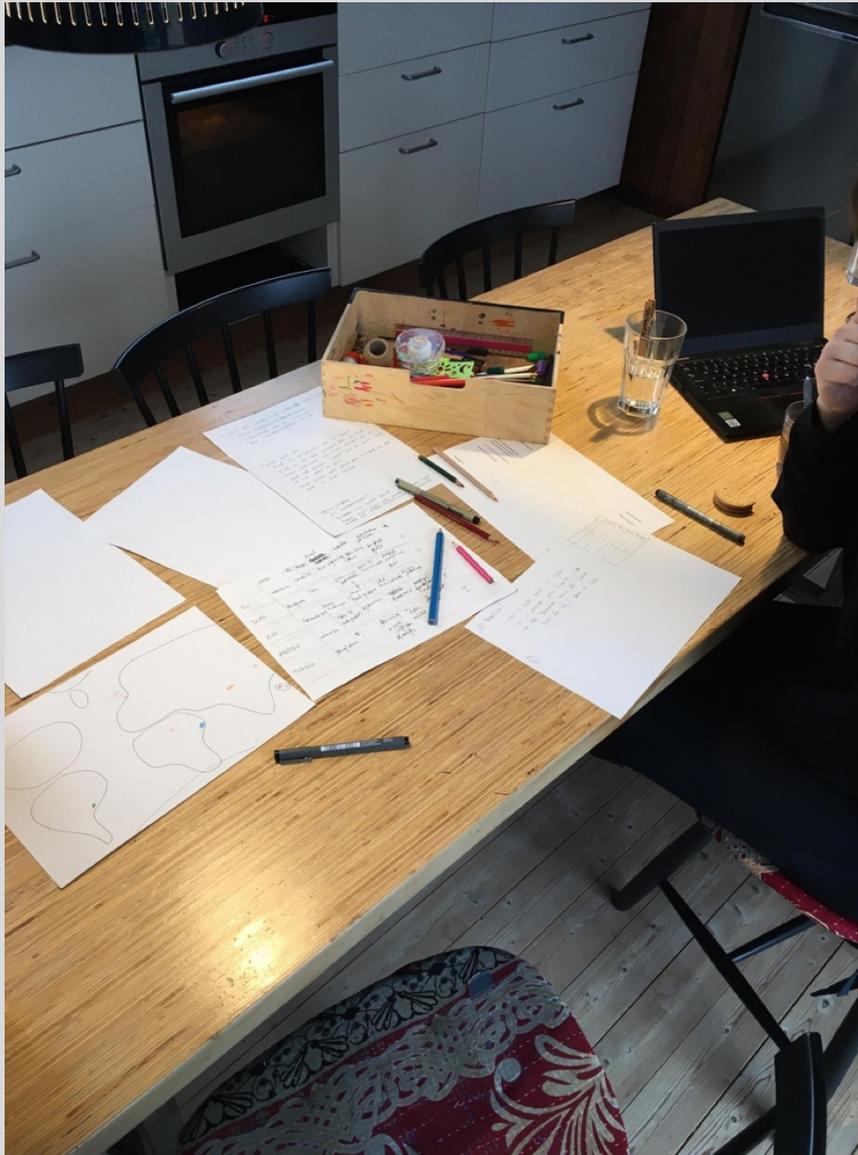


Figure 8: Picture from workshop on March 7th.

Most of the suggestions on the format of the game were based on previous games that the volunteers had developed or on their previous experience with the education of students. Throughout the workshop, our process became increasingly stressed, as we wanted to have a somewhat finished format by the end of the day. Because of this stressed feeling, I found myself making suggestions based on existing games that I knew, which had little to no connection to pluriversality.

Through the process, many ideas were scrapped. For instance, that the game should include some kind of currency that the players could trade, that the game should include physical activities similar to an escape game, or that the players would have to search on the internet for answers to questions in the game. It was through this negotiation of elements and the elimination of ideas that I experienced the emergence of a set of implicit criteria. The criteria were not explicitly stated, but seemed to include that:

- The game should not be too complex or take too long, as it should be playable in a timespan of 30-45 minutes to fit into the structure of the learning courses.
- It should be playable without the presence of someone from NOAH, as they intended to make it downloadable from their website.
- Therefore, the physical components of the game should not require too many materials, also for environmental and economic reasons.
- It should be fun and engaging for the students, while also resulting in a process of learning.

Initially, these criteria surprised me, as they were mostly related to the practical aspects of the game, and not to any of the fundamental principles of NOAH or to a more general purpose of the game. However, a resemblance of pluriversal principles became apparent through my inquiry into what aspects of the global value chains the game should illustrate. Through this inquiry, we were able to decide on some aspects of the game:

- It should illustrate how global value chains touch upon the realities of both the Global South and the Global North (thus emphasizing the existence of multiple realities).
- It should teach students about the environmental and social consequences of the production and extraction of materials but should not tell the students what to think of global issues but instead expand their horizons and give them the knowledge to create their own opinions (thus illustrating defuturing practices and opening the space for the development of alternatives).

These initial aspects echo the fundamental principles of the organization of NOAH (critiquing the unsustainable status quo and indicating alternatives, see section 4.2) and are from my experience embedded in most of the work that NOAH performs. They were, however, very loosely articulated and not coupled to a more general vision of the game on how to challenge modernity. It seemed that the intention of ‘getting something done’ in the workshop, had overshadowed the more thorough implementation of principles that would support the game’s critique of modernity and its indication of alternatives.

6.1.3 First iteration of the game

An illustration of the first iteration can be seen in Figure 9. The elements that we agreed upon were materialized through a world map with different highlighted spots that should function as the board of the game. A world map was chosen to exemplify the global nature of the value chains and to make it

printable by the schools themselves. The spots were colored and represented different locations that each of the value chains of the four materials went through in their journey from material extraction to consumption. The color code was arbitrarily decided as red for tin, blue for soy, yellow for textile, and purple for palm oil.

The idea at this point was that the player, at the start of the game, would receive a card with a depiction of a relatable, everyday product that was coupled to one of the value chains (smartphone for tin, bacon for soy, t-shirt for textile, and Nutella for palm oil). Everyday products were chosen to concretize the abstract idea of global value chains. The player would then travel through each location of their value chain to collect four ‘Value Chain Cards’ that presented statements and pictures of different environmental and social issues related to their value chain in that specific location, e.g., deforestation in Paraguay as a result of the expansion of soy production.

Many different aspects of the game were discussed but not decided on at this point, including how and when the game should end, if it should be based on competition or collaboration, and how players were to move throughout the board.

6.1.4 Reflections on Phase 1

- Time and resource restrictions seemed to limit the potential for the application of pluriversal principles.
- Additionally, the lack of a vision strongly affected the process, and while it did allow for a very exploratory process where many suggestions were made, it inhibited a more thorough and purposeful implementation of pluriversal principles.

Soy

- 1 Paraguay, deforestation from soy production
- 2 Argentina, dispossession of land
- 3 Denmark, env. damage from pig production
- 4 England, consumption of bacon

Textile

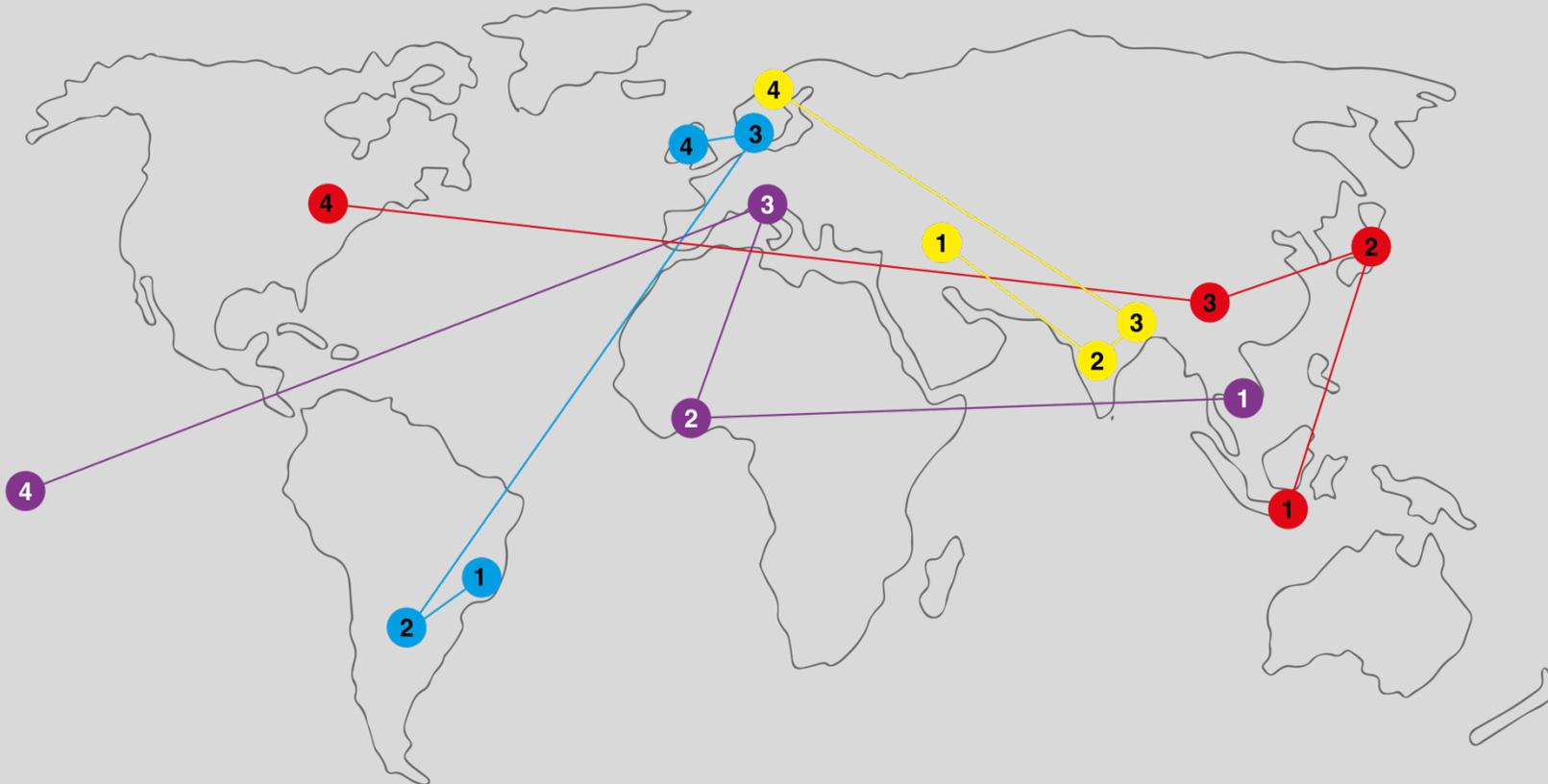
- 1 Kazakhstan, drought from cotton production
- 2 India, struggles against seed patents
- 3 Bangladesh, dangerous working conditions
- 4 Sweden, consumption of textile

Tin

- 1 Indonesia, acidic lakes from tin extraction
- 2 South Korea, planned obsolescence
- 3 China, assembly in internment camps
- 4 USA, consumption of smartphones

Palm Oil

- 1 Malaysia, deforestation from palm oil production
- 2 Côte d'Ivoire, child labor in cocoa production
- 3 Switzerland, production of Nutella
- 4 Great Pacific Garbage Patch, accumulation of food packaging



Due to the massive expansion of soy production in the Chaco region of Paraguay, much of the rain forest has been cut down.

1

Value Chain Card 1
in soy value chain

Figure 9: First iteration of the game. The players will only see the map. Descriptions at the top are included to present which realities they will encounter throughout the game. Made in Adobe Illustrator.

6.2 Phase 2 – Struggles for Pluriversality

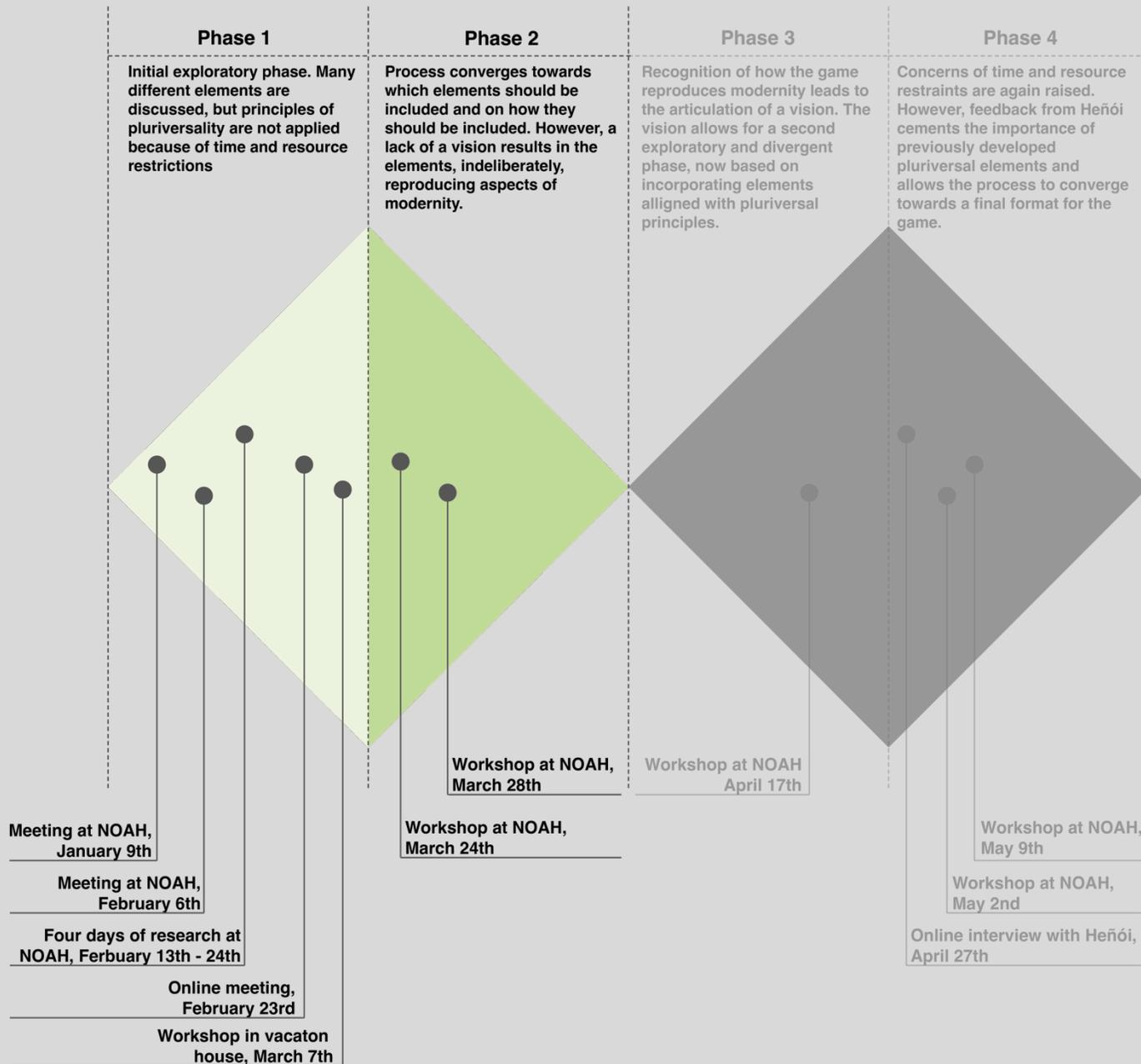


Figure 10: Phase 2. Made in Adobe Illustrator.

In this phase, principles of pluriversality were put forward but struggled against constraints of time and resources and therefore the design process converged towards a format of competition – a core tenet of modernity.

6.2.1 The Setting

The interactions in this phase included two workshops with one of the volunteers at the office of NOAH on March 24th and March 28th.

6.2.2 What happened?

At the initial workshop, a wish for the game to be a bit more complex and include more elements than in the first iteration was articulated by the volunteer. The reasoning was, that a higher level of complexity would make the players more engaged in the game, and thus also result in a deeper process of learning. I accepted the reasoning and saw this as an opportunity for the application of pluriversal principles in the new elements of the game. However, this higher degree of complexity entailed further work and clashed with the other wish expressed by the volunteer of being done with the game soon. She was engaged in many other projects and wanted to finish the development of the game.

The suggestions on additional elements in the game were still not founded in pluriversal principles, despite both the volunteer and me being familiar with pluriversality. Instead, suggestions were based on game aspects and formats that were known from experience with existing games. This resulted in many suggestions being based around the idea of competition since that is the usual foundation for board games as Dutton (2023) remarks: “In the world of board games, most titles involve total victories over adversaries in zero-sum competitions”. Competition is, however, one of the characterizing factors of the patriarchal culture that is inherently linked with modernity, as Escobar (2018) writes: “Patriarchal culture is defined as characterized by actions and emotions that value competition, war, hierarchies, power, growth,

procreation, the domination of others and the appropriation of resources” (p. 13). I saw this convergence towards competition as a result of the process adhering more to the practical criteria from phase one than to the fundamental principles of NOAH or principles of pluriversality. Based on the pluriversal critique of competition, I proposed that the game should instead be based on collaboration, which resulted in an interesting discussion.

The discussion revolved around the idea that a competitive format would be a better and more exciting way of engaging the players while a collaborative format would be a manifestation of an alternative approach to the best way of reaching beneficial outcomes. In the end, a competitive format was chosen because the criteria of an interesting and engaging game were weighted higher than the benefits of collaboration, and because it was deemed easier to develop because of the familiarity with competitive formats.

6.2.3 Second iteration of the game

An illustration of the second iteration can be seen in Figure 12. Through the two workshops in this phase, additional elements were added to the game to add more complexity and a more exciting experience of play. These included a game board with squares that the player would move through with the use of a die. The fields would be color coded, and landing on a color would prompt a specific action, e.g., having to answer a question or having to move a few steps backward. Furthermore, in line with the new competitive focus of the game, ‘points’ that the player could lose or gain by, for instance, answering questions wrong or right, were included.

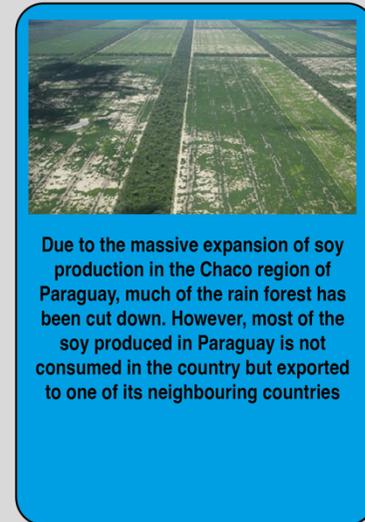
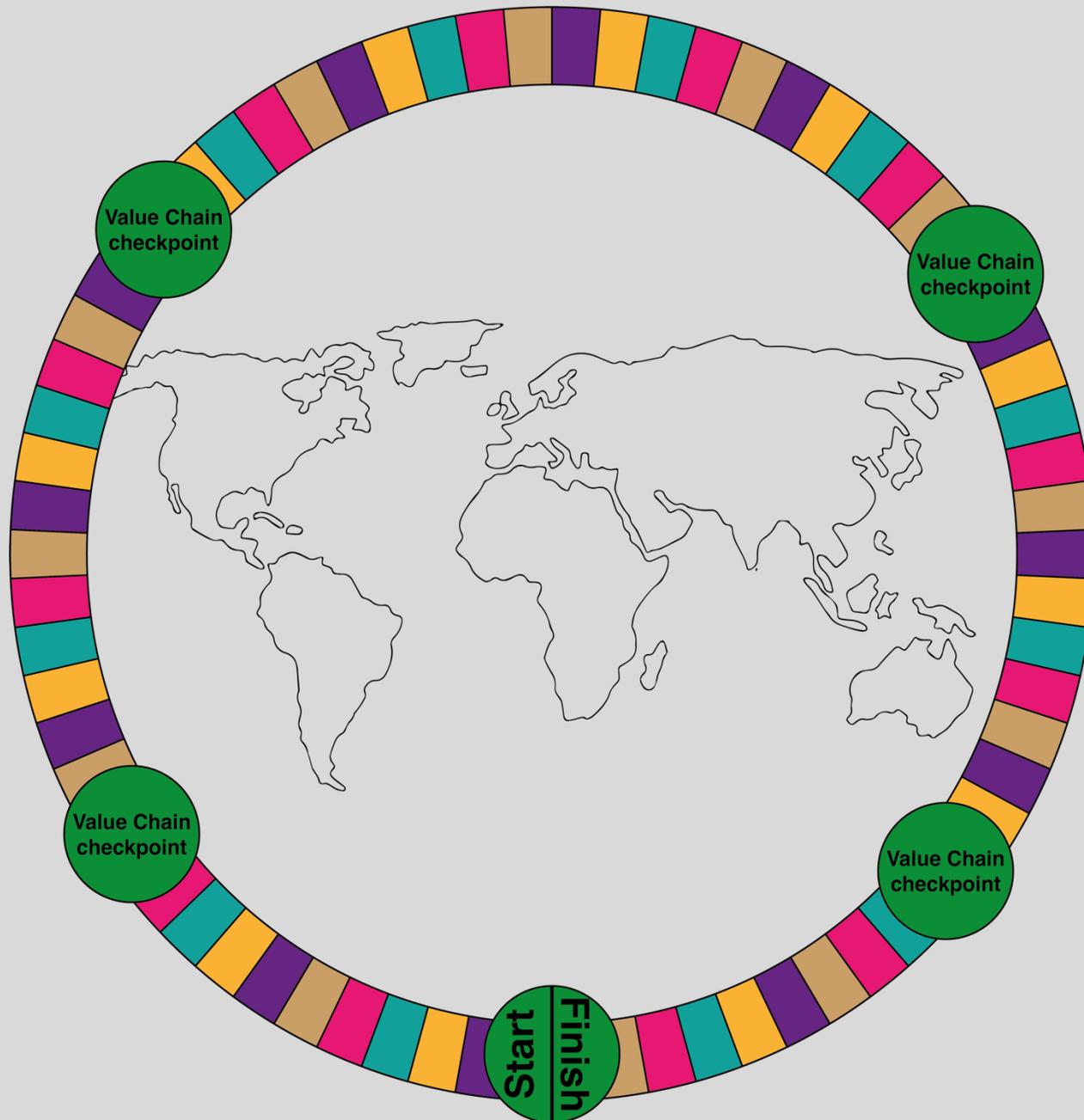


Figure 11: Picture from workshop on March 24th.

The players still had to collect the Value Chain Cards by landing on specific locations on the board but would now be asked to organize them in the correct order based on clues that were depicted on the backside of the cards. The winner would be the player with the greatest number of points who was first able to correctly organize their Value Chain Cards. The addition of organizing the cards was made to prompt the players to interact with the cards. Instead of just collecting them, they would have to look at the pictures and read the statements on them to correctly organize their cards. The pictures and statements thus had the dual purpose of illustrating the realities of the different localities and people affected by the global value chain and to allude to which Value Chain Card was next in the order.

6.2.4 Reflections on Phase 2

- The lack of a vision founded in pluriversal principles resulted in the reproduction of aspects of modernity through a competitive format of the game.
- I had thought that the fundamental principles of NOAH, which I have argued are comparable to pluriversality, would more strongly influence the development of the game, but it was now clear that a more explicit discussion on the vision of the game was needed.
- I saw this lack of the incorporations of the fundamental principles of NOAH as a consequence of a rushed design process, where the limited time and resources of the volunteers resulted in a wish to finish the game without necessarily trying to implement more alternative aspects and principles than those of normal, competitive board games.
- I, therefore, saw the decision to go with a competitive format not as a result of an adherence to the patriarchal, competitive culture but as a lack of resources and time to critically engage with it.



Due to the massive expansion of soy production in the Chaco region of Paraguay, much of the rain forest has been cut down. However, most of the soy produced in Paraguay is not consumed in the country but exported to one of its neighbouring countries

Value Chain Card 1 in soy value chain



In Argentina big, transnational companies dispossesses small-scale farmers (or 'campesinos') of their land. These companies also participate in the circumvention of criteria of certification of the soy produced in Paraguay, by importing the non-certified soy from Paraguay and then selling it as 'certified soy' to pig-producing countries, including a small country in Scandinavia

Value Chain Card 2 in soy value chain

Figure 12: Second iteration of the game. Made in Adobe Illustrator.

6.3 Phase 3 – Implementation of pluriversality

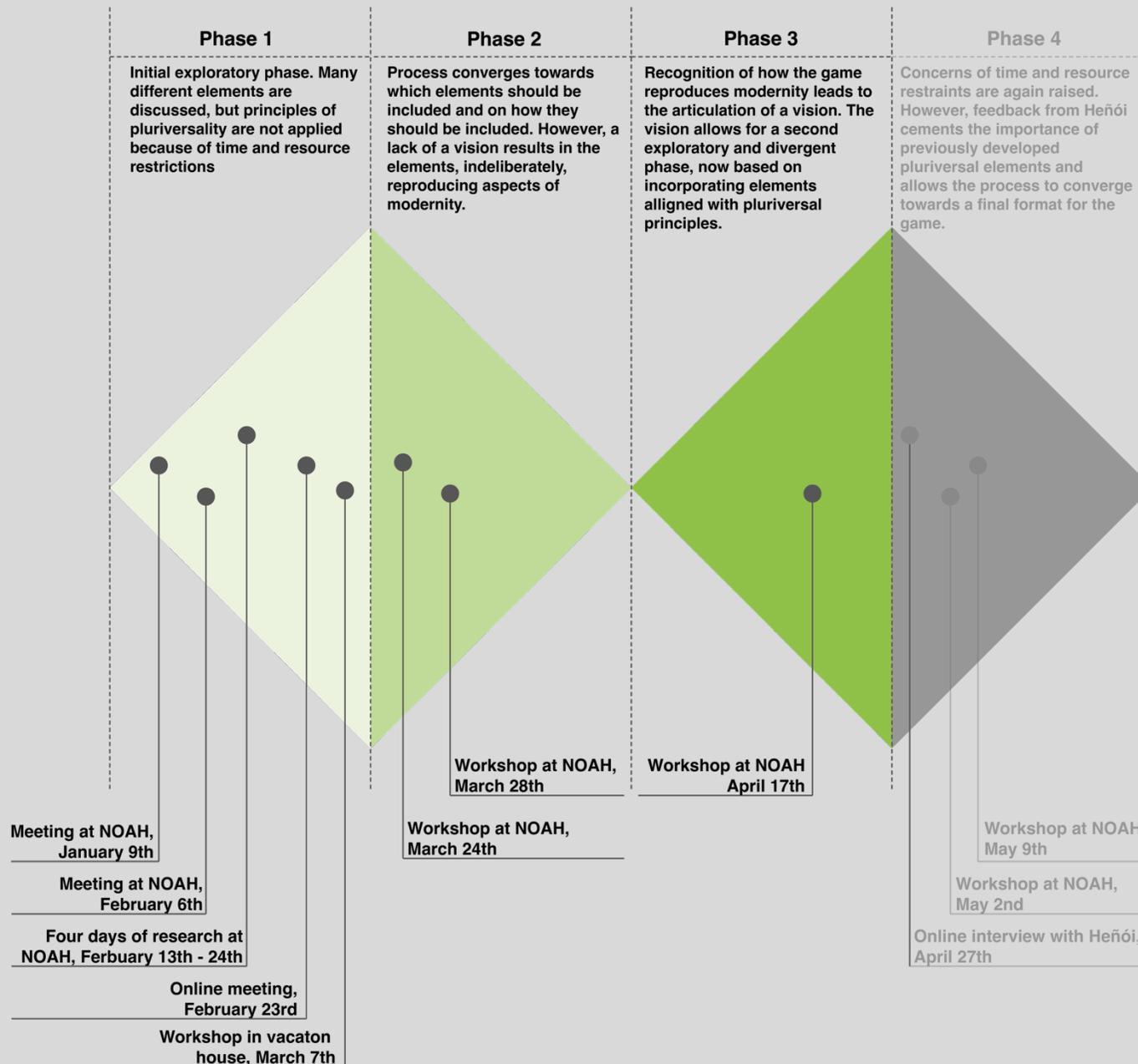


Figure 13: Phase 3. Made in Adobe Illustrator.

In this phase pluriversal principles were finally adopted into the development of the game by reflecting on how the previous iteration of the game reproduced aspects of modernity, and by having two additional volunteers join the process. This allowed for a second divergent phase to incur.

6.3.1 The Setting

This phase consisted of a workshop with two new interns and the volunteer from the previous workshops, at the office of NOAH on April 17th.

6.3.2 What happened?

From the last phase, it had become apparent that the design process of the game would not naturally adhere to principles of pluriversality even though these principles were echoed in the vision of NOAH. I saw this as a result of a lack of an articulated vision for the game and because of restrictions on time and resources. I started this workshop by insisting on a deeper discussion of the vision of the game and argued for the necessity of such a discussion based on my previous experience with design processes in my educational program and based on literature on Transition Management (Loorbach 2010). In the discussion, the volunteer stated that she wanted the game to give the players ‘a sense of injustice’ over how current global value chains are affecting people and the environment. She further stated that the game should illustrate the struggles of the multiple realities of the world and that it should indicate alternative ways of organizing society. I saw these expressions as an articulation of principles that were better attuned to a game intended to challenge modernity than the practical criteria from phase 1. However, I found the latter point to be of special interest, as I saw the second iteration of the game to be reproducing the ‘one reality’ of modernity, through its focus on competition, and because there was only one ‘correct’ way to play the game. I, therefore, saw the current state of the game to contradict these newly articulated principles of the game.



Figure 14: Picture from the workshop on April 17th.

As I presented my reflections to the volunteer and the interns, I experienced a collective feeling of relief, as if a recognition of the game not being how it was supposed to be had lied dormant within everyone but had been suppressed by the wish of finishing the game quickly.

These newly articulated principles constituted what I will call a ‘vision’ for the process (again drawing on Loorbach 2010). I saw the development of the vision, as a result of how my insistence on a discussion had established a space where articulations that were in line with NOAH’s fundamental principles and the principles of pluriversality could be made. Based on the collective and now explicit recognition of how the second iteration of the game reproduced aspects of modernity, it was acknowledged that while it might require more time to develop a game that truly challenged modernity, it was preferable to developing a game that reproduced it. Furthermore, the articulation of the vision enabled the application of pluriversal principles in the revamp of several elements of the game by establishing a steering point for the new suggestions. The pluriversal principles were thus used as the foundation for how suggestions for modifications and new elements should challenge modernity and indicate alternatives to support the vision.

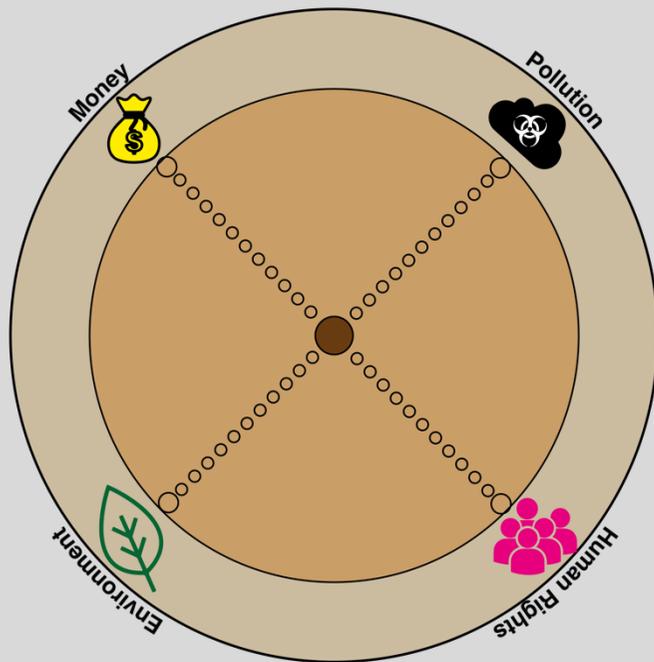


Figure 15: The profile board that each player has of the game. Made in Adobe Illustrator.

The pluriversal principle of illustrating the struggles and approaches of the multiple realities of the world, resulted in the divergence from having only one correct way of playing the game. We scrapped the idea of points and replaced it with what we called a ‘profile’. The profile was made up of four different categories (Pollution, Money, Human Rights, and Environment), and is indicated through a ‘Profile board’ (see Figure 15). The idea was, that instead of gaining or losing points by landing on the squares of the board and having to answer questions, each colored field would instead prompt the player to be faced with 2-3 possible decisions on a dilemma related to a certain aspect of global value chains. Based on how players handled the dilemmas they would then gain or lose affiliation in the categories of the profile. An example of a dilemma can be seen in Figure 16.

- You have been granted a piece of land, what do you do?**
- **Establish a plantation**
 - *(Gain affiliation in the Money-category but lose affiliation in the Human Rights-category)*
 - **Give it to the indigenous people with ancestral claim to the land**
 - *(Gain affiliation in the Human Rights-category but lose affiliation in the Money-category)*
 - **Initiate a ‘Rewilding’-project**
 - *(Gain affiliation in the Environment-category but lose affiliation in the Human Rights-category)*

Figure 16: Example of a dilemma. Made in Adobe Illustrator.

The point of this addition was to indicate alternatives to modernity by emphasizing the multiple approaches to environmental and social issues through the possible choices for each dilemma. Further, we wanted to illustrate that it is never win-win and that each approach always has its consequences. Through the dilemmas, the players would be confronted with the struggles of the realities that exist throughout the value chains of their products, as they for instance would be faced with dilemmas regarding worker's rights, dispossession of land, deforestation, trade embargos, and corruption. The four categories of the profile represented four distinct approaches to these issues (a pollutant approach, a money-driven approach, a human rights-driven approach, and an environmental approach). While the approaches might overlap and create mixed approaches, you can never be positively affiliated in all categories, e.g., both have gained a lot of money, polluted a lot, protected the environment, and secured human rights.

The pluriversal principle of challenging the neoliberal agenda was incorporated through the inclusion of 'Missions' that signaled a shift away from the idea of competition and speed as the foundation for the game. The missions would be randomly given to each player together with their product at the start of the game. An example of two missions can be seen in Figure 17. The inspiration for the missions came from the Danish game, 'Slaget om Nørrebro' (The Battle for Nørrebro, <https://www.slagetom.dk/slaget-om-noerrebro/>). In our game, they described which profile, or 'role', the player should take on through the game. The missions were intended to exemplify the different approaches to environmental issues and were meant to guide the players by having them attain a certain profile through their actions.



Figure 17: Example of two missions. Made in Adobe Illustrator.

With the addition of the missions, the game would seemingly still have a competitive format. This was, however, a deliberate decision because whenever a player ‘wins’ the game by collecting all their Value Chain Cards and fulfilling their mission, they would have to turn their mission card around and read a description of how their profile and corresponding approach has affected the environment and the realities of the people that they have encountered throughout the game. An example of such a description can be seen in Figure 18. The descriptions of the missions were based on the pluriversal principle of both illustrating the defuturing effects of the dominant approaches and of indicating alternative approaches. The element of competition in the game was therefore kept to initiate a discussion on what ‘winning’ actually entails when the topic is environmental and social issues.



Figure 18: Example of the description on the backside of the missions from Figure 17. Made in Adobe Illustrator.

6.3.3 Third iteration of the game

An illustration of the third iteration can be seen in Figure 19. At this point, the game still consisted of a circular board with a world map in the middle. The map, however, had changed to that designed by Hajime Narukawa (Stinson 2016). The map is made by dividing the globe into 96 triangles and then folding these triangles into a rectangle to avoid the common distortion of the size of land masses. The folding of the triangles results in a reorientation of the continents that displaces Europe from the center of the map. We thought this map would fit nicely, as it is a way of countering the Eurocentrism of most modern maps. Furthermore, there is no longer a ‘Finish’ square on the board, as the game will continue until a player has collected all their Value Chain Cards and completed their mission.

The colored squares of the board are connected to the colored cards shown in Figure 19. Each color represents a certain group of issues related to global value chains, and the dilemmas on the backside of the cards will thus be about the group of issues corresponding to the color of the card, e.g., land occupation or corruption. Whenever a player answers the dilemma on the backside of a card, they must adjust their profile on their Profile Board depending on how their decision changed their affiliation to the categories (see Figure 15).

The products given to each player at the start of the game decide which value chain they should collect, and the mission describes which profile they must attain when collecting the cards. We discussed the option of letting the players choose their missions, but it was argued that since the players will not know the descriptions on the backside of each mission card, it might lead to unintended shaming of individual players if they for instance chose to play the game in a specific manner just to be ‘profiled’ by the description on the backside of their card. That the missions are given out randomly also echoes NOAH’s (and the pluriversal) insistence on not blaming individuals but focusing on the systems in which we are embedded.

6.3.4 Reflections on phase 3

- By engaging in a more thorough discussion on the vision of the game we were finally able to integrate elements based on pluriversal principles.
- Not all principles of pluriversality were represented in the game yet, e.g., no elements reflected the principle of transformation as a result of enactment.
- The wish to revamp the game had seemed to lie dormant throughout the process, as it felt like a relief for all participants of the workshop that the game finally took on a format that was more attuned to the fundamental principles of NOAH and the principles of pluriversality.
- The successful inclusion of pluriversal principles can thus both be ascribed to the addition of the two interns to the process, which allowed for more time and resources in the project, and to the insistence on a discussion of a vision for the game.
- The experiences in this phase echoed my reflections from phase two, as the previous lack of inclusion of pluriversal principles had not been a result of non-adherence to the principles, but a consequence of limited time and resources and a lack of a vision.



Figure 19: Third iteration of the game. Made in Adobe Illustrator.

6.4 Phase 4 – Pluriversality under pressure

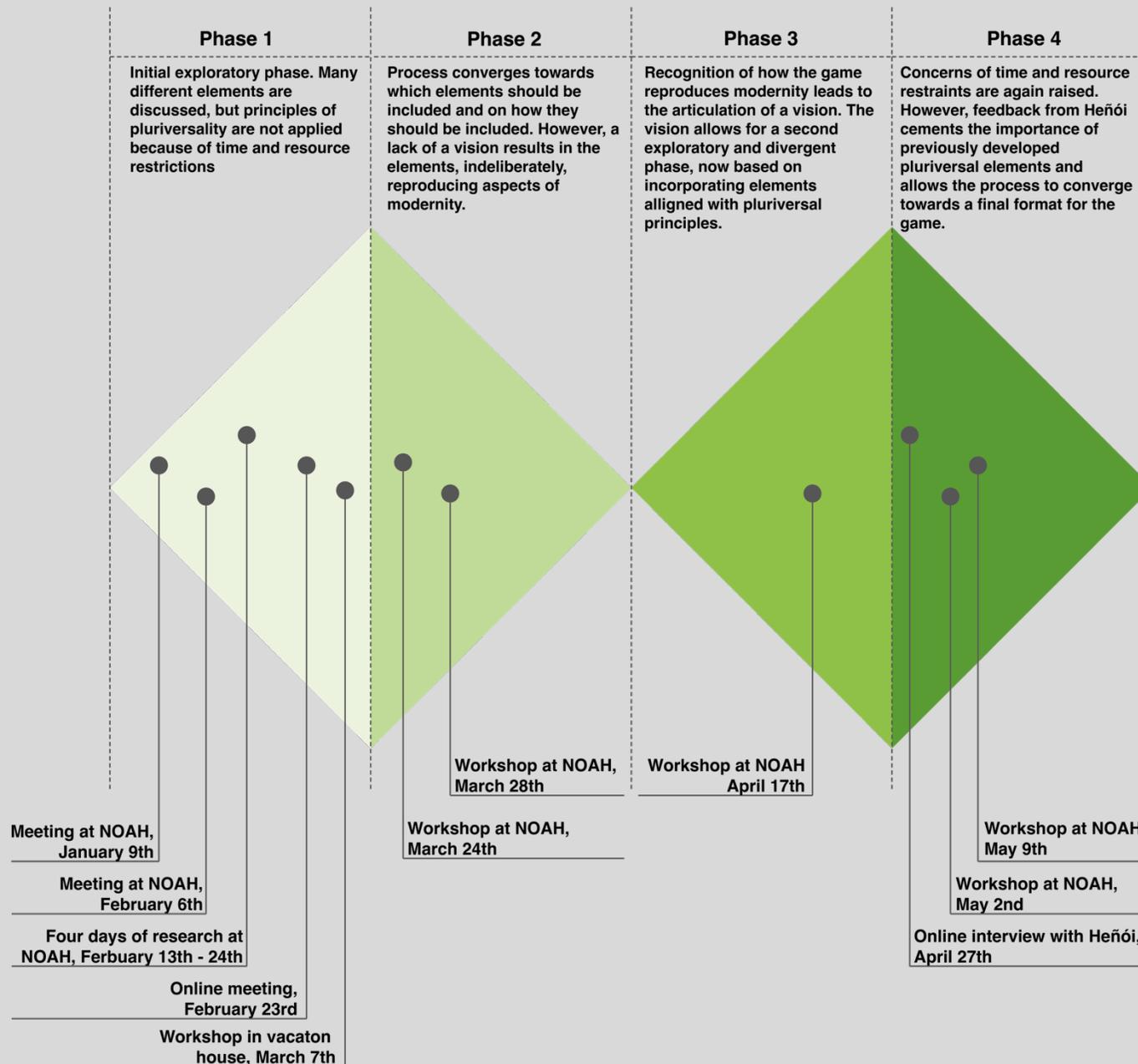


Figure 20: Phase 4. Made in Adobe Illustrator.

In this phase, I presented the third iteration of the game to activists from NOAH's sister organization in Paraguay, Heñói, during an online interview. The feedback from Heñói was used to emphasize the value of the new elements included in the game in phase 3, and aided in the convergence towards a pluriversal format of the game.

6.4.1 The Setting

This phase consisted of an online, semi-structured interview with Ángel and Inés from Heñói on the April 27th, a workshop with the entire working group on May 2nd at NOAH's offices, and a workshop with the volunteer from the previous phases on May 9th, also at the offices of NOAH.

Heñói

Heñói is an NGO from Paraguay. The organization started 13 years ago as a social movement to defend local and indigenous farmers' access to native and traditional seeds. Since then, they have expanded their work and now focus on a multiplicity of environmental and social issues. One of their main focus areas is to fight against the transnational companies behind the expansion of GMO soy production that dispossess small-scale farmers of their land (Heñói n.d.; Ángel Tuninetti, pers. comm., April 27th, 2023).

6.4.2 What happened?

When asked about their intentions behind participating in the project Ángel said that they want to “show their reality” (pers. comm., April 27th, 2023). They want to challenge the idea that Paraguay is part of the world's ‘food chamber’, and instead emphasize that the agricultural production in Paraguay produces soy that is used in Global North pig production to feed a wealthy few. Further, they want to show how the production of soy has stark consequences as transnational companies hire private military troops to

illegally dispossess indigenous people and small-scale farmers, as has also been reported by The Guardian and Al-Jazeera (Hill 2016; Costa 2021; Blair 2021), and how transnational companies are using European-produced pesticides that are illegal in Europe, in the production of soy in Paraguay, which poses severe health risks for communities located close to large-scale soy production farms. This point reflects similar cases in Brazil (da Silva et al. 2023). Ángel provided an impactful testament to the realities of the Paraguayan communities by stating that the life of the community that they intended to interview for the video for the project could be characterized by as a “small paradise surrounded by an ocean of industrial agriculture that wants to asphyxiate them. This is not a metaphor” (pers. comm., April 27th, 2023).

They further provided examples of how certification schemes and ‘Due Diligence’-policies enacted by the Global North governments and institutions are counteracted by systems developed in the Global South that seek to evade these schemes and policies, which has also been reported by Clement (2021). They were adamant that the development of these schemes was supported by transnational companies that seek to maintain their margin of profit. That the Global North governments do not recognize these dynamics is, according to Inés, because we “live in different realities”, Ángel, on the other hand, sees the lack of real action from the Global North governments as either “an act of ignorance or complicity” (pers. comm., April 27th, 2023).

Ángel and Inés additionally explained how the disparities between the realities of the Global North and Global South were also present even when working with ‘progressive activists’ from the Global North. They referenced a previous project they had done with NOAH where NOAH had asked Heñói if they could deliver any numbers on the gender and age composition of a specific community they collaborated with, since NOAH had to report on their work to the organization from which they had received funding.

In the meantime, however, the community disappeared for three months as they had been dispossessed of their land, and when they reappeared, it was not questions of age and gender composition that were on the agenda for Heñói, as Ángel stated “you are busy with other things when you starve” (pers. comm., April 27th, 2023).

The interview with Ángel and Inés was a very impactful insight into the realities that we wanted to illustrate and emphasize the existence of through the game. So finally, through the presentation of the game, I wanted to explore if they felt that these realities were appropriately represented in the game. I presented the third iteration of the game, and after the presentation, Ángel exclaimed that it was “very creative” and that it was “fantastic because it combines all the different realities encountered throughout a value chain” (pers. comm., April 27th, 2023).

He explained how the different dilemmas worked well in presenting the issues that they face in their work, and that it was a good idea to have the students make decisions in the game as one of Heñói’s intentions of participating in the project also was to show the consequences of actions taken in the Global North on the environment and people of the Global South. Ángel’s more specific feedback was based on how certain words and concepts within the game could be articulated to strengthen the representative ability of the game. He for instance argued that the ‘Pollution’ part of the player profiles should be explained better and maybe should be based on an approach that results in pollution instead.

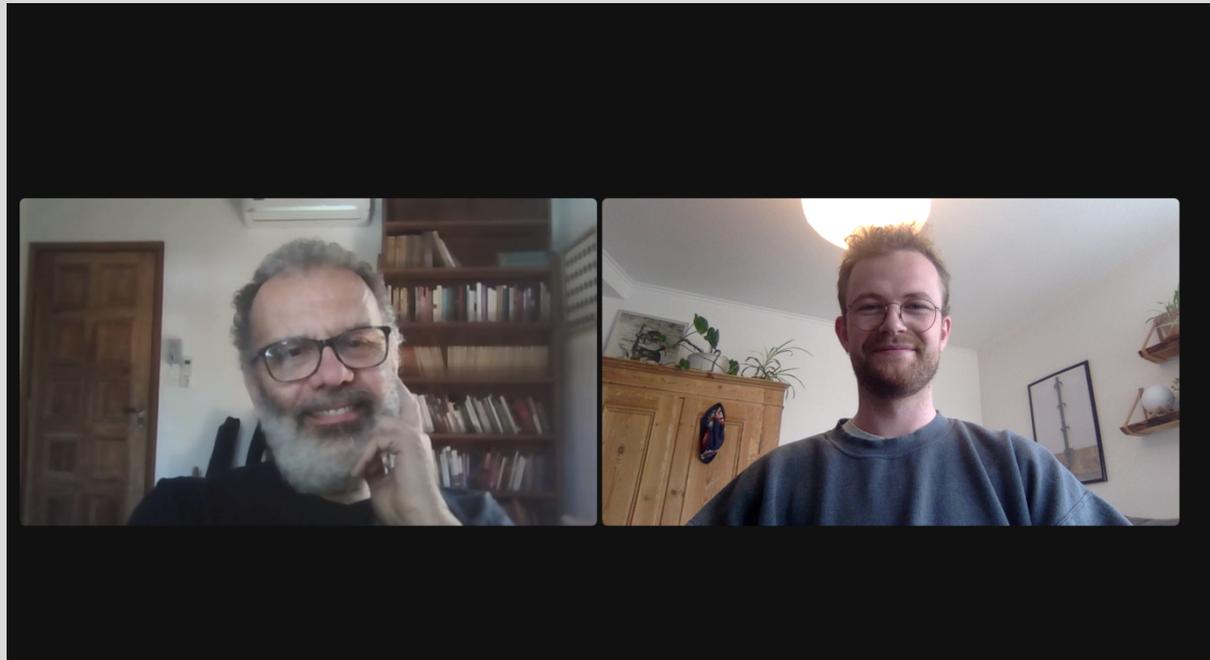


Figure 21: Screenshot from online meeting with Heñói on April 27th. Ángel to the left and myself to the right.

During the workshop with the entire working group on May 2nd we wanted to test the game with the other volunteers. However, during the workshop, statements of time pressure and lack of resources were again expressed. The result of these statements was a discussion on whether some of the elements that were added in the last phase of the project should be left out to finish the game sooner. I initially did not speak up, even though I thought it would be a shame, since I also wanted to acknowledge and respect the potential stress and frustration of the other volunteers. However, when I explained how Ángel had stated that the dilemmas actually represented their realities and how I had experienced his reaction to the game as an indication of the strength of the pluriversal elements, it was agreed to keep the elements. The discussion then shifted to instead focus on how to delegate the tasks of finalizing the development of the game. The process of the delegation also highlighted that we now had the resources and time of the entire working group available, and the interest in keeping all elements of the game was therefore strengthened.

At the final workshop on May 9th, it was clear that the pluriversal principles were there to stay, as the volunteer who participated had continued development of the game since the last workshop to further include elements of pluriversality. Instead of the Value Chain Cards simply being cards that the players should collect and organize, the players should now instead ‘create’ a value chain. Among the colored squares on the board, there were still four locations related to the four different aspects of global value chains. These aspects were now chosen to be Indigenous Rights, Working Conditions, Legislation, and Environmental Issues. The decision to include these four aspects reflected what categories of issues we had identified through our research and from the testimonies from Heñói.



Figure 22: Picture from the workshop on May 2nd.

At each of these four locations, where the player would have previously collected their Value Chain Cards, they were now presented with three different Value Chain Cards that they could pick. The three cards represented different ways of handling issues related to each of the four aspects of the value chain. Like with the dilemmas, the option chosen by the player would affect their profile.

The intention behind this addition to the game was to make the collection of the Value Chain Cards more interactive and to implement the feedback from Heñói on the strength of the dilemmas into an additional element of the game. Figure 23 illustrates how these three cards might look and what options they might provide.

During the workshop on May 9th, the volunteer from NOAH stated how, based on her experience, different movements all aimed at challenging modernity, like Degrowth, Ecofeminism, and Marxism, would sometimes develop almost antagonistic relationships. She said this might be because they each have a very biased and specific view on what ‘the’ (singular) alternative to modernity is. To account for this, we wanted the alternative approaches, indicated through the Value Chain Cards and the possible answers to the dilemmas, to be based on the many different movements that aim at challenging modernity, to emphasize that a plurality of alternative approaches is a strength and not a limitation. This would also allow for the indication of alternatives building on the emancipatory potential of technology, thus adhering to the pluriversal principles of pluriversal design

not being anti-technology. However, as this point appeared quite late in the process it will be explored further in section 7.2.

6.4.3 Fourth iteration of the game

In the fourth iteration of the game, which is also the last iteration at the time of writing, the game starts with the players receiving a product that represents the value chain that they must construct, and a mission that states how they must go about constructing the value chain, expressed as a profile that the player must attain. This iteration is illustrated in Figure 24. The profile is presented through affiliation with four different categories on their profile board. In this iteration, ‘Pollution’ was changed to ‘Development’, akin to the ‘project of Development’ (see section 2.1), based on feedback from Heñói, and based on the centrality of the ‘project of Development’ in the pluriversal critique of modernity. While the different value chains were previously color-coded, they are now indicated with a symbol. This was done to avoid confusion as the squares and dilemma-cards are also color-coded.

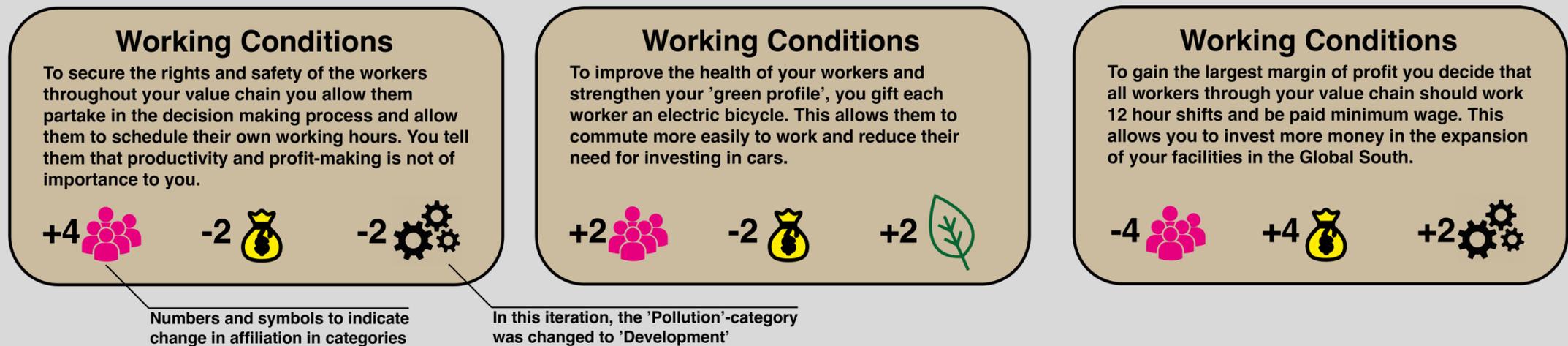


Figure 23: Example of three Value Chain Cards for the Working Condition aspect. Made in Adobe Illustrator

By rolling a die the players move throughout the board and are presented with cards based on the color of the squares that they land on. The different colors are coupled to dilemmas within different categories such as ‘Corruption’ and ‘Land occupation’. The player does not know how each answer to a dilemma would affect their profile as the possible answers to and consequences of the dilemmas are presented by an opposing player. This was decided to make the game more demanding, as the players would have to consider which answer would support their mission, or approach, the best.

The players will have to visit each of the four locations that represent one of the four aspects of the value chains. The aspect of Indigenous Rights is related to how indigenous people might be displaced or how ancestral claims to pieces of land might stop the development of production facilities. Working Conditions are related to how the workers are treated throughout the value chain. Legislation relates to any laws or regulations that may affect a value chain. And finally, Environmental Issues are related to how the value chain affects the environment. Landing on one of the four locations allows the player to pick between three Value Chain Cards representing different ways of approaching these aspects (see Figure 23 for an example). As with the dilemmas, their choice of Value Chain Card will affect their profile.

Whenever a player has constructed their entire value chain and has done so in a manner that fulfills their mission, the game ends. When the game ends, the winner presents their constructed value chain to the other players, flips their mission card, and reads a description of how their approach and decisions throughout the game have affected people and the environment.

As mentioned, the game is not yet finalized. While the format of the game, as presented above, has been developed, some elements will require more work and will be further explored by the end of June 2023. What needs to be further developed are the dilemmas and the categories of the dilemmas (e.g., corruption, land occupation), the Value Chain Cards, the missions, and the physical design of the game.

6.4.4 Reflections on phase 4

- While I had researched soy production in Paraguay before the interview and thus knew about some of the issues related to it, the testimonies from Ángel and Inés were very impactful. This goes to show how big a difference there is between reading and researching about different realities and inhabiting these realities.
- This emphasized the principle of pluriversality stating that transformation happens through enactment, and while we have attempted to incorporate the testimonies from Heñói in the game, we must acknowledge, that the impact on the players of the game will always be limited compared to those inhabiting the realities. This point will be further explored in section 8.2.
- The fact that Ángel and Inés, that can be seen as ‘experts’ on the realities that we want to show the existence of, stated that the game did a good job, was interpreted as a stamp of approval of the format of the game.
- In this phase, principles of pluriversality again struggled against constraints of time and resources. However, the feedback from Heñói was effective in buttressing the pluriversal principles, which shows how the volunteers of NOAH have respect for the realities of their sister organizations.

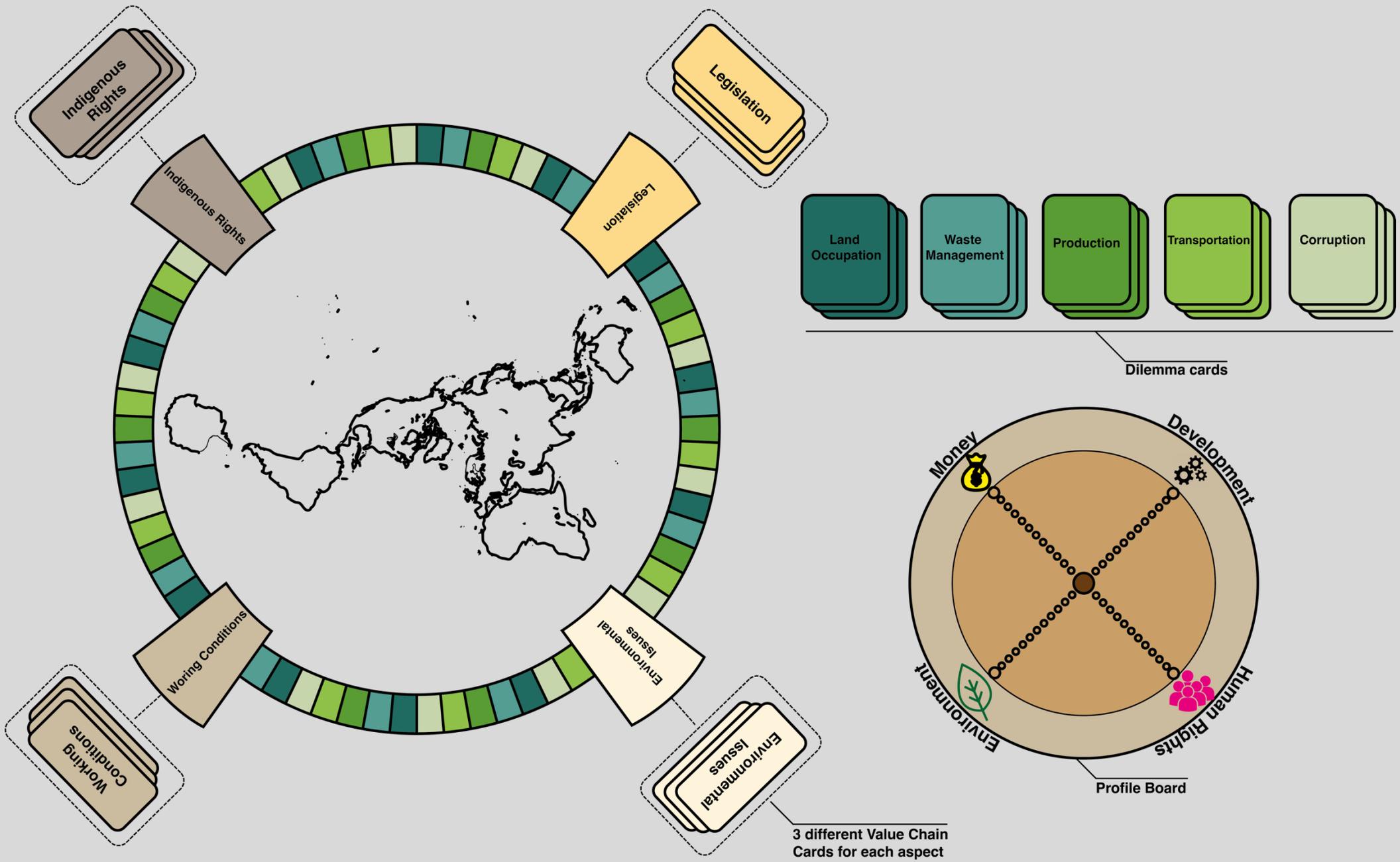


Figure 24: Fourth iteration of the game. Made in Adobe Illustrator

7 Insights based on my experiences.

In this section, I will present my insights from the participation in the design process of the game. The insights will cover four main points: the importance of a vision when challenging the dominance of modernity, the co-constitutive construction of problems and solutions, the imperative of acknowledging Global North design and academia's embeddedness in modernity, and finally considerations when attempting to support people inhabiting different realities than yourself. The insights are meant as a supplement to the game as my contribution to the transformation of design.

7.1 The importance of an articulated vision

What became apparent throughout the project was that a vision is needed for a design project to challenge modernity and the establishments and beliefs that uphold it. As mentioned, I have drawn on Transition Management (Loorbach 2010) in my conception of 'visions' as articulated principles or wishes that should guide the actions and decisions of a project. This vision must be fundamentally grounded in principles that critically approach modernity.

That a vision is imperative for critical design projects was clear throughout every phase of this project, as the initial lack of a vision led to the reproduction of modernity through e.g., the competitive format of the game. This reproduction of modernity was not intended and actually ran counter to the convictions of all the participants in the project, as was exemplified by the feeling of relief when the vision was finally articulated (see section 6.3.2). This highlights the need for the explicit articulation of visions and the danger of assuming that a design project can support a desired transition as long as the participants simply share similar convictions.

These insights were agreed with when I presented them at the final workshop on May 9th, and the volunteer stated that "a clearer conversation on the purpose of the game" would have been beneficial for the process (pers. comm., May 9th, 2023). When the vision for the design project was eventually articulated, the flat organizational structure of NOAH allowed the articulation of the vision to be developed within the context of the project. That NOAH does not have a board or management that sets out a predetermined direction for their projects, allowed us to develop a vision that was attuned to the project.

To wrap up my insights on this matter I will draw on Escobar's (2018) point that "transitions are not designed but emergent" and that transitions "takes place on the basis of a multiplicity of local actions (...) without the need for any central planning or intelligence guiding the process" (p. 152), which echoes that of Transition Management (Loorbach 2010). My insights from this project indicate that while design projects, as an example of these kinds of 'local actions', should indeed not be guided by the intentions or wishes originating from centralized entities, their actions should, however, be guided by their own articulated visions that are attuned to the realities of the people engaged with and affected by the project. In line with theories on Transition Management, I argue that one way of strengthening a design project's contribution is to align the specific vision of the project with larger, "long-term sustainability visions" for society (Loorbach 2010, p. 163). These 'long-term sustainability visions' does not necessarily entail specific and agreed-upon directions for actions and can also take the form of different transition discourses, as presented by Escobar (2018, p. 139-144). In our project, our vision was for instance aligned with that of pluriversality through the application of the pluriversal principles. The main insight here is thus, that if no vision is articulated, any step taken toward a desired transition might be countered by another step that reproduces the unsustainable status quo.

7.2 The co-constitutive co-construction of problems and solutions

As described in section 3.3.1 pluriversal design should illustrate how modernity leads to defuturing practices (Fry 2017). By illuminating the effects and destructive capacity of modernity and the related idea of the One-World world (Law 2015), pluriversal design will implicitly increase the attractiveness of the alternatives put forward. These alternatives to the defuturing practices should emphasize ‘futuring’ practices of the currently oppressed realities of the world (Fry 2017). While these futuring practices, which constitute different ways of knowing, being, and doing, have been silenced as they do not adhere to the beliefs of modernity, they provide a wide range of alternative approaches to environmental and social issues. Examples of such approaches include indigenous ecological knowledge of local pastoralists in Morocco (Davis 2005) and the ascribing of ‘mauri’ (life essence) to the natural environment by the Ngāti Hori clan of Hawkes Bay, New Zealand (Barcham 2022). For design to indicate alternatives to modernity, an engagement with what is ‘possible’, is required. Dilnot (2015) presents an interesting definition of ‘possibility’ as the “negotiation with actuality and not the escalation of what is” (quoted in Escobar 2018, p. 18). A ‘negotiation with actuality’ must, in pluriversal design projects, entail both a critical analysis of modernity and an inquiry into existing forms of alternative practices of knowing, being, and doing. If a critical assessment of the dominant epistemology and ontology of the given subject is not made, then the project will not be able to explore the full range of ‘possibilities’ but will be limited to the ‘escalation of what is’.

Such analyses will lay the foundation for a problem statement that sets the direction for the design project. It is important to realize, that problem statements are never neutral statements about reality but are a result of a continuous set of answers to how the designer(s) perceives the problem and why they do so. It is thus a construction, and an “*expression of concern*” that further “*always imply solution statements*” (Escobar 2018, p. 185, emphasis

in original). Thus, as the problem statement is an expression of concern of the designer and a result of how the designer’s values and positions have directed the analysis and the ‘negotiation with actuality’, the statement will inevitably also define and narrow down the solution space. Expressed differently, problem statements may result in projects being guided by a case of ‘because I see *this* as the problem, I see *this* as the solution’. This is how sets of problems/solutions are co-constructed and why they can be seen as co-constitutive.

In our project, these insights are relevant to the alternatives to modernity that we want to indicate through the game. The insights stemmed from the workshop on May 9th, where the volunteer explained how she experienced almost antagonistic relationships between movements aimed at challenging modernity. She gave an example of how her friend that is active in a Marxist community is so determined that everything can be explained through issues of class struggles that other positions which also criticize the status quo are seen as invalid. She further stated that because many different leftist movements and communities are trying to push for change that fits their agenda, their struggles for social change “appear very fragmented” even though their visions and analyses often overlap in their critique of modernity (pers. comm., May 9th, 2023). This notion of fragmentation can be compared to Ezio Manzini’s (2015) notion that critiques of modernity and push for social change emerge independently around the world like “beautiful islands of applied cultural and socioeconomic wisdom (...) in the sea of unsustainable ways of being and doing” (quoted in Escobar 2018, p. 208). Manzini argues that the growing number of ‘islands’ that constitute alternative ways of being, knowing, and doing is forming an ‘archipelago’ with the strength to significantly challenge modernity. However, the point presented by the volunteer raised the question of whether the social movements and communities, that Manzini’s ‘islands’ represent, might naturally form this archipelago since each of their constructed sets of

problems/solutions might result in approaches that implicitly invalidate other approaches in their attempt to solidify their own. While this issue can be seen as a call for intersectionality (Onafuwa 2018) our approach has been that of pluriversality; to emphasize, as the volunteer stated in the workshop on May 9th, that a “transition is not just one way, it is a plurality of ways” (pers. comm., May 9th, 2023). In this sense, pluriversality entails the realization of the potential strength in challenging modernity from many different vantage points, and that these vantage points should not be conceived of as antagonistic, but should be recognized as the product of how different realities lead to different processes of problem/solution constructions that each has one thing in common: a critique of modernity and a push for alternative ways of knowing, being, and doing.

The main insight here is thus that all design projects are guided by a specific set of problem/solution statements that is a result of the situated analysis of the reality of the participants. What is required in pluriversal design is the acknowledgment that different projects on the same topic will result in different problem/solution statements as a result of their situatedness within different realities. No set of problem/solution statements are invalid, they are all valid within their realities, and they all challenge modernity in different ways by emphasizing alternative ways of knowing, being, and doing, and should thus be conceived as being mutually supporting in the realization of pluriversality.

As these realizations came quite late in our project we have not implemented them into the game yet. However, the intent is to materialize them by drawing on many different transition discourses (Degrowth, ecofeminism, Buen Vivir, etc.) in the development of the alternatives that are indicated in the game. In this process, it is important to recognize that we, the participants in NOAH’s project, are also situated within a specific reality and that our analysis will inevitably also lead to bias towards a specific statement of problem/solution.

As I have tried to illustrate here, this is a premise of all design projects, and I believe that the best way to approach it in our case is to be transparent about the values on which our analysis is founded. Thus, the introduction of the game might need to be accompanied by a presentation of our view on modernity and pluriversality.

7.3 The ‘edges of modernity’

The third insight draws on Berry’s (1999) notion that universities are one of the four key establishments upholding modernity (see section 3.1). In this sense, universities are where academia ‘happens’ and where the dominant epistemology of Global North science is reproduced. This epistemology rests on the idea of an objective reality ‘out there’ that can be observed (Escobar 2018). This ‘one reality’, or ‘One-World world’ (Law 2015), is what contemporary design approaches situated within the mature design disciplines are designing for (see section 2.3). As the neoliberal agenda dominates the reality of the One-World world, current design practices are limited to the objective of profit-making (Taboada et al. 2020) where people are seen as black-boxed individuals and consumers that can be conceived of as knowable entities by the designer, as with the idea of the ‘homo economicus’ (Fletcher 2010). As described in section 3.2, the design for a One-World world is what has effectively led to the oppression of alternative realities.

While some design approaches can be said to diverge from the dominant design practices, like Participatory Design that attempts to ‘unbox’ people by exploring their ‘Matter of Concerns’ (Brodersen & Pedersen 2019), and while other approaches are challenging the dominant socio-economic and political paradigms or are attempting to develop new ones, like Transition Management (Loorbach 2010), these steps towards a transformation of design needs to be accompanied by a realization that this transformation cannot originate within the current epistemes of Global North academia, as

has also been noted by Escobar (2018): “academic knowledge in general seems unprepared to provide us with the earth-wise knowledge needed for the integral functioning of humans and the Earth” (p. 223). The third insight supplements Escobar’s point, in that the transformation of design must originate in the collaboration with communities and movements that inhabit realities at the ‘edge of modernity’.

Through my participation in the project, I have been allowed to engage in the enactment of the realities of NOAH and Heñói. This enactment has allowed me to experience and engage in the ontological struggles of their realities. These struggles were exemplified by how NOAH, even though they are inhabiting a reality on the edge of modernity, are still affected by modernity. This is a fundamental struggle of all realities that seek to challenge modernity, since, as Escobar’s notion of ‘edge of modernity’ indicates, no reality exists ‘outside’ modernity. Thus, any attempt to challenge modernity is ultimately restrained by modernity itself. In the project, this became apparent as aspects of modernity were continuously at risk of being reproduced in the game, even though the game intended to challenge modernity itself. The risk of the reproduction of modernity came from seemingly harmless discussions on e.g., what elements to include in the game, how the game should end etc., and would have been near impossible to detect without a continuous participation in the project. These struggles also emphasized the point that while NOAH’s fundamental principles were comparable to those of pluriversality, the more firmly articulated principles of pluriversality, as presented in this report, helped guide the process.

The ontological struggles of communities and movements might therefore be invisible to the researcher that does not participate in the enactment of the realities and only became visible to me through the approach of participant observation. These struggles are, nonetheless, what contemporary design must engage with to diversify the epistemology upon which it rests. If Global

North academia were to actively engage with these alternative realities to diversify the epistemology on which current design practices are based, it would open up for a pluriversal approach to design based on an ‘ecology of knowledges’ (Santos et al. 2007) that would not oppress different ways of knowing, being, and doing, but instead, amplify and support them.

7.4 Supporting different realities than your own

While I have stated that I have participated in the enactment of the realities of NOAH and Heñói, it is important to note that these two organizations, even though they both exist at the edge of modernity, still inhabit different realities. This can be explained by how NOAH is physically situated within the Global North. This point was illustrated in the interview with Heñói where Ángel and Inés mentioned how even in the work with ‘progressive activists’ from the Global North, the difference between the realities that organizations from the South and North inhabit, becomes apparent (see section 6.4.2). This point is relevant as the project focuses on both ends of global value chains, and thus seeks to equally challenge the dominating reality of the Global North and to support the currently oppressed realities of the Global South. The final insight thus draws on Escobar’s (2018) point that “transformation takes place in the process of enacting other worlds/practices” (p. 99) and is related to how pluriversal design can support realities that are different from the reality in which the design project is situated.

That transformation requires the enactment of other worlds and practices does not entail that movements or communities in the Global North cannot attempt to support the realities of the Global South, as is emphasized by Fry (2017) “the point here is clearly not that nothing should arrive from the North, but rather that what does again must be of true advantage to the South, as identified by a process of rigorous critical selection” (p. 18). While there might not exist strict guidelines for this ‘process of selection’, design projects that wish to support alternative realities, need to critically assess the purpose

of the projects and how the embeddedness in modernity affects the participants of the projects. Through our project, I have experienced two elements that can be of use when engaging in these assessments: a set of pluriversal principles and an articulated vision for the design project.

I have already commented on how having a vision for the design project can reduce the risk of reproducing modernity (see section 7.1), but an additional role of such a vision is that it allows for the assessment of the purpose of the project. The seemingly simple, yet fundamental question of ‘why’ we are designing when engaging in pluriversal design projects can be asked by considering why the vision is articulated the way it is. For projects to result in an outcome of true advantage to the South, the answer to this ‘why’ must be founded in what Escobar (2018) calls “*a profound understanding of the political project of the movement*” (p. 187, emphasis in original). The vision of a design project that aims at supporting the alternative realities, must thus be based on a ‘profound understanding’ of these realities. In our project, we attempted to gain this understanding by drawing on the volunteer’s previous experiences in working with NOAH’s sister organizations in the Global South. The understanding we gathered from this was what allowed the articulation of the vision to be based on the intention of illustrating the injustices happening throughout current global value chains and of indicating alternative ways of organizing society. Through the interview with Heñói, the understanding was verified as being in line with their intentions for participating in the project.

Apart from this ‘profound understanding’, a recognition of how the participants in a design project are affected by their embeddedness in modernity can be acquired by continuously comparing the design actions and decisions taken in the project to the pluriversal principles. In our project, the application of pluriversal principles, for instance, allowed us to acknowledge how the initial competitive format of the game was a result of our own

embeddedness within modernity and further allowed us to diverge from this format.

The final insight is thus that for a pluriversal design project performed in the Global North to result in true advantages for the South, a critical assessment of the purpose of the project and the embeddedness of its participants within modernity must be made, and that an articulated vision and a set of pluriversal principles can aid in this assessment.

7.5 Contribution of insights to the transformation of design

For the final part of this section, I want to summarize the four key insights presented above and present how they are intended to contribute to the transformation of design. The four key insights are:

- A vision is needed for design projects that aim at challenging the unsustainable status quo, to reduce the risk of reproducing aspects of modernity.
- All design projects will inevitably produce co-constitutive problem/solution statements based on the reality and values of the participants. If the foundation of the projects are based on a critical analysis of the unsustainable and unjust consequences of modernity, none of the corresponding statements are invalid but should be conceived of as mutually supporting in the realization of a pluriversal world.
- The origin of the transformation of design must be from outside current Global North design practices and epistemology. Active engagement with organizations and movements inhabiting alternative realities at the edge of modernity is needed.
- Global North design projects that aim at supporting alternative realities require a critical assessment of the purpose of the projects and of the embeddedness of the participants. Articulated visions and the adaptation of pluriversal principles can help in this assessment.

The intention is that these key insights can contribute to the transformation of design by being applied in future design projects. Drawing on Escobar's (2018) point that transformation requires enactment, I posit that the transformation of design also will require a process of enactment. I believe that a transformation of design will require a continuous process of design projects that not only push the boundaries of the dominant design disciplines but are situated within radically new socio-economic and political paradigms. This transformation will enable design to diverge from its current role in the reproduction of modernity, and instead take on its role in the required transformation towards a truly sustainable and just society.

It was the adaptation of pluriversal principles that enabled a transformation of our design process and aided in the realization of the game. I will therefore argue, that pluriversality can play an important role in the transformation of design, due to its inherent critique of modernity and its insistence of alternative ways of knowing, being, and doing, that constitute alternative realities to that of the unsustainable status quo.

8 Discussion and reflections

In this section I will discuss and reflect on the potential limitations of my thesis in regard to the methodological approach of participatory observation, whether games can be used to enact alternative practices, the lack of testing in the development of the game, whether working with NOAH was fruitful for my inquiry and finally the relevance and future application of my contributions.

8.1 Participatory Observation

8.1.1 'Subjectivity' of empirical data

The method of participatory observation (PO) that I have applied in this project, emphasizes how researchers that are actively participating in the everyday life and activities of 'insiders' can explore dynamics that would have been otherwise invisible to non-participating researchers (Jorgensen 1989a). This was reflected in my experiences at NOAH where the struggles against modernity became apparent through my continuous participation in the development of the game. However, since the data gathered through PO is based on the personal experience of the researcher, it will be inherently 'subjective' and thus not live up to the demand for 'objectivity' that is one of the core tenets of modern science (Escobar 2018). The modernist claim for 'objectivity' in research rests on the need for replicability to ensure the credibility of the data collected and thus the insights gained. The lack of replicability is present in my project where my experiences inevitably have been affected by my values and convictions, and had another researcher thus engaged in this project they would have experienced it differently and thus reached different insights. A question can therefore be posed of the credibility of my insights if the research that I have undertaken cannot be replicated.

My position on this is related to Escobar's (2018) notion of 'strong relationism' and the pluriversal critique of 'the real'. From this position, instead of conceiving of reality as 'one reality' that exists 'out there', the multiple realities existing in the world are enacted and are constituted by their relations and "come into being moment by moment through our participation in the world" (Escobar 2018, p. 88). From this position issues of objectivism/subjectivism in research are dismissed entirely as "*it is impossible to demarcate a single, stable real*" (p. 87, emphasis in original) that can be objectively observed, and as the multiple realities are not subjectively perceived but collectively enacted. As my experiences are a result of the collaborative enactment of the realities that I have participated in, I will argue that the insights that I have reached are attuned to the struggles of the alternative ways of knowing, being, and doing, within these realities.

Thus, I will argue that the potential limitation of the 'subjective' aspect of PO is a non-issue and end the discussion on this topic with a quote from Ingold (2011) that again emphasizes the strength of PO: "Participation is not opposed to observation but is a condition for it, just as light is a condition for seeing things, sound for hearing them, and feeling for touching them" (quoted in Escobar 2018, p. 87).

8.1.2 Ethical considerations

The second reflection on the methodological approach of PO is related to the ethical considerations for the 'insiders' whose reality the researcher is participating in. While the researcher is engaging by taking on the role of participant, there will still be a divide between insiders and the researcher. This divide can be explained by the fact that the researcher 'steps in' to the reality of the insiders and will, when the research period ends, 'step out' of it again. Therefore, while the researcher might participate in the enactment and struggles of the explored reality during the research period, the acknowledgment of the researcher's ability and intention of stepping out of

this reality again, is important. It is important because it leads to the realization that while the researcher might be affected by the engagement *during* the process of participation, whatever the researcher has experienced and will report *after* the process will have consequences for the people still inhabiting these realities.

This reflection is thus a call for the ethical considerations of the realities that the researcher is exploring. These realities might entail struggles of oppression, and while the researcher might have the privilege of eventually 'stepping out' of this reality, the people inhabiting them on a more profound level, do not.

8.2 Games as a way of enacting alternative practices

In our project, the purpose of the game was to illustrate the injustices happening throughout current global value chains and to indicate the realities of the world that exist as alternatives to the dominant One-World world (Law 2015). The intention was that the students, through participation in the game, would be equipped to participate in the further learning course in NOAH's project and be enabled to engage in a critical assessment of the current global value chains and in the indication of alternatives. By drawing on Escobar's (2018) point that transformation takes place "in the process of enacting other worlds/practices" (p. 99), I will in this subsection draw on literature on Design Games to discuss whether our game can be seen as a way of enacting alternative ways of knowing, being, and doing.

Vaajakallio & Mattelmäki (2014) describes how, for players, design games "appear as a mindset that creates an experience of being in a game world, a magic circle, which is a physical and ideal playground with a special ordering of time, roles and rules." (p. 69). It is the potential of this 'playground' that I want to explore in this discussion. By having the players take on different roles according to their missions, and by basing the game around the

dilemmas and Value Chain Cards, the ‘special ordering of time, roles and rules’ of our game was aimed at representing the different realities that the value chains come into contact with. This ‘ordering’ is what set the format for our ‘playground’, and thus defined the space for the potential enactment of realities.

When participating in design games, Brandt et al. (2008) state that “the players jointly make an inquiry into the subject matter where various understandings and views are put forward and reacted upon” (p. 57). In our game, this joint inquiry and reaction were facilitated by the decisions that players had to make when faced with dilemmas and through their decision on which Value Chain Card to pick. The confrontation with the consequences of the choices and decisions made by the players can be seen as what Brandt et al. call an “inquiry into existing practice and participatory design of possible futures” (p. 61). Here, the dilemmas represent the realities, or ‘existing practice’, that many oppressed communities face, and the decisions of the players constitute the ‘design of possible futures’, in that the player’s decisions are expressions of how to (dominantly or alternatively) engage with the presented realities. In the current iteration of the game the players are playing individually, however, the intention is that the ‘participatory’ or ‘joint’ aspect of the inquiry will emerge through discussions among the players on why specific choices were made, possibly facilitated by a teacher or a representative from NOAH.

The ‘design of possible futures’ that the game is intended to allow for, is what can be compared to Escobar’s (2018) notion of ‘transformation through enactment’. I will argue that our design game, and design games in general, can establish spaces for a ‘symbolic enactment’ of alternative ways of knowing, being, and doing. These spaces might not directly affect the material reality but opens up for the recognition of the existence and struggles of alternative realities. This potential of design games is especially relevant

for projects in the Global North that may not have physical access to the alternative realities, but still wish to support them.

That the format of our game might succeed in creating these spaces was exemplified through the positive feedback from Ángel during the interview with Heñói. However, whether our game actually opens up for the possibility of enactment and design of possible futures is hard to tell since we have not tested the game yet. The project plan of NOAH dictated that the game would not be tested until late June, which, in my eyes, is one limitation of our process. From previous experience with design projects through my education as a Sustainable Design Engineer, the sooner the intended users (or in this case players) are included in the process, the better the outcome will turn out. Despite this view, I did not challenge the project plan as it was first of all the basis for the acquisition of funding for the project and second of all, an expression of the available time and resources of the working group.

8.3 NOAH as an organization at ‘the edge of modernity’

The decision to engage with NOAH was made based on the assumption that they constituted an organization that worked to challenge the dominant One-World world at the ‘edge of modernity’. This assumption was based on knowledge of their previous projects, on the fact that they are part of a larger network of organizations that can also be viewed as existing on the edge of modernity through their membership in Friends of the Earth International, and on research on their fundamental principles. I, therefore, did not have any concrete, personal experience with their approach but will, from my experiences in the participation of the project, argue that the assumption was correct and that they can indeed be viewed as an organization that challenges modernity based on principles that are similar to that of pluriversality.

Drawing on the insight from section 7.3, the participation in their project has thus proven to be a suitable space for the exploration of how pluriversal principles can be applied to transform design.

To explore the potential of pluriversal principles, it might have been interesting to engage in a design project that was not performed by an organization with fundamental principles already akin to that of pluriversality but instead by an organization more firmly embedded within modernity. My approach to the transformation of design has, however, been based on the notion that while organizations inhabiting realities firmly embedded within modernity might be able to diverge towards new design disciplines, their embeddedness inhibits them from truly engaging in the radicality of a ‘transformation of design’. Drawing on Irwin’s (2015) continuum of design disciplines, my position is that such organizations might be able to move towards existing or developing disciplines but will not be able to engage in the emergence of radically new design disciplines that exist within new socio-economic and political paradigms. This engagement in the emergence of radically new paradigms is what I see as the foundation for a transformation of design, and will, in my opinion, be driven by communities, movements, and organizations existing at the edge of modernity. This is, however, just my opinion based on my own experience in working with actors both at the edge of and closer to ‘the center’ of modernity. Thus, this point of reflection should also be viewed as a call for future research to explore and challenge this view by applying pluriversal principles in design projects performed by organizations more resolutely embedded within modernity.

8.4 Relevance and future application of my contributions

Finally, I will comment on the contributions of my thesis in light of its role as a case study. Flyvbjerg (2006) excellently provides amendments to five of the most common misunderstandings on the perceived limitations of case studies. Here, I will discuss one of these in relation to my thesis.

The misunderstanding that I find relevant to discuss is what Flyvbjerg (2006) explains as: “One cannot generalize on the basis of an individual case; therefore, the case study cannot contribute to scientific development” (p. 221). The main point of this misunderstanding that I want to discuss is that it indicates that for discoveries or insights to be valid, they need to be generalizable. This misunderstanding is thus adhering to the idea of the One-World world where the world is viewed as being constituted by a single real from which we can derive universal knowledge and to which we can apply universal theories. Flyvbjerg presents an amendment to this misunderstanding by stating that “formal generalization is overvalued” and that “‘the force of example’ is underestimated.” (p. 228). I will contribute to this amendment by drawing on pluriversality to argue that as the world is made up of multiple realities, each specifically enacted, any knowledge derived through research is a result of this specific enactment, meaning that all knowledge is contextually specific, limited, and valid. This point is similar to that made by Santos et al. (2007): “*All ignorance is ignorant of a certain knowledge, and all knowledge is the overcoming of a particular ignorance. There are no complete knowledges*” (p. XIVII, emphasis in original).

What this means for my thesis is that my contributions, in the shape of the game and my insights, should be viewed in light of the context from which they are derived. Due to this contextual specificity, the application of my contributions in future design projects aimed at the transformation of design, should be done reflectively. I do believe that my contributions can be seen as a “force of example” (Flyvbjerg 2006, p. 228) for projects similarly engaged with the ontological struggles of alternative realities, and my hopes are, that this report can provide the foundation for the assertion of whether my contributions are relevant for such future design projects.

9 Conclusion

The transformation of design will require a continuous process of design projects that engage with communities and movements inhabiting realities existing at ‘the edge of modernity’. Within these realities modernity is being challenged through the enactment of alternative ways of knowing, being, and doing. Active engagement with these alternative ways of knowing, being, and doing is needed for the decentering of modernity that is required for the transformation of design.

Through this report, I have presented my exploration of how pluriversal principles can support this transformation of design in order to advance the sustainable transformation of society. The exploration was made possible through participation in the development of a learning game in a design project in the Danish environmental NGO, NOAH.

The application of the principles in NOAH’s project enabled the design process to diverge from the reproduction of modernity and supported the development of a game that seeks to challenge the dominant One-World world (Law 2015) by indicating the plurality of realities within the world and by emphasizing the ontological struggles of these realities. Based on my experiences in the project I will therefore conclude that principles of pluriversality have significant potential in the transformation of design through their ability to support design processes in their critique of modernity and in the indication of alternatives.

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