# Design principles of the pluriversal design paradigm

Eveline van Zeeland

University of Twente, the Netherlands

Corresponding e-mail: e.m.vanzeeland@utwente.nl

doi.org/10.21606/drs.2024.295

**Abstract**: When scientists embrace a different paradigm, this naturally leads to a shift in academic behavior. While the importance and necessity of the pluriversal design framework are evident, understanding how this paradigm influences academic conduct is less clear. Through a systematic literature review of 103 academic papers on the pluriversal approach, it is deducted what it is that researchers do or suggest to do when shaping their research and design practice through the pluriversal design paradigm. In this study, the pluriversal design paradigm is distilled into a set of foundational prerequisites and design principles. These design principles can be applied by both scholars and practitioners across various design contexts. Since behavior and ethics are intertwined, this study also delves into the ethical considerations of pluriversal design.

**Keywords**: pluriversal design, prerequisites, design principles, ethics

## 1. Introduction

*"Life is universal. Its modes are pluriversal"* (Erasmus 2020, 62).

A growing community of design researchers is challenging the notion of universal knowledge. They assert that we inhabit a world composed of many worlds (StJohn and Akama 2022). These many worlds or worldviews encompass various aspects, including the material, spiritual, physical, and temporal dimensions (Cadaval Narezo, et al. 2023). These worldviews are not just perspectives (Conway and Singh 2011), but rather "*a set of beliefs, values, and systems of knowledge that articulates communities' social life to religion, politics, the economy and the environment*" (Cadaval Narezo, et al. 2023, 1146). Here, the word 'community' must be seen broadly: "*community goes beyond the human realm as the term assumes that everything – the wind, the mountains, a rainbow, the animals, the people, but also books, our houses, the cities – has a azón-o'tan ('heart' in Maya-Tseltal)*" (Cadaval Narezo, et al. 2023, 1146). These different worlds lack an overarching principle, otherwise it would be a universe (Castillo 2016).

The pluriverse embodies a process (Dunford 2020), a value (Dunford 2020), a human capability (R. Leitão 2023), a form of social design (R. Leitão 2022) and a tool (Fox and McDermott 2020, Escobar 2020). The road to a pluriverse reality is paved by the degrowth, feminist and decolonial movements (Demaria and Kothari 2017). Particularly, the decolonial movement played a pivotal role in establishing pluriversality as a design paradigm. From a decolonial perspective, pluriversal design challenges the exclusive reliance on a Eurocentric perspective. Within this Eurocentric perspective, Indigenous people are often not seen as partners in research or design but are "*situated as the object of research or design*" (Barcham 2022, 7). This highlights *"the need for renewed experimentation with practical approaches for better recognizing and working productively with ontological difference"* (Campion, et al. 2023, 3).

Viewed from a broader ontological perspective, the pluriversal design paradigm celebrates diversity. It goes beyond the mere attempt to amalgamate different viewpoints: "*pluriversality is not a synonym for inclusivity or diversity. Instead, it refers to the human capacity to build worlds differently*" (R. Leitão 2023, 17). Pluriversality encompasses a range of socio-cultural worldviews and distinct realities, notably embracing what might initially appear as contradictory belief systems or improbable scenarios (Akama, Light and Kamihira 2020). In this light, pluriversal thinking can offer fresh perspectives and innovative solutions, aiding in the quest for alternative ways of comprehending the current and envisioning the future (Kayumova and Dou 2022). Consequently, the pluriversal approach finds its most fitting application in addressing issues that require unconventional paths to progress (Maldonado-Villalpando, et al. 2022), including matters related to sustainability, well-being, politics, justice, and the challenges of societal transformation.

Although contributions to the pluriversal approach are relatively recent (Nourani Rinaldi 2022), the approach represents a distinct paradigm in contrast to the universal design paradigm. Table 1 underscores the difference between the universal and pluriversal design paradigm. The pluriversal design approach is considered to be a shift in thinking and in creating and building knowledge (Dube and Moyo 2022, Kayumova and Dou 2022). This "*existential shift*" (Blaney and Trownsell 2021, 51) can be defined as a transition from an 'ontology of separation' to an 'ontology of relatedness' (Escobar and Maffei 2021a), thereby transforming design from a transactional practice into a relational one (Noel, et al. 2023). This transition, sometimes also referred to as 'the decolonial turn' (Karmakar and Chetty 2023, Ortiz 2023) or 'relational turn' (Trownsell, Behera and Shani 2022), implies a redesign of the design field (Akama, Light and Kamihira 2020).

*Table 1    Pluriversal paradigm versus universal paradigm (Leitão and Noel 2023, R. Leitão 2023)*

|  | **Pluriversal paradigm** | **Universal paradigm** |
|---|---|---|
| **Belief** | Multiple worlds with many possible ways to live and work | One single world, with one right way to live and work |
| **Tendency** | Divergence | Convergence |
| **Narrative** | Multiple narratives coexisting | One underlying narrative |
| **Result** | Heterogeneity | Homogeneity |

The emergence of this paradigm shift can be attributed to three key factors. First, academia is now more diverse than ever, and thus is challenging the current paradigm in many ways (Martinez-Vargas 2020). Second, it is a response to the prevailing zeitgeist. In contemporary times, programs centering too much on Eurocentric perspectives have lost international appeal (Nayak 2022). Third, and most significantly, this shift is seen as imperative for our survival (Blaney and Trownsell 2021), particularly in light of the crises that demarcate the twenty first century (Noel, et al. 2023): "*to navigate our threatened, threatening world, it seems more important than ever to seek out new alliances and sophisticated conjunctions*" (Jensen 2022, 191).

How does one navigate this path? How can we effectively implement the pluriversal design paradigm? How to manage difference (Jammulamadaka, et al. 2021)? Currently, knowledge on practical approaches to pluriversal design is limited (Arias-Gutierrez and Minoia 2023, Barcham 2022, Kambunga and Smith 2023, Kaul, et al. 2022) and there exists "*an urgent need to see the pluriverse in action, directly engaging with other ontologies and world-making practices*" (Ehrnström-Fuentes and Böhm 2023, 257). If the pluriversal design paradigm is a tool (Escobar 2020), it's essential to understand how to effectively utilize this tool. Therefore, this paper aims to provide practical guidance by presenting design principles. Given that "*design is the activity that translates intangible values and ideals into tangible experiences and artifacts*" (R. Leitão 2023, 19), design principles serve as the mechanisms in this translation. These design principles can be thought of as possible strategies, recommendations, guidelines, or considerations (Interaction Design Foundation n.d.) that can be applied to varying degrees based on the specific context. It's crucial to distinguish between 'design principles' and the broader concept of 'principles'. While principles encapsulate fundamental truths or general laws, design principles offer specific recommendations or guidelines tailored for the design process. Design principles provide practical suggestions to inform and guide the design team or design researcher. The here presented design principles have been derived from a comprehensive literature review, which involved dissecting the explicit and implicit principles proposed or used by scholars.

## 2. Methodology

A systematic literature review was conducted, starting with a search on Web of Science Core Collection using the keywords "pluriverse" or "pluriversal," which yielded 298 papers as of September 19th, 2023. No demarcations have been made, not on the basis of discipline, year or any other variable. These papers initially underwent screening by eliminating 'false positives', to retain only academically relevant research papers. After excluding book reviews, non-English literature, and other irrelevant sources, 113 papers remained. Subsequently, these 113 papers were carefully examined, and based on relevance, 103 papers were included in this review (see the appendix for details). The 103 selected papers were then categorized based on their respective topics and research approaches.

Figure 1 presents the paper distribution across various topics or orientations. It's worth noting that the group labeled 'Education, Science, and Methodology' includes methodological papers, making it the largest category. This is not surprising, especially considering that we are still in the early stages of this emerging paradigm, where one would naturally anticipate a significant number of methodological papers. Figure 2 illustrates the relative youth of most papers, with the remark that the analysis was conducted in September 2023, and the year 2023 was still in progress. It's important to emphasize that 50% of the papers have a conceptual nature, which influences how the design principles that are presented in this manuscript should be interpreted.

To uncover design principles, open solo-coding was employed on the 103 papers, following Saldana's (2009) methodology, which consists of two iterative coding cycles. Initially, in the first cycle, data underwent In Vivo coding, marking sentences that elucidated the why and the how of the research. This comprehensive approach ensured the consideration of all potential insights. In the second cycle, a focused coding technique was employed, categorizing all marked sentences into conceptual verbs and actions. Through axial coding, categories were iteratively organized and reorganized and two overarching themes emerged: essential prerequisites and tool-like design principles. The resulting design principles should be regarded as suggested principles, rather than being firmly grounded in practical evidence of effectiveness. As recently pointed out by Ehrnström-Fuentes and Böhm (2023), there is a pressing need for practical examples. The suggested design principles resulting from this interpretative literature review may contribute to laying the groundwork for the development of these practical illustrations. The results of the literature study are presented in the following section.
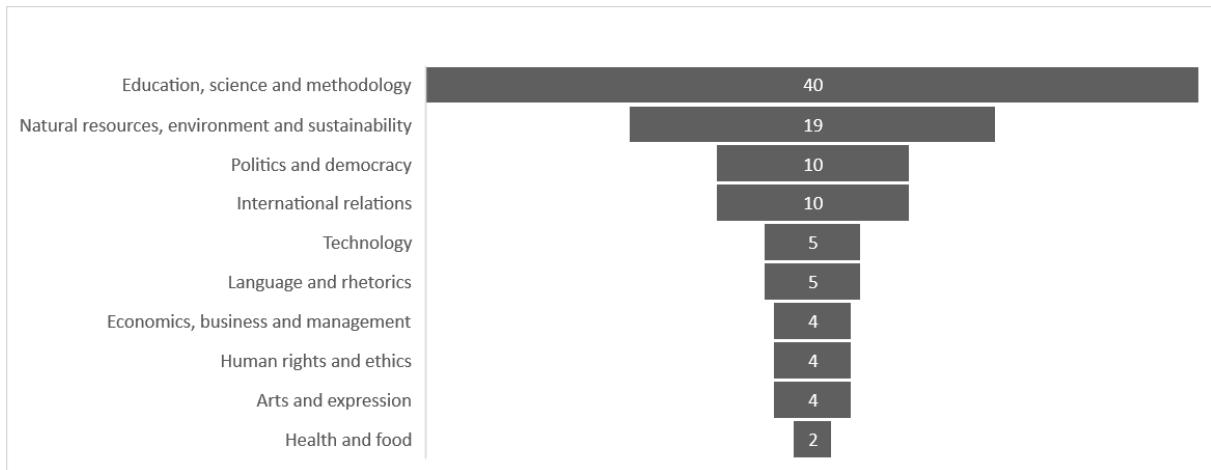
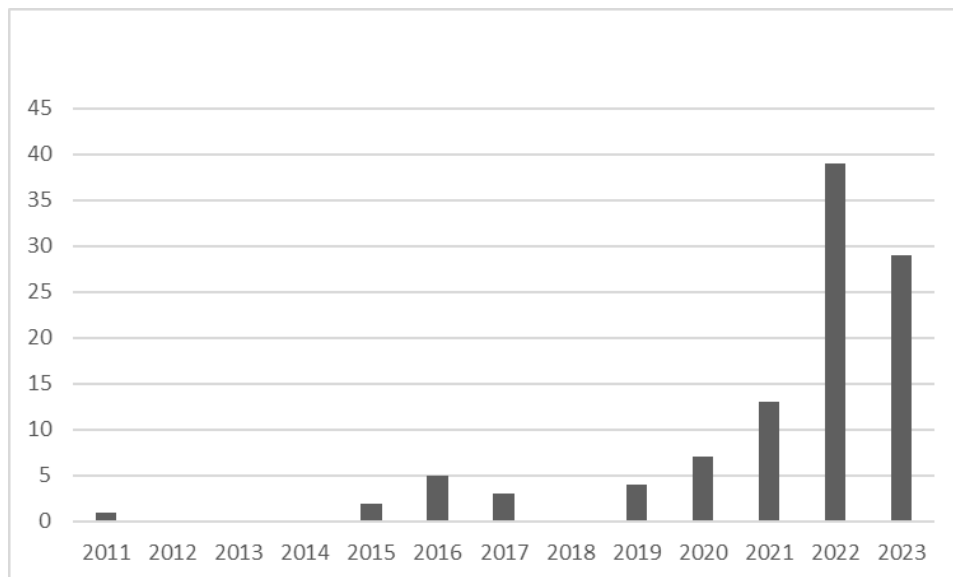*Figure 1   Distribution of the included papers by topic or orientation*



*Figure 2   The allocation of the selected papers based on their publication year (as of September 2023)*

## 3. Foundational prerequisites and design principles

The findings of the literature review reveal the existence of two fundamental principles. These principles are addressed first in section 3.1. They serve as foundational prerequisites that must be fulfilled for any attempt to implement pluriversal design to have a reasonable chance of success, regardless of the specific context. In the absence of these prerequisites, achieving a pluriverse design becomes an unattainable goal. In section 3.2, we delve into the discussion of the design principles themselves.

### 3.1 Foundational prerequisites

Various authors identify prerequisites or requirements for the pluriversal design paradigm. For instance, Blaney and Trownsell (2021) acknowledge two essential requirements: 1) taking seriously the plurality of worlds and 2) learning how to cope with incommensurate ways

of doing and being. Cadaval Narezo et al. (2023) also emphasize two key principles: conviviality and relationality. Escobar (2021b) identifies 1) the need to challenge and undermine the dominant view of the human, and 2) the notion of relationality or radical interdependence as a way of understanding life. Despite the differences in their terminology, all these authors converge on two overarching principles, which, in essence, encompass similar ideas: 1) nurturing diversity and 2) embracing interconnectedness.

**Nurturing diversity**

A pluriversal approach signifies a shift from merely tolerating diversity to actively nurturing it (Querejazu 2016). This requires a 'pedagogy of care' or an approach centered on 'sharing and caring' (Arias-Gutierrez and Minoia 2023, Gray 2022, Loh and Shear 2022). The primary and most fundamental prerequisite is, therefore, the nurturing principle. Nurturing diversity involves recognizing that there may be various interpretations of the world and allowing these differing viewpoints to thrive: "*pluriversality is about making those alternative worlds visible and contributing to their flourishing*" (R. Leitão 2023, 33). This principle specifically applies to the "*silent voices*" (Ferretti and Barrera de la Torre 2023)*.* Diversity, preceded by the active verb "nurturing," demands action: "*the point of diversity is to hear from unanticipated sources, open up the space for different ways of knowing, and allow things to enter*" (Akama, Light and Kamihira 2020, 9). This nurturing gets shape by embracing deep differences and combining that with "*an ethos of non-interference coupled with hospitality and co-operation*" (Conway and Singh 2011, 702). Nurturing requires effort (Eshun and Madge 2016) and a 'practice of waiting', which involves knowing when to ask questions and when to remain silent, when to step away and when to return while awaiting the emergence of knowledge (StJohn and Akama 2022). In this process, it is an inviolable rule "*not to force a convergence of horizons*" (Akama, Light and Kamihira 2020, 4).

**Embracing interconnectedness**

The concept of interconnectedness must be understood as existential to the pluriversal design paradigm. As Blaney and Trownsell (2021) suggest, it's not merely a matter of starting with models that emphasize the deep interrelation of worlds; it's about recognizing and actively incorporating our inherent entanglement with the world as an integral aspect of our being, knowledge, and actions. In other words: "*pluriversal should not be mistaken for a collective of independent units or cultures and conflated with cultural relativism; it rather stands for an entangled collective of many worlds that exist and are connected by the colonial matrix of power*" (Azarmandi 2023)*.* These entanglements make differences dynamic (Blaney and Trownsell 2021), and can lead to conflictual situations, also described as 'ontological conflicts' (Oslender 2019). This interconnectedness is not confined to cultures; it extends to methods and methodologies (Koro 2022) and to natural and spiritual entities (Akama, Light and Kamihira 2020, Ishii 2022). Embracing interconnectedness is fundamentally about the 'principle of relationality' (Akama, Light and Kamihira 2020, Masquelier 2022). Recognizing the relationships and connections between all conceivable entities is at the core of the ontological approach, and this approach demands a "*caring attitude for the relatedness of things*"

6

(Croon 2022, 241). Pluriversal relationality is multidimensional (Trownsell, Behera and Shani 2022) and *all* interactions should be conducted 'in a spirit of kindness and honesty' (Huaman 2022). To nurture interconnectedness, the concept of *re-rooting* - strengthening existing roots and re-establishing lost or new ones - and *re-commoning* – re-establishing an ethos of the common - are suggested (Nirmal and Rocheleau 2019).

## 3.2 Design principles

From the comprehensive literature study, seven design principles emerge: 1) cultivating radical empathy, 2) fostering (re)imagination and delinking, 3) encouraging physical encounters, 4) employing narratives, 5) utilizing mapping, visual thinking, and bodily expressions, 6) embracing a participatory approach, and 7) harnessing knowledge. These design principles are best viewed as *potential* tools available to the designer or researcher. They are not mandatory but rather serve as a versatile toolbox for conducting design practice or research design. The interconnections between these principles are significant, and they are presented here in a random order.

**Cultivating radical empathy**

Given the substantial discrepancies among different worlds, the cultivation of radical empathy is an important element in navigating in a pluriverse worlding (Brandão, et al. 2021). It enables the researcher to gain both a broader and a deeper understanding of complex issues (Noel, et al. 2023). Radical empathy entails exploring the work and perspectives of others "*as valid contributions to the future and not as mere curiosities or exoticisms*" (R. Leitão 2023, 33). It involves a dedication to understanding (Noel, et al. 2023) and being moved by differences (Croon 2022). This approach encompasses curiosity, self-reflection, learning from, and exploring with Indigenous communities (Akama, Light and Kamihira 2020), as well as embracing an affective attitude and a "feeling-thinking" process (Arias-Gutierrez and Minoia 2023). Radical empathy can be particularly challenging when dealing with entities, such as "*earthlings that we cannot speak with*" (Francesca and Saverio 2022, 60). Cultivating radical empathy necessitates scholars to be acutely conscious of pluralism (Conway and Singh 2011) and learn to be at ease with existential discomfort (Blaney and Trownsell 2021).  This discomfort prompts individuals to confront their own vulnerabilities and uncertainties, which fosters a deeper understanding of the human condition and cultivates a heightened sensitivity to diverse worldviews. Radical empathy also involves a willingness to unlearn what we think we know about each other and about design, and relearn how to collaboratively navigate the unknown (McArthur, Zhang and Xu 2022). Creating an ethos of radical empathy requires the establishment of a safe environment because a pluriversal framework demands the embracing of discomfort (Azarmandi 2023). This safe environment commences with the development of mutual recognition and respect (Campion, et al. 2023) and fosters open, unfettered discussions (Arias-Gutierrez and Minoia 2023). As complexity increases, which is inherent in a pluriversal approach, the importance of trust grows (Campion, et al. 2023). Building authentic trust is vital for the progress of the design process (StJohn and

Akama 2022), since it fosters open communication and collaboration among parties involved, leading to stronger and more meaningful relationships. However, this is easier said than done. Building genuine trust implies an investment in being benevolent, credible and authentic in one's actions and communication (Zeeland 2021). Authentic trust implies that there is no hidden agenda involved and that honesty and integrity form the basis of the relationship.

**Fostering (re)imagination and delinking**

Since the pluriverse "*is a paradox of difference and sharedness"*, the execution of the pluriversal design paradigm is all about "*reframing difference"* (FitzGerald 2023, 2)*.* This reframing hinges on the twin processes of imagination and delinking. Imagination is a crucial component since the pluriversal design paradigm inherently has a future-oriented outlook (Noel, et al. 2023). Imagination serves as a tool for exploring a diverse range of possibilities (Blaney and Trownsell 2021), creating a space of possibility (Barcham 2022), unraveling these possibilities (Bhattacharya et al., 2023) and crafting pluriversal alternatives (Cushman, Baca and Garcia 2021). Recognizing that, "*the narratives that frame the interpretation of the world are a product of people's imagination"* (R. Leitão 2023, 22), active reimagination is essential for reevaluating notions of identity and difference and envisioning varied interpretations of the world (Masquelier 2022). This also involves the ability to imagine that one's assumptions may be incorrect and to envision what does not yet exist (Nirmal and Rocheleau 2019). In this imaginative process, four dimensions come into play: 1) the history of place, 2) the means of subsistence, 3) the relation to nature and 4) the narrative of the future (Ehrnström-Fuentes 2016, Escobar 2008). To facilitate this reimagination, delinking is a pivotal concept. Delinking requires scholars to "*learn how to unlearn"* (Cushman, Baca and Garcia 2021, 14) and to reconsider questions that have already been answered (Dube and Moyo 2022). Consequently, there is a need to redefine definitions, concepts, and relationships to imagine new solutions (Lang 2022). In this process of reimagination and delinking, designers emerge as catalysts for change, leveraging their abilities as instruments of hope and desire for a brighter tomorrow (Noel, et al. 2023, Masquelier 2022). As desire implies awakening, enthusiasm, energy, eagerness, and readiness for action, it is the driving force behind genuine change (R. Leitão 2022)*.*

**Encouraging physical encounters**

In the context of the pluriversal design paradigm, place-based methodologies are recommended to incorporate location-specific concerns into the design process (Vanni and Crosby 2023). This emphasis on place underscores the fundamentally site-specific nature of the ontological perspective (Huaman 2022). The creation of physical encounters can be achieved through the establishment of contact zones. Contact zones, or 'safe spaces' (Kambunga and Smith 2023), encourage meetings, sharing, clashes, and discussions among various stakeholders. Interestingly, it is not the physical characteristics of a place that contribute to its safety in this regard, but rather the interpersonal qualities, such as mutual respect, ac-

ceptance, and confidentiality, that play a significant role. Kambunga and Smith (2023, 2) define a safe space as "*a consciously developed social environment for thoughts, situated actions, and mutual learning that allows participants both to engage in dialogues about their everyday experiences, tensions, and contested pasts, and consequently to imagine and co-create alternative and plural futures*". It is vital to understand that these zones or safe spaces are continuously evolving and require ongoing attention (Mendes and Lau 2022). Besides contact zones, physical encounters can also be achieved by the practice of walking around. Walking around allows designers to observe interactions, fostering a deeper understanding of the context (Bhattacharya, et al. 2023, Campion, et al. 2023). Furthermore, physical encounters facilitate the principle of serendipity – the act of stumbling upon valuable insights without actively seeking them. Serendipity is recognized as a critical factor in driving creative breakthroughs (Titus 2007) and inspires new directions in design. By embracing serendipity, designers can harness chance occurrences to enhance the richness and diversity of their work, fostering a culture of exploration. In both ways, either in contact zones or by walking around, physical encounters entail designers and researchers immersing themselves in spaces where various entities interact (Akama, Light and Kamihira 2020). Consequently, pluriversal scholars "*write* from *places rather than* about *places"* (Vasudevan and Novoa 2022, 80)*.

**Employing narratives**

Narratives play a pivotal role in most design practices within the pluriversal design paradigm, serving as a strategic medium for engagement and expression (Cushman, Jackson, et al. 2019). They also serve as a source of actual data and knowledge in the design process. These narratives encapsulate the implicit and intuitive knowledge of regional practitioners (Gaio, et al. 2023) and facilitate the transfer of knowledge across generations (Noel, et al. 2023). From a strategic medium perspective, the utilization of narratives serves as a method to examine and comprehend diverse storylines (Bhattacharya, et al. 2023), and to facilitate the process of "*unlearning historically embedded patterns"* (Ortiz 2023, 183). Pluriversal writing fosters opportunities for building alliances and coalitions, highlighting the empowering effects of intercultural dialogue (Cadaval Narezo, et al. 2023, 1157). It is crucial to approach pluriversal writing and telling without romanticization, with a focus on uncovering hidden narratives, and with a keen awareness of how power dynamics shape which stories are told, heard, and carry weight (Ortiz 2023).

**Utilizing mapping, visual thinking and bodily expressions**

Pluriversal research is often regarded as a form of creative research (Vasudevan and Novoa 2022), which prompts the exploration of various methods and techniques to embody this creative essence. Techniques like mapping, visual thinking, and bodily expressions embody a 'thinking-through-making methodology' (Francesca and Saverio 2022). These methods aid in establishing connections between history and the future (Vasudevan and Novoa 2022), making ontological conflicts visible (Campion, et al. 2023), comprehending sensory overload (Jensen 2022), having a praxis of liberation (Castillo 2016), and clarifying relationships for a

broad audience (Nirmal and Rocheleau 2019). The arts are capable of inducing empathy, evoking emotional engagement, and facilitating visionary projections (Eshun and Madge 2016). Three visual metaphors commonly associated with the pluriversal design paradigm are 'weaving' (Akama, Light and Kamihira 2020, Barcham 2022, Campion, et al. 2023), 'bridging' (Escobar 2021b), and 'opening doors' (Esteva and Escobar 2017).

**Embracing a participatory approach**

Participatory approaches are advocated to ensure the active involvement of diverse world perspectives in the design team or within a governance structure. Emphasizing self-organization and self-management of collective practices is crucial (Maldonado-Villalpando, et al. 2022). The participatory approach encompasses the participation not only of marginalized groups of people but also of nature as an entity (Mandujano, et al. 2021). This may include a governance structure where officials engage in extended dialogues with natural features, like lakes and hills, before reaching decisions (Akama, Light and Kamihira 2020). In these structures, fundamental concepts of agency, autonomy, solidarity, and emancipation play a central role (Law 2015, Maldonado-Villalpando, et al. 2022, Masquelier 2022, Naylor 2022, Rosa 2023). It's not merely about listening to marginalized voices but fostering meaningful dialogues—rather than bargaining—through which alliances and cross-cultural partnerships can be forged (Dionisio, Dombroski and Yates 2023, Martinez-Vargas, Walker, et al. 2022, Masquelier 2022, Dunford 2020). The objective here is not to find a compromise but to gain a comprehensive understanding of the various worlds and how they intersect. From this understanding, collaborative plans can be co-produced, and a balance in executive power can be achieved (Campion, et al. 2023). Participatory approaches acknowledge the communal dimension of the pluriversal design paradigm (Escobar and Maffei 2021a, Escobar 2021b). Communality can be understood as the 'we-condition of being' and as such relates to principles of love, care and compassion as ethics of living (Escobar 2021b). The participatory approach encompasses multiple directions and dimensions: communities participate in the design research process, and scholars actively engage with communities (Vasudevan and Novoa 2022, 83).

**Harnessing knowledge**

This last principle relates to the process to uncover and capture overlooked sources of knowledge: *"we have looked around instead of ahead for wisdom and guidance, addressing sources that may not have been accepted to date in scholarly fields"* (Akama, Light and Kamihira 2020, 7). The *"call to cultivate knowledge differently requires not only doing the academic enterprise differently, but also alters our conscientious worlding"* (Blaney and Trownsell 2021, 58). In the pluriversal paradigm, the knowledge generation process can be seen as a space for expanding capabilities and empowerment in which various methodological approaches and knowledge systems are valued (Martinez-Vargas, Walker, et al. 2022). To access this knowledge, methodological techniques are often deployed that acknowledge ontological variations in lived experiences, such as case study methods or critical ethnographic

research (Vasudevan and Novoa 2022). The harnessed knowledge is inherently context-bound, with place and time serving as its two primary contextual pillars.

## 4. Ethics of pluriversal design

Design is a "*reflexive practice whereby we design our world, while our world acts back on us and designs us*" (Barcham 2022, 7). Design inherently involves choices and these choices have consequences that affect others. Therefore, it is necessary to address the ethical considerations surrounding the utilization of a designer's toolbox. Although the strong ethical dimension within the pluriversal design paradigm might not always be explicitly stated by scholars (Vasudevan and Novoa 2022), it is undeniably present: "*pluriversality not only tells us how to do ethics; it also provides us with the measure for what does and does not count as an ethical outcome*" (Hutchings 2019, 119). This ethical dimension pertains to the responsibility and accountability of design outcomes in relation to others (Croon 2022). It underscores the importance of integrity as a fundamental value in the design practice: *"pluriversal ontological design is helping to create a shared future, bringing distant horizons closer while maintaining the integrity of different worldviews*" (Barcham 2022, 16). The significance of integrity is closely tied to the purpose of the conduct, as there is always a risk that indigenous people may be relegated to mere executors of plans developed by others, rather than genuine partners in the design and implementation of management programs (Campion, et al. 2023)*.* The pluriversal argument can potentially operate as a Trojan horse, when local community members are "*lured into the sphere of influence of the corporation"* (Ehrnström-Fuentes and Böhm 2023, 256)*.*

Another risk to consider is the tendency to perceive difference everywhere and potentially exaggerate or romanticize this difference (FitzGerald 2023). Instead, it is essential to adopt a functional perspective on difference: "*a pluriversal ethics requires that we pursue the relentless task of examining over and over again the ways in which different moral voices and different moral knowledges are formed, the conditions in and through which certain moral claims and judgements gain authority and meaning and the good to be found in living different forms of moral life"* (FitzGerald 2023, 5). Recognizing where differences exist enables us to build bridges between them. These risks emphasize the importance of maintaining a self-critical attitude throughout the research process (Huaman 2022)*.* Jammulamadaka et al (2021) advocate a non-extractive critical researcher subject position "*where one does not seek to extract others' knowledge and profit from it, but instead to represent and give it voice"* (Jammulamadaka, et al. 2021, 723). In doing so, scholars must exhibit qualities of fearlessness, reflexivity, and generosity simultaneously (Lobo and Rodriquez 2022). Sometimes, the boundary between a researcher and an activist blurs, which reinforces the need for reflective practice. Vasudevan and Novoa (2022) observe that the specific nuances and tensions of researcher-community collaborations remain under-articulated, so this is definitely a point of attention.

Dunford (2020) presents two ethical questions concerning the pluriversal design paradigm. Firstly, does pluriversality serve as a shield or hinder criticism of oppressive ideologies, such

as fascism? The general response to this query is a resounding "no" as pluriversality explicitly rules out any practices that systematically shut down possibilities for others (Dunford 2020, Noel, et al. 2023). The same principle applies to sexist, racist, or imperialist worldviews: "*if a given system, practice or worldview systematically rules out or marginalizes other ways of living, practices or worldviews, then it is not compatible with a world in which many worlds fit*" (Dunford 2020, 792). The second question raised by Dunford (2020) pertains to whether the absence of a positive universality regarding solutions will lead to a series of fragmented struggles operating separately. This question receives a less resolute answer, since it depends on the design of the process. Additionally, FitzGerald (2023) poses the question of whether global ethics can exist in the pluriverse. Her response is affirmative, as multiple worlds should be understood in the context of their interconnections. Although "*taking pluriversality seriously would seem to put global ethics in an impossible position*" (Hutchings 2019, 118), it is not impossible. It requires rethinking global ethics by "*shifting our understanding of global ethics away from seeing it as a route to determining answers to questions of global justice and toward seeing at as an embodied, reflective practice*" (Hutchings 2019, 123).

## 5. Discussion and conclusion

The ontological dimension is intrinsic to everything that undergoes a design process (Escobar and Maffei 2021a). This paper aims to address the question of how this ontological dimension can be shaped within the practice of design: "*the world of multiple worlds, Pluriverse, is not an ontological project but a project of praxis*" (Koro 2022, 140). In an attempt to facilitate this praxis, design principles are deduced from the work of various scholars. I have chosen to articulate design principles because they allow for choice, permitting diversification in practice depending on the specific context. Through this, my contribution is twofold: 1) to offer practical strategies, recommendations, guidelines, or considerations and 2) to contribute to the theoretical framework underpinning the pluriversal design paradigm.

While this paper is not the first to propose principles or dimensions, with notable works by Escobar (2021b), Huaman (2022), Masquelier (2022), and Noel et al. (2023), it distinguishes itself as the first to derive these principles from an extensive literature review, exclusively based on the contributions of others. The two overarching prerequisites I presented can be regarded as the essence of the pluriversal design paradigm, while the seven design principles are akin to the habits that characterize it.

The pluriversal design paradigm is not a panacea. Its practicality is subject to encountering obstacles that confront all individuals navigating within colonial modernity. Such challenges may potentially be even more severe within specific cultural contexts, particularly those characterized by a pronounced cultural inclination towards consensus, diametrically opposed to the divergent nature inherent in the pluriversal design paradigm (McArthur, Zhang, & Xu, 2022). Challenges can also arise when participants lack self-awareness of their own

backgrounds and racialization (Menon, et al. 2021), when essential participants are effectively invisible (Mezzanotti and Kvalvaag 2022) or in situations involving individuals who do not belong to any community or are in exile from their community (Woods 2020).

In summary, this study explores how the pluriversal design paradigm shapes academic behavior. Furthermore, I provided a framework to guide researchers and practitioners in pluriversal design, addressing its ethical dimensions. While my aim is to contribute to making the paradigm more practically applicable, I am cognizant that the path to reversing a universe into a pluriverse remains lengthy: *"to reverse a universe to create a pluriverse, the path is still long"* (Cadaval Narezo, et al. 2023, 1157).

# 6. References

Akama, Y., A. Light, and T. Kamihira. 2020. "Expanding patricipation to design with more-than-human concerns." *Proceedings of the 16th Participatory Design Conference 2020 - Participation(s) Otherwise - Vol 1.* Manizales, Colombia. 1-11.

Arendttorp, E., K. Rodil, H. Winschiers-Theophilus, and C. Magoath. 2022. "Overcoming Legacy Bias: Re-Designing Gesture Interactions in Virtual Reality With a San Community in Namibia." *CHI Conference on Human Factors in Computing Systems.* New Orleans, LA, USA. 1-18.

Arias-Gutierrez, R., and P. Minoia. 2023. "Decoloniality and Critical Interculturality in Higher Education: Experiences and Challenges in Ecuadorian Amazonia." *Forum for Development Studies* 50 (1): 11-34.

Azarmandi, M. 2023. "Disturbing a Discipline: Towards Pluriversal Peace and Conflict Studies." *Journal of Intervention and Statebuilding* 1-15.

Barcham, M. 2022. "Weaving Together a Decolonial Imaginary Through Design for Effective River Management: Pluriversal Ontological Design in Practice." *Design Issues* 38 (1): 5-16.

Bhattacharya, S., J. Mukherjee, A. Choudry, and R. Ghosh. 2023. "Reifying 'river': Unpacking pluriversal possibilities in rejuvenation surrounding the Adi Ganga of Kolkata." *Frontiers in Water* 1-15.

Blaney, D., and A. Tickner. 2017. "Worlding, Ontological Politics and the Possibility of a Decolonial IR." *Millennium - Journal of International Studies* 45 (3): 292-311.

Blaney, D., and T. Trownsell. 2021. "Recrafting International Relations by Worlding Multiply." *Uluslararasi Iliskiler* 18 (70): 45-62.

Brandão, A., S. Sussai, J. Germine, D. Eltz, and A. Araujo. 2021. "Social Sciences in One Health: Insights from multiple worlds perspectives on the dam rupture in Brumadinho-Brazil." *Frontiers in Public Health* 9 (649355).

Cadaval Narezo, M., G. Méndez Torres, A. Hernández Vásquez, and J. Castro-Sotomayor. 2023. "Contributions to the pluriverse from indigenous women professors of intercultural universities." *Globalizations* 20 (7): 1144-1162.

Campion, O., S. West, K. Degnian, M. Djarrbal, E. Ignjic, C. Ramandjarri, G. Womati Malibirr, et al. 2023. "Balpara: A Practical Approach to Working With Ontological Difference in Indigenous Land & Sea Management." *Society & Natural Resources* 1-21.

Castillo, M. 2016. "Dancing the pluriverse: Indigenous performance as ontological praxis." *Dance Research Journal* 48 (1): 55-73.

Chipato, F., and D. Chandler. 2022. "Another decolonial approach is possible: international studies in an antiblack world." *Third World Quarterly* 43 (7): 1783-1797.

Chipato, F., and D. Chandler. 2023. "The Black Horizon: Alterity and ontology in the anthropocene." *Global Society* 37 (2): 157-175.

Cisneros-Publa, C. 2023. "Multivocal Critical Qualitative Inquiry as an avenue for public policy." *Qualitative Inquiry* 1-8.

Conway, J., and J. Singh. 2011. "Radical Democracy in Global Perspective: notes from the pluriverse." *Third World Quarterly* 32 (4): 689-706.

Croon, A. 2022. "Thinking with care in human-computer interaction." *Feminist Theory* 23 (2): 232-246.

Cushman, E., D. Baca, and R. Garcia. 2021. "Delinking: toward pluriversal rhetorics." *College English* 84 (1): 7-32.

Cushman, E., R. Jackson, A.L. Nichols, C. Rivard, A. Moulder, C. Murdock, D. Grant, and H. Brook Adams. 2019. "Decolonizing projects: creating pluriversal possibilities in rhetoric." *Rhetoric Review* 38 (1): 1-22.

Demaria, F., and A. Kothari. 2017. "The Post-Development Dictionary agenda: paths to the pluriverse." *Third World Quarterly* 38 (12): 2588-2599.

Denzin, N. 2006. "Analytic autoethnography or déjà vu all over again." *Journal of Contemporary Ethnography* 35 (4): 419-428.

Dionisio, R., K. Dombroski, and A. Yates. 2023. "Testing practices for testing times: Exploring Indigenous-led governance." *Dialogues in Human Geography* 13 (2): 301-305.

Dube, B., and N. Moyo. 2022. "A decolonial reading of the history curriculum: towards undoing historicide for curricular justice for the Zimbabwean learner." *Research papers in education* 1-21.

Dunford, R. 2020. "Converging on food sovereignty: transnational peasant activism, pluriversality and counter-hegemony." *Globalizations* 17 (5): 781-796.

Ehrnström-Fuentes, M. 2016. "Delinking legitimacies: a pluriversal perspective on political CSR." *Journal of Management Studies* 53 (3): 433-462.

Ehrnström-Fuentes, M., and S. Böhm. 2023. "The political ontology of corporate social responsibility: obscuring the pluriverse in place." *Journal of Business Ethics* 185: 245-261.

Erasmus, Z. 2020. "Sylvia Wynter's theory of the human: Counter- not post-humanist." *Theory, Culture and Society* 37 (6): 47-65.

Escobar, A. 2015. "Degrowth, postdevelopment, and transitions: a preliminary conversation." *Sustainability science* 10: 451-462.

—. 2020. *Pluriversal Politics.* Duke University Press.

Escobar, A. 2021b. "Reframing civilization(s): from critique to transitions." *Globalizations* 1-18.

—. 2008. *Territories of difference: place, movements, life, redes.* Duke University Press.

Escobar, A., and S. Maffei. 2021a. "What Are Pluriversal Politics and Ontological Designing? Interview with Arturo Escobar." *diid—disegno industriale industrial design* 75: 34-45.

Eshun, G., and C. Madge. 2016. "Poetic world-writing in a pluriversal world: a provocation to the creative (re)turn in geography." *Social and Cultural Geography* 17 (6): 778-785.

Esteva, G., and A. Escobar. 2017. "Post-Development @25: on 'being stuck' and moving forward, sideways, backward and otherwise." *Third World Quarterly* 38 (12): 2559-2572.

Ferretti, F., and G. Barrera de la Torre. 2023. "Cosmohistories and pluriversal dialogues: the future of the history of geography." *Dialogues in Human Geography* 1-5.

FitzGerald, M. 2023. "Building the pluriverse with care." *Journal of International Political Theory* 1-8.

Fox, K., and L. McDermott. 2020. "The Kumulipo, Native Hawaiians, and well-being: how the past speaks to the present and lays the foundation for the future." *Leisure studies* 39 (1): 96-110.

Francesca, V., and S. Saverio. 2022. "Urban Nature Fabrication: A framework for a practice-based teaching methodology of design for the pluriverse." *IASDR 2021 With Design: Reinventing Design Modes.* Springer Nature Singapore. 52-39.

Gaio, A., A. Joffe, J. Hernandez-Acosta, and M. Dragicevic-Sesic. 2023. "Decolonising the cultural policy and management curriculum - reflections from practice." *Cultural trends.*

Gills, B., and S. Hosseini. 2022. "Pluriversality and beyond: consolidating radical alternatives to (mal-)development as a Commonist project." *Sustainability Science* 17: 1183-1194.

Gray, C. 2022. "Critical pedagogy and the pluriversal design studio." *DRS 2022.* Bilbao.

Henrich, J., S. Heine, and A. Norenzayan. 2010. "The weirdest people in the world?" *Behavioral and brain sciences* 33 (2-3): 61-83.

Huaman, E. 2022. "How Indigenous scholarship changes the field: pluriversal appreciation, decolonial aspirations, and comparative Indigenous education." *Comparative Education Review* 66 (3): 391-416.

Hunt, S. 1991. *Modern Marketing Theory: Critical issues in the philosophy of marketing science.* Cincinnati: South-Western Publishing.

Hutchings, K. 2019. "Decolonizing global ethics: thinking with the pluriverse." *British and International Affairs* 33 (2): 115-125.

n.d. *Interaction Design Foundation.* Accessed October 6th, 2023. https://www.interaction-design.org/literature/topics/design-principles.

Irani, L., J. Vertesi, P. Dourish, K. Philip, and R. Grinter. 2010. "Postcolonial computing: a lens on design and development." *SIGCHI Conference on Human Factors in Computing Systems.* Atlanta, Georgia, USA. 1311-1320.

Ishii, M. 2022. "Living in the forest as a pluriverse: Nature conservation and indigeneity in India's Western Ghats." *Journal of Political Ecology* 29: 725-740.

Jammulamadaka, N., A. Faria, G. Jack, and S. Ruggunan. 2021. "Decolonising management and organisational knowledge (MOK): Praxistical theorizing for potential worlds." *Organization* 28 (5): 717-740.

Jensen, C. 2022. "How to deal with cosmoecological perplexities: Artscience, critical zones, pluriversal politics." *Engaging Science, Technology, and Society* 8 (1): 189-198.

Kambunga, A., and R. Smith. 2023. "Decolonial design practices: creating safe spaces for plural voices on contested pasts, presents and futures." *Design Studies* 86 (101170).

Karmakar, G., and R. Chetty. 2023. "Tackling environmental and epistemic injustice: decolonial approaches for pluriversal peacebuilding in South Africa." *Peace Review* 35 (3): 496-510.

Kaul, S., B. Akbulut, F. Demaria, and J. Gerber. 2022. "Alternatives to sustainable development: what can we learn from the pluriverse in practice?" *Sustainability Science* 17: 1149-1158.

Kayumova, S., and R. Dou. 2022. "Equity and justice in science education: Toward a pluriverse of multiple identities and onto-epistemologies." *Science Education* 106: 1097-1117.

Koro, M. 2022. "Speculative experimentation in (methodological) Pluriverse." *Qualitative Inquiry* 28 (2): 135-142.

Kuhn, T. 1970. *The structure of scientific revolutions, 2nd edition, enlarged.* University of Chicago Press.

Lang, M. 2022. "Buen vivir as territorial practice. Building a more just and sustainable life through interculturality." *Sustainability Science* 17: 1287-1299.

Law, J. 2015. "What's wrong with a one-world world?" *Distinktion: Scandinavian Journal of Social Theory* 16 (1): 126-139.

Lechuga, M., K. Drazner Hoyt, and S. Burrell. 2023. "Reconnections: remembering land when the university wants us to forget." *Communication and Critical/Cultural Studies* 20 (1): 9-15.

Leitão, R . 2023. "Pluriversal Worlding: Design, Narratives, and Metaphors for Societal Transformation." *AM Journal* 30: 17-35.

Leitão, R. 2022. "From needs to desire: pluriversal design as a desire-based design." *Design and Culture* 14 (3): 255-276.

Leitão, R., and L. Noel. 2023. "Pluriversal design as a paradigm - Call for Papers." *DRS2024: Resistance - Reflection - Recovery - Reimagination.* Boston.

Lobo, M., and D. Rodriquez. 2022. "Decolonising the university from the Antipodes: Geographical thought and praxis." *Geographical Research* 60: 40-45.

Loh, P., and B. Shear. 2022. "Fight and build: solidarity economy as ontological politics." *Sustainability Science* 17: 1207-1221.

Maldonado-Villalpando, E., J. Paneque-Gálvez, F. Demaria, and B. Napoletano. 2022. "Grassroots innovation for the pluriverse: evidence from Zapatismo and autonomous Zapatista education." *Sustainability Science* 17: 1301-1316.

Mandujano, L., E. Kuruc, J. Lu, P. Sanoni, and X. Meza. 2021. "Panel session - Pluriversal Design Transitions for Higher Education Motivated by COVID-19." *Mandujano, L. G., Kuruc, E., Lu, J. L., Sanoni, P., & Meza, X. V. (2021, May). Panel Session–Pluriversal Design7th International Conference of the Immersive Learning Research Network (iLRN) .*

Martinez-Vargas, C. 2020. "Decolonising higher education research: from a uni-versity to a pluri-versity of approaches." *South African Journal of Higher Education* 34 (2): 112-128.

Martinez-Vargas, C., M. Walker, F. Cin, and A. Boni. 2022. "A Capabilitarian Participatory Paradigm: Methods, Methodologies and Cosmological issues and possibilities." *Journal of Human Development and Capabilities* 23 (1): 8-29.

Masquelier, C. 2022. "Pluriversal intersectionality, critique and utopia." *The Sociological Review* 70 (3): 616-631.

McArthur, I., L. Zhang, and F. Xu. 2022. "Un-learning/Re-learning: Towards pluriversal co-design." *McArthur, I., Zhang, L., & Xu, F. (2021, December). Un-learning/Re-learning: ToCongress of the International Association of Societies of Design Research.* Singapore: Springer Nature Singapore. 1377-1396.

Mendes, A., and L. Lau. 2022. "Wither the plurality of decolonising the curriculum? Safe spaces and identitarian politics in the arts and humanities classroom." *Arts and Humanities in Higher Education* 21 (3): 223-239.

Menon, S., C. Green, I. Charbonneau, E. Lehtomäki, and B. Mafi. 2021. "Approaching global education development with a decolonial lens: teachers' reflections." *Teaching in Higher Education - Critical Perspectives* 26 (7-8): 937-952.

Mezzanotti, G., and A. Kvalvaag. 2022. "Indigenous peoples on the move: intersectional invisibility and the quest for pluriversal human rights for indigenous migrants from Venezuela in Brazil." *Nordic Journal of Human Rights* 40 (3): 461-480.

Nayak, B. 2022. "Interdisciplinary limits of creative business education." *Technological forecasting & Social change* 121781.

Naylor, L. 2022. "Solidarity as a development performance and practice in coffee exchanges." *Sustainability Science* 17: 1195-1205.

Nirmal, P., and D. Rocheleau. 2019. "Decolonizing degrowth in the post-development convergence: questions, experiences, and proposals from two Indigenous territories." *ENE: Nature and space* 2 (3): 465-492.

Noel, L., A. Ruiz, F. van Amstel, V. Udoewa, N. Verma, N. Botchway, A. Lodaya, and S. Agrawal. 2023. "Pluriversal futures for design education." *She ji: The Journal of Design, Economics and Innovation* 9 (2): 179-196.

Nourani Rinaldi, P. 2022. "The age of transition: postdevelopment and North-South synergies." *Latin American Perspectives* 49 (1): 237-256.

Ortiz, C. 2023. "Storytelling otherwise: decolonising storytelling in planning." *Planning Theory* 22 (2): 177-200.

Oslender, U. 2019. "Geographies of the pluriverse: decolonial thinking and ontological conflict on Colombia's Pacific Coast." *Annuals of the American Association of Geographers* 109 (6): 1691-1705.

Popplow, L., and M. Duque. 2017. "Engaging with ghosts, idiots and ___ - Otherness in Participatory Design." *Nordes '17 Oslo.*

Querejazu, A. 2016. "Encountering the Pluriverse: looking for alternatives in other worlds." *Revista Brasileira de Política Internacional* 59 (2): e007.

Rosa, F. 2023. "From community networks to shared networks: the paths of Latin-Centric Indigenous networks to a pluriversal internet." *Information, Communication and Society* 26 (11): 2326-2344.

Saldaña, J. 2009. *The coding manual for qualitative researchers.* London: SAGE publications.

Savransky, M. 2021. "The pluralistic problematic: William James and the Pragmatics of the Pluriverse." *Theory, Culture and Society* 38 (2): 141-159.

StJohn, N., and Y. Akama. 2022. "Reimagining co-design on Country as a relational and transformational practice." *Codesign* 18 (1): 16-31.

Titus, P. 2007. "Applied creativity: The creative marketing breakthrough model." *Journal of Marketing Education* 29 (3): 262-272.

Tozzi, A. 2021. "An approach to pluralizing socionatural resilience through assemblages." *Progress in Human Geography* 45 (5): 1083-1104.

Trownsell, T., N. Behera, and G. Shani. 2022. "Introduction to the Special Issue: Pluriversal relationality." *Review of International Studies* 48 (5): 787-800.

Vanni, I., and A. Crosby. 2023. "Place-based methodologies for design research: an ethnographic approach." *Design Studies* 85: 101168.

Vasudevan, R., and M. Novoa. 2022. "Pluriversal planning scholarship: embracing multiplicity and situated knowledges in community-based approaches." *Planning Theory* 21 (1): 77-100.

Velasco-Herrejón, P., T. Bauwens, and M. Friant. 2022. "Challenging dominant sustainability worldviews on the energy transition: lessons from Indigenous communities in Mexico and a plea for pluriversal technologies." *World Development* 150: 105725.

Wang, D. 2022. "Translanguaging as a decolonising approach: students' perspectives towards integrating Indigenous epistemology in language teaching." *Applied Linguistics Review* 1-22.

Woods, M. 2020. "Decoloniality, communality, and anti-semitism." *Cultural Dynamics* 32 (4): 241-260.

Zeeland, E. van. 2021. "Designing for trust; a neuroscientific and design perpsective on trust within a professional context." University of Twente, Enschede.

Zhang, J. 2023. "Decolonizing the temporal and relational assumptions in contemporary science and science policies." *Critical Policy Studies* 17 (1): 162-174.

# Appendix: Papers included in the literature review

| Education, Science and Methodology |
| --- |
| Akama, Y., Light, A., & Kamihira, T. (2020, June). Expanding participation to design with more-than-human concerns. In *Proceedings of the 16th Participatory Design Conference 2020-Participation (s) Otherwise-Volume 1* (pp. 1-11). |
| Arias-Gutierrez, R. I., & Minoia, P. (2023, January). Decoloniality and critical interculturality in higher education: experiences and challenges in Ecuadorian Amazonia. In *Forum for Development Studies* (Vol. 50, No. 1, pp. 11-34). Routledge. |
| Cadaval Narezo, M., Méndez Torres, G., Hernández Vásquez, A., & Castro-Sotomayor, J. (2023). Contributions to the pluriverse from indigenous women professors of intercultural universities. *Globalizations*, 1-19. |
| Cisneros-Puebla, C. A. (2023). Multivocal Critical Qualitative Inquiry as an Avenue for Public Policy. *Qualitative Inquiry*, 10778004231163159. |
| Cushman, E., Jackson, R., Nichols, A. L., Rivard, C., Moulder, A., Murdock, C., ... & Adams, H. B. (2019). Decolonizing projects: Creating pluriversal possibilities in rhetoric. *Rhetoric Review*, *38*(1), 1-22. |
| Dube, B., & Moyo, N. (2022). A decolonial reading of the history curriculum: towards undoing historicide for curricular justice for the Zimbabwean learner. *Research Papers in Education*, 1-21. |
| Ferretti, F., & Barrera de la Torre, G. (2023). Cosmohistories and pluriversal dialogues: The future of the history of geography. *Dialogues in Human Geography*, 20438206231171203. |
| Francesca, V., & Saverio, S. (2021, December). Urban Nature Fabrication: A Framework for a Practice-Based Teaching Methodology of Design for the Pluriverse. In *Congress of the International Association of Societies of Design Research* (pp. 52-69). Singapore: Springer Nature Singapore. |
| Garcia-Arias, J., Corbetta, S., & Baronnet, B. (2023). Decolonizing education in Latin America: critical environmental and intercultural education as an indigenous pluriversal alternative. *British Journal of Sociology of Education*, 1-19. |
| Gray, C. M. (2022). Critical pedagogy and the pluriversal design studio. *DRS2022: Bilbao*, 25. |
| Himelright, J. (2021). Paraphrasing away properties with pluriverse counterfactuals. *Synthese*, *198*(11), 10883-10902. |
| Huaman, E. S. (2022). How Indigenous scholarship changes the field: Pluriversal appreciation, decolonial aspirations, and comparative Indigenous education. *Comparative education review*, *66*(3), 391-416. |
| Jensen, C. B. (2022). How to deal with cosmoecological perplexities: Artscience, critical zones, pluriversal politics. *Engaging Science, Technology, and Society*, *8*(1), 189-198. |
| Kambunga, A. P., Smith, R. C., Winschiers-Theophilus, H., & Otto, T. (2023). Decolonial design practices: Creating safe spaces for plural voices on contested pasts, presents, and futures. *Design Studies*, *86*, 101170. |
| Kayumova, S., & Dou, R. (2022). Equity and justice in science education: Toward a pluriverse of multiple identities and onto-epistemologies. *Science Education*, *106*(5), 1097-1117. |
| Koro, M. (2022). Speculative experimentation in (methodological) pluriverse. *Qualitative Inquiry*, *28*(2), 135-142. |
| Law, J. (2015). What's wrong with a one-world world?. *Distinktion: Scandinavian Journal of Social Theory*, *16*(1), 126-139. |
| Lechuga, M., Hoyt, K. D., & Burrell, S. (2023). Reconnections: remembering land when the university wants us to forget. *Communication and Critical/Cultural Studies*, *20*(1), 9-15. |
| Leitão, R. M. (2022). From Needs to Desire: Pluriversal Design as a Desire-Based Design. *Design and Culture*, *14*(3), 255-276. |
| Leitão, R. M. (2023). Pluriversal Worlding: Design, Narratives, and Metaphors for Societal Transformation. *AM Journal of Art and Media Studies*, (30), 17-35. |
| Lobo, M., & Rodríguez, D. (2022). Decolonising the university from the Antipodes: Geographical thought and praxis. *Geographical Research*, *60*(1), 40-45. |
| Maldonado-Villalpando, E., Paneque-Gálvez, J., Demaria, F., & Napoletano, B. M. (2022). Grassroots innovation for the pluriverse: Evidence from Zapatismo and autonomous Zapatista education. *Sustainability Science*, *17*(4), 1301-1316. |
| Mandujano, L. G., Kuruc, E., Lu, J. L., Sanoni, P., & Meza, X. V. (2021, May). Panel Session–Pluriversal Design Transitions for Higher Education Motivated by COVID-19. In *2021 7th International Conference of the Immersive Learning Research Network (iLRN)* (pp. 1-3). IEEE. |
| Martinez-Vargas, C. (2020). Decolonising higher education research: From a uni-versity to a pluri-versity of approaches. *South African Journal of Higher Education*, *34*(2), 112-128. |
| Martinez-Vargas, C., Walker, M., Melis Cin, F., & Boni, A. (2022). A capabilitarian participatory paradigm: Methods, methodologies and cosmological issues and possibilities. *Journal of Human Development and Capabilities*, *23*(1), 8-29. |
| Masquelier, C. (2022). Pluriversal intersectionality, critique and utopia. *The Sociological Review*, *70*(3), 616-631. |
| Mendes, A., & Lau, L. (2022). Wither the plurality of decolonising the curriculum? Safe spaces and identitarian politics in the arts and humanities classroom. *Arts and Humanities in Higher Education*, *21*(3), 223-239. |
| Menon, S., Green, C., Charbonneau, I., Lehtomäki, E., & Mafi, B. (2021). Approaching global education development with a decolonial lens: teachers' reflections. *Teaching in Higher Education*, *26*(7-8), 937-952. |
| Nayak, B. S. (2022). Interdisciplinary limits of creative business education. Technological Forecasting and Social Change, 182, 121781. |
| Noel, L. A., Ruiz, A., van Amstel, F. M., Udoewa, V., Verma, N., Botchway, N. K., ... & Agrawal, S. (2023). Pluriversal Futures for Design Education. *She Ji: The Journal of Design, Economics, and Innovation*, *9*(2), 179-196. |
| Nourani Rinaldi, P. (2022). The Age of Transition: Postdevelopment and North-South Synergies. *Latin American Perspectives*, *49*(1), 237-256. |
| Savransky, M. (2021). The pluralistic problematic: William James and the pragmatics of the pluriverse. *Theory, Culture & Society*, *38*(2), 141-159. |
| Seth, S. (2023). Pluriversal Problems, Revolutionary Remedies. *Science, Technology and Society*, *28*(1), 22-29. |
| St John, N. (2023). From anma (waiting) to marra (feeling good): Ways of designing in Ntaria. *Design Studies*, *86*, 101180. |
| St John, N., & Akama, Y. (2022). Reimagining co-design on Country as a relational and transformational practice. *CoDesign*, *18*(1), 16-31. |
| Vanni, I., & Crosby, A. (2023). Place-based methodologies for design research: An ethnographic approach. *Design Studies*, *85*, 101168. |
| Vasudevan, R., & Novoa E, M. (2022). Pluriversal planning scholarship: Embracing multiplicity and situated knowledges in community-based approaches. *Planning Theory*, *21*(1), 77-100. |

Vogel, C., & Musamba, J. (2022). Towards a politics of collaborative worldmaking: ethics, epistemologies and mutual positionalities in conflict research. *Ethnography*, 14661381221090895.

Woods, M. (2020). Decoloniality, communality, and anti-semitism. *Cultural Dynamics*, *32*(4), 241-260.

Zhang, J. Y. (2023). Decolonizing the temporal and relational assumptions in contemporary science and science policies. *Critical Policy Studies*, *17*(1), 162-174.

**Natural resources, environment and sustainability**

Barcham, M. (2022). Weaving together a decolonial imaginary through design for effective river management: Pluriversal ontological design in practice. *Design Issues*, *38*(1), 5-16.

Bhattacharya, S., Mukherjee, J., Choudry, A., & Ghosh, R. (2023). Reifying "river": Unpacking pluriversal possibilities in rejuvenation surrounding the Adi Ganga of Kolkata. *Frontiers in Water*, *5*, 1070644.

Campion, O. B., West, S., Degnian, K., Djarrbal, M., Ignjic, E., Ramandjarri, C., ... & Austin, B. J. (2023). Balpara: A Practical Approach to Working With Ontological Difference in Indigenous Land & Sea Management. *Society & Natural Resources*, 1-21.

Demaria, F., & Kothari, A. (2017). The Post-Development Dictionary agenda: paths to the pluriverse. *Third World Quarterly*, *38*(12), 2588-2599.

Dionisio, R., Dombroski, K., & Yates, A. (2023). Testing practices for testing times: Exploring Indigenous-led governance. *Dialogues in Human Geography*, *13*(2), 301-305.

Gills, B. K., & Hosseini, S. H. (2022). Pluriversality and beyond: consolidating radical alternatives to (mal-) development as a commonist project. *Sustainability Science*, *17*(4), 1183-1194.

Hope, J. (2021). Conservation in the Pluriverse: Anti-capitalist struggle, knowledge from resistance and the 'repoliticisation of nature'in the TIPNIS, Bolivia. *Geoforum*, *124*, 217-225.

Ishii, M. (2022). Living in the forest as a pluriverse: nature conservation and indigeneity in India's Western Ghats. *Journal of Political Ecology*, *29*(1), 725-740.

Johnson, P. (2022). More-than-human geographies: an encounter with Serres' universality. *cultural geographies*, *29*(3), 405-418.

Karmakar, G., & Chetty, R. (2023). Tackling Environmental and Epistemic Injustice: Decolonial Approaches for Pluriversal Peacebuilding in South Africa. *Peace Review*, 1-15.

Kaul, S., Akbulut, B., Demaria, F., & Gerber, J. F. (2022). Alternatives to sustainable development: what can we learn from the pluriverse in practice?. *Sustainability Science*, *17*(4), 1149-1158.

Lang, M. (2022). Buen vivir as a territorial practice. Building a more just and sustainable life through interculturality. *Sustainability Science*, *17*(4), 1287-1299.

McArthur, I., Zhang, L., & Xu, F. (2021, December). Un-learning/Re-learning: Towards Pluriversal Co-design. In *Congress of the International Association of Societies of Design Research* (pp. 1377-1396). Singapore: Springer Nature Singapore.

Nirmal, P., & Rocheleau, D. (2019). Decolonizing degrowth in the post-development convergence: Questions, experiences, and proposals from two Indigenous territories. *Environment and Planning E: Nature and Space*, *2*(3), 465-492.

Oslender, U. (2019). Geographies of the pluriverse: Decolonial thinking and ontological conflict on Colombia's Pacific coast. *Annals of the American Association of Geographers*, *109*(6), 1691-1705.

Rousell, D. (2023). Weaving the pluriverse: childhood encounters with the underground worlds of Birrarung Marr. *Children's geographies*, 1-17.

San Martín, W., & Wood, N. (2022). Pluralising planetary justice beyond the North-South divide: Recentring procedural, epistemic, and recognition-based justice in earth-systems governance. *Environmental Science & Policy*, *128*, 256-263.

Tozzi, A. (2021). An approach to pluralizing socionatural resilience through assemblages. *Progress in Human Geography*, *45*(5), 1083-1104.

Velasco-Herrejón, P., Bauwens, T., & Friant, M. C. (2022). Challenging dominant sustainability worldviews on the energy transition: Lessons from Indigenous communities in Mexico and a plea for pluriversal technologies. *World Development*, *150*, 105725.

**Politics and democracy**

Blaney, D. L., & Tickner, A. B. (2017). Worlding, ontological politics and the possibility of a decolonial IR. *Millennium*, *45*(3), 293-311.

Cabaña, G., & Linares, J. (2022). Decolonising money: learning from collective struggles for self-determination. *Sustainability Science*, *17*(4), 1159-1170.

Conway, J., & Singh, J. (2011). Radical Democracy in Global Perspective: notes from the pluriverse. *Third World Quarterly*, *32*(4), 689-706.

Escobar, A. (2015). Degrowth, postdevelopment, and transitions: a preliminary conversation. *Sustainability science*, *10*, 451-462.

Escobar, A. (2021). Reframing civilization (s): From critique to transitions. *Globalizations*, 1-18.

Escobar, A., & Maffei, S. (2021). What Are Pluriversal Politics and Ontological Designing? Interview with Arturo Escobar. *diid—disegno industriale industrial design*, (75), 12-12.

Esteva, G., & Escobar, A. (2020). Post-Development@ 25: on 'being stuck'and moving forward, sideways, backward and otherwise. In *The Development Dictionary @ 25* (pp. 13-26). Routledge.

Jabri, V. (2023). Ontology, relationality and an alternative reading of 'difference'. Journal of International Political Theory, 1-8.

Loh, P. (2023). Beyond Postcapitalist Economy: Toward a Pluriversal Politics of Transformation in Massachusetts. *Rethinking Marxism*, *35*(1), 135-148.

Loh, P., & Shear, B. W. (2022). Fight and build: solidarity economy as ontological politics. *Sustainability Science*, *17*(4), 1207-1221.

**International Relations**

Blaney, D. L., & Trownsell, T. A. (2021). Recrafting international relations by worlding multiply. *Uluslararası İlişkiler Dergisi*, *18*(70), 45-62.

Chipato, F., & Chandler, D. (2022). Another decolonial approach is possible: international studies in an antiblack world. *Third World Quarterly*, *43*(7), 1783-1797.

Chipato, F., & Chandler, D. (2023). The Black Horizon: Alterity and Ontology in the Anthropocene. *Global Society*, *37*(2), 157-175.

Kurki, M. (2022). Relational revolution and relationality in IR: New conversations. *Review of International Studies*, *48*(5), 821-836.

Querejazu, A. (2016). Encountering the pluriverse: Looking for alternatives in other worlds. *Revista Brasileira de Política Internacional*, *59*, e007.

Querejazu, A. (2022). Cosmopraxis: Relational methods for a pluriversal IR. *Review of International Studies*, *48*(5), 875-890.

Rojas, C. (2016). Contesting the colonial logics of the international: Toward a relational politics for the pluriverse. *International Political Sociology*, *10*(4), 369-382.

Shih, C. Y. (2021). Post-Chinese, Post-Western and Post-Asian Relations: Engaging a Pluriversal East Asia. *China Report*, *57*(3), 270-288.

Trownsell, T. (2022). Recrafting ontology. *Review of International Studies*, *48*(5), 801-820.

Trownsell, T., Behera, N. C., & Shani, G. (2022). Introduction to the Special Issue: Pluriversal Relationality. *Review of International Studies*, *48*(5), 787-800.

### Technology

Arendttorp, E. M. N., Rodil, K., Winschiers-Theophilus, H., & Magoath, C. (2022, April). Overcoming legacy bias: re-designing gesture interactions in virtual reality with a San community in Namibia. In *Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems* (pp. 1-18).

Croon, A. (2022). Thinking with care in human–computer interaction. *Feminist Theory*, *23*(2), 232-246.

Rodima-Taylor, D., & Campbell-Verduyn, M. (2023). Reimagining blockchain in a pluriversal world: Digital land governance in the Global South and the metaverse. *Anthropology Today*, *39*(4), 17-20.

Rosa, F. R. (2023). From community networks to shared networks: the paths of Latin-Centric Indigenous networks to a pluriversal internet. *Information, Communication & Society*, *26*(11), 2326-2344.

Turner, B., & Wiber, M. G. (2023). Legal Pluralism and Science and Technology Studies: Exploring Sources of the Legal Pluriverse. *Science, Technology, & Human Values*, *48*(3), 457-474.

### Language and rhetorics

Cushman, E., Baca, D., & García, R. (2021). Delinking: Toward pluriversal rhetorics. *College English*, *84*(1), 7-32.

Ortiz, C. (2023). Storytelling otherwise: Decolonising storytelling in planning. *Planning Theory*, *22*(2), 177-200.

Perry, M. (2021). Pluriversal literacies: Affect and relationality in vulnerable times. *Reading Research Quarterly*, *56*(2), 293-309.

Walker, K. (2020). Divergence and Diplomacy as a Pluriversal Rhetorical Praxis of Coalitional Politics. *Rhetoric Society Quarterly*, *50*(4), 225-239.

Wang, D. (2022). Translanguaging as a decolonising approach: students' perspectives towards integrating Indigenous epistemology in language teaching. *Applied Linguistics Review*, (0).

### Economics, Business and Management

Ehrnström-Fuentes, M. (2016). Delinking legitimacies: A pluriversal perspective on political CSR. *Journal of Management Studies*, *53*(3), 433-462.

Ehrnström-Fuentes, M., & Böhm, S. (2023). The political ontology of corporate social responsibility: Obscuring the pluriverse in place. *Journal of Business Ethics*, *185*(2), 245-261.

Jammulamadaka, N., Faria, A., Jack, G., & Ruggunan, S. (Eds.). (2021). *Decolonising Management and Organisational Knowledge*. Organization, 28(5), 717-740

Naylor, L. (2022). Solidarity as a development performance and practice in coffee exchanges. *Sustainability Science*, *17*(4), 1195-1205.

### Human rights and ethics

Azarmandi, M. (2023). Disturbing a Discipline: Towards Pluriversal Peace and Conflict Studies. *Journal of Intervention and Statebuilding*, 1-15.

FitzGerald, M. Building the pluriverse with care. Journal of International Political Theory, 17550882231181422.

Hutchings, K. (2019). Decolonizing global ethics: Thinking with the pluriverse. *Ethics & International Affairs*, *33*(2), 115-125.

Mezzanotti, G., & Kvalvaag, A. M. (2022). Indigenous Peoples on the Move: Intersectional Invisibility and the Quest for Pluriversal Human Rights for Indigenous Migrants from Venezuela in Brazil. *Nordic Journal of Human Rights*, *40*(3), 461-480.

### Arts and expression

Castillo, M. R. F. (2016). Dancing the pluriverse: Indigenous performance as ontological praxis. *Dance Research Journal*, *48*(1), 55-73.

de Moya-Cotter, J. (2022). Loss and Life in the Andean Pluriverse: Slow Unravelings and suma qamaña in Óscar Catacora's Wiñaypacha. *Humanities*, *11*(2), 43.

Eshun, G., & Madge, C. (2016). Poetic world-writing in a pluriversal world: a provocation to the creative (re) turn in geography. *Social & Cultural Geography*, *17*(6), 778-785.

Fox, K. M., & McDermott, L. (2020). The Kumulipo, Native Hawaiians, and well-being: how the past speaks to the present and lays the foundation for the future. *Leisure Studies*, *39*(1), 96-110.

### Health and food

Brandão, A. P. D., Sussai, S., Germine, J. A. D. L., Eltz, D. D., & Araújo, A. (2021). Social sciences in One Health: Insights From multiple worlds perspectives on the dam rupture in Brumadinho-Brazil. *Frontiers in Public Health*, *9*, 649355.

Dunford, R. (2020). Converging on food sovereignty: transnational peasant activism, pluriversality and counter-hegemony. *Globalizations*, *17*(5), 782-796.

About the Author:

**Eveline van Zeeland** is Assistant Professor Design & Marketing at the Faculty of Engineering Technology of the University of Twente. Her research interests include designing for trust, design science research as scientific paradigm and design thinking & creativity.