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Pluriversal Futures for Design Education

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Abstract
The Future of Design Education working group on pluriversal design — with members from Latin America, the Caribbean, Africa, South and Southeastern Asia, North America, Oceania, and Europe — developed recommendations for higher education design curricula. The group addresses the dominance of a Eurocentric design canon and worldwide colonization by a twentieth-century design monoculture grounded in the concept of universal human experience. Curricular recommendations honor Indigenous worlds and place-based ways of being, and chime with anthropologist Arturo Escobar's premise that every community practices the design of itself, through participatory processes that are independent of experts. The authors posit that rather than a Cartesian rationalist perspective, the group advocates a relational view of situations in which the design responses to interdependent natural, social, economic, and technical systems, are specific to places and cultures. The recommendations assert a pluriversal design imperative in which multiple worldviews thrive and diverse lived experiences inform the entire field, as well as individual projects.

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Introduction

> "There is only one sky and we must take care of it, for if it becomes sick, everything will come to an end. This may not take place right now, but it could happen later. Then it will be our children, their children, or the children of their children who will die. This is why I tell the white people these words of warning that I have heard from very great shamans. Through them, I want to make them understand that they should dream further and pay attention to the voices of the forest's spirits."[1]
>
> —Davi Kopenawa and Bruce Albert

For decades, the Yanomami Indigenous people of Amazonia have warned that modernity is endangering the earth. Today, the wider world is finally listening and echoing Yanomami concerns. A 2022 article in *The Guardian* newspaper describes an approaching climate "catastrophe"[2] facing millions of people across the globe, but it is one of many challenges. In addition to storms, droughts, and wildfires, there are countless instances of violence, oppression, ongoing warfare, and the rise of global inequality. The world is in perpetual crisis.

In response to these devastating and complex challenges—and the call of Indigenous people—many critical scholars are wrestling with how the structure of knowledge can influence conditions around the world. Aníbal Quijano,[3] a Peruvian sociologist, wrote that "the European paradigm of rational knowledge, was not only elaborated in the context of, but as part of, a power structure that involved the European colonial domination over the rest of the world." These structures link power to knowledge, preserving the extractivist praxis of historical colonialism which considers "the other cultures are different in the sense that they are unequal, in fact inferior, by nature."[4] Sociologist Boaventura de Sousa Santos refers to the "horizon of possibilities," "rights to options," and other ways of thinking to support a Eurocentric framing of the world.[5] According to Santos, capitalism and colonialism are integral to a Eurocentric worldview, combining to create "forms of domination" that expand from the Global North to the Global South.[6] Here, Global South does not refer to geographic denominator, but to communities that have been subjected to colonialism, formerly known as The Third World, while Global North is used in lieu of the term *developed* or First World.

These systems of expansion and control are, to a large extent, supported by carefully designed tools, material culture, institutions, discourses, policies, and economies that support oppressive aims.[7] Therefore, design is also implicated in the tacit knowledge structures that separate the Global North from the Global South. An expansive understanding of design, in other words, is often embedded within the "modernist unsustainable … practices" of our time, which support the status quo of modernity.[8]

Nevertheless, design is not just a tool for oppression.[9] It is also a tool for hope.[10] In his analysis of present-day predicaments, anthropologist Arturo Escobar considers how design may be "redirected towards other ontological commitments" beyond market-driven activity, while also exploring the profound impact that design has on the nature of being and reality.[11] Such

1 Davi Kopenawa and Bruce Albert, *The Falling Sky: The Words of a Yanomami Shaman*, trans. Nicholas Elliott and Alison Dundy (Cambridge, MA: Harvard University Press, 2013), 410.
2 Damian Carrington, "World Close to 'Irreversible' Climate Breakdown, Warn Major Studies," *The Guardian*, October 27, 2022, https://www.theguardian.com/environment/2022/oct/27/world-close-to-irreversible-climate-breakdown-warn-major-studies.
3 Aníbal Quijano, "Coloniality and Modernity/Rationality," *Cultural Studies* 21, no. 2-3 (2007): 174, https://doi.org/10.1080/09502380601164353.
4 Ibid.
5 Boaventura de Sousa Santos, *Epistemologies of the South: Justice Against Epistemicide* (London: Routledge, 2014), 20.
6 Ibid., 25.
7 Frederick M. C. van Amstel, Rodrigo F. Gonzatto, and Lesley-Ann Noel, "Introduction to *Diseña* 22: Design, Oppression, and Liberation (2nd Issue)," *Diseña* 22 (January 2023): 1–5, https://doi.org/10.7764/disena.22.Intro.
8 Arturo Escobar, *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds* (Durham, NC: Duke University Press, 2018), 15.

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an ambitious undertaking places design as an agent of structural change — a medium through which to build new ways of being in the world.

Before describing the theoretical groundwork behind such a transformative shift, it is worth exploring the origins of the complex problems characterizing contemporary life. This exploration is a starting point for a description of ontological design. Many problems are rooted in reductionist and linear understandings of the lifeworld, which underpin the dominant economic models of the Global North.

Economic models emanating from the Global North offer little or no recognition that "economy is merely one aspect of the whole ecological and social fabric."[12] The notion of "unlimited growth on a finite planet" is, according to Fritjof Capra and Pier Luigi Luisi, "at the root of all the major problems of our time."[13] The economic problem manifest in both the environmental and social spheres. Monoculture farming reduces diversity; the "complexity of biodiversity is part of the natural capital that has built up over millions of years, and which modern society is now degrading."[14] Furthermore, the ecological problem has a correlate in cultural diversity, which also degrades under capitalist modernity.

Design theorist and philosopher Tony Fry refers to this cultural degradation as "elimination by design."[15] In the name of economic progress, the past century saw the destruction of vernacular form, traditional ecological knowledge, and Indigenous cultural practices that nourished and sustained millions of people.[16]

The erosion of both land and culture is rooted in a seventeenth-century Cartesian view of reality. This view conceptualized "the universe as a mechanical system." According to Capra and Luisi, this led to "the manipulation and exploitation of nature that became typical of modern civilization."[17] Inspired by Indigenous ways of relating to nature, recent studies from both the Global South and Global North explore alternative theories and practices that challenge dominant modes of consumption, production, and being in design.[18] Common to these critical accounts is an awareness of the complexity and interconnectedness among natural, socio-cultural, and technological aspects of life. As Escobar notes, emerging frameworks revolve around "questions of place, the environment, experience, politics, and the role of digital technologies in transforming design contexts."[19]

Modern design practices, with origins in the Global North, became an all-consuming force from the nineteenth century onwards. Mass production encouraged standardization and the distribution of marketing and social messages and goods far from the places where things were made. Perceptual principles — grounded in Gestalt psychology — were seen as universal, and the resulting forms deemed "socially unifying" during a tumultuous political period marked by two world wars, increasing immigration, and the growing social problems of urbanization. This spread of modern design promoted an exclusionary model — a singularly "desirable" view of economic and social progress — at the expense of local identities and traditions. According to sociologist Ramón Grosfoguel, cultural homogenization can also be traced to colonization during the same period, which erased and destroyed people, cultures, and knowledge systems.[20]

9 Manuhuia Barcham, "Design Processes and Tools as Oppression? Rethinking Our Design Practice for more Just Design Outcomes," *Diseña* 22 (January 2023): article no. 7, https://doi.org/10.7764/disena.22.Article.7.

10 Lesley-Ann Noel, "Dreaming Outside the Boxes that Hold Me In: Speculation and Design Thinking as Tools for Hope and Liberation against Oppression," *Journal of Futures Studies* 26, no. 3 (2022): 71–82, https://doi.org/10.6531/JFS.202203_26(3).0006.

11 Escobar, *Designs for the Pluriverse*, 15. –

12 Fritjof Capra and Pier Luigi Luisi, *The Systems View of Life: A Unifying Vision* (Cambridge: Cambridge University Press, 2016), 56.

13 Ibid.

14 Ulrich Loening, "The Attitude of Human Ecology," in *Radical Human Ecology: Intercultural and Indigenous Approaches*, ed. Lewis Williams, Rose Roberts, and Alastair McIntosh (Farnham, UK: Ashgate Publishing, 2012), 39.

15 Escobar, *Designs for the Pluriverse*, 6.

16 Ibid.

17 Capra and Luisi, *Systems View of Life*, 25.

18 Escobar, *Designs for the Pluriverse*, 6.

19 Ibid., 27.

20 Ramón Grosfoguel, "The Structure of Knowledge in Westernized Universities: Epistemic Racism/Sexism and the Four Genocides/Epistemicides of the Long 16th Century," *Human Architecture: Journal of the Sociology of Self-Knowledge* 11, no. 1 (2013): 73–90.

Twentieth-century, design education embraced this hegemonic frame of reference in curricula and teaching practices, flattening the diversity of popular design expression around the world. The recommendations by the Future of Design Education working group on pluriversal design are a protest against a singular, canonical design education. They shift the curricular discourse to include long-marginalized voices and ideas that decenter Western design pedagogy and practice. Examples include Gutierrez Borrero's Design from the South and Diseños Otros, the work of the Designs and Oppression network, and more.[21] While these vibrant threads thrive within their own indigenous contexts, they are often on the periphery of professional and academic dialogue. As writer and civil rights activist Audre Lorde said, "The master's tools will never dismantle the master's house"—that is, the problems of oppression won't be solved with the tools of a system of oppression.[22] The working group's pluriversal recommendations push design education away from a reductionist, linear, single-sided understanding of the world, and toward a relational, ontological, and pluralistic perspective—respecting different ways of knowing and being in the world.

Such recommendations do not come from a single voice, or the small number of people who authored this article. In a dialogic process, the 25 members of this working group on pluriversal design mirrored their principles by teaching each other about issues and practices of their home countries and cultures. The original mission was curriculum development for designing across disparate cultures or across different subcultures within the same place. The group expanded the focus from multiculturality to pluriversality, which is not just about cultural uniqueness but about understanding the world in different ways. It adopted a *pluriversal* design mission. In the concept of pluriversality, culture encompasses more than heritage, geography, or outward expressions of identity. It also includes diverse worldviews that represent essential relationships among the natural, social, and technical systems that define lived experiences. Interest in pluriversality evolved alongside interest in positionality.

Pluriversality

Arturo Escobar defines the *pluriverse* as related to the Zapatista resistance movement's motto of a "world in which many worlds can fit."[23] More specifically, the pluriverse is a home for plural universes—not an opposition, but an unsettling synthesis of multiples. It sees the possibility of universally shared concepts that are not *worlds*, such as *nation*, *culture*, *land*, and *life*.[24] According to philosopher Álvaro Vieira Pinto, universality is just one path that connects consciousness to the totality of human experience.[25] Without universals, human beings cannot develop complex and diverse existential projects, perspectives, and experiences.

For political scientist Bernd Reiter, the crises of the twenty first century are a result of centuries of imperialism and capitalism. These crises cannot be eliminated simply by the further evolution of capitalism. New plural and equitable utopias—the pluriverse—address these major crises and must inform future decisions.[26] With this in mind, the Future of Design Education working group does not propose substituting Eurocentric rationalist approaches with

21 Alfredo Gutiérrez Borrero, "Resurgimientos: sures como diseños y diseños otros," *Nómadas* 43 (2015): 113–29, available at http://www.scielo.org.co/scielo.php?pid=S0121-75502015000200008&script=sci_abstract&tlng=es; Tony Fry, "Design for/by 'the Global South,'" *Design Philosophy Papers* 15, no. 1 (2017): 3–37, https://doi.org/10.1080/14487136.2017.1303242.

22 Audre Lorde, "The Master's Tools Will Never Dismantle the Master's House," in *Sister Outsider: Essays and Speeches* (Berkeley: Crossing Press, 1984), 110–13.

23 Escobar, *Designs for the Pluriverse*, 16.

24 Alfredo Gutiérrez Borrero, *DISSOCONS Diseños del sur, de los sures, otros, con otros nombres. Diss. Facultad de Artes y Humanidades* [Designs from the South, the Souths, others, with other names] (PhD dissertation, Universidad de Caldas, Faculty of Arts and Humanities, 2022), https://repositorio.ucaldas.edu.co/handle/ucaldas/17409.

25 Álvaro Vieira Pinto, *Consciência e Realidade Nacional* [National Conscience and Reality], vol. 1 (Rio de Janeiro: ISEB, 1960).

26 Bernd Reiter, ed., *Constructing the Pluriverse: The Geopolitics of Knowledge* (Durham, NC: Duke University Press, 2018), 4.

another universal view. Instead, it proposes a framework in which many forms of design practice coexist. The working group challenges the concept of universality as only one way of being. And it challenges the Western design education traditions through which the concept has been reinforced. Furthermore, a pluriversal approach does not treat the work of other cultures or subcultures as exotic or their achievements as secondary, less legitimate alternatives to a more dominant practice. It broadens the view of design as a human activity practiced across all cultures and subcultures in a variety of ways. Thus, various types of designs as practiced around the world — Design by the South, Diseños Otros, Designs by the Oppressed, etc. — fall within the notion of pluriversal design.[27]

A pluriversal approach to design and design education sets aside the narrative of Eurocentric modernism for a range of locally rooted perspectives and a more complex view of the field of design. It reveals overarching values and purposes of design for bringing about ways of being — individual, group, or cultural — despite contradictions and conflicts in different contexts and narratives at a microscale. The multiplicity and intersectionality of perspectives in a pluriversal approach balance the power inequalities between "those with privilege" and "those who are oppressed." Extractivist practices can be avoided by teaching a curriculum that emerges from local roots and context. One way to balance power inequities is to foster radical participation — a design process conducted *with*, *through*, and *by* the people for whom the impact of the design is the greatest. This honors local histories and design cultures — incorporating them into the larger story of the field in publications and class exemplars, but also shifts the center of gravity when discussing concepts that unite design across the world. At the same time, the Future of Design Education working group recognizes that simply going hyper-local can camouflage the ongoing struggle against the colonizing effects of a Western design legacy. Disclosing longstanding discrepancies between a universal design perspective and the rich diversity of place-based design cultures can be instructional for future generations of designers.

A pluriversal approach challenges the traditional view of design as a *transactional* practice, instead focusing on *relationality*. The world is moving away from Eurocentrism and toward greater respect for the diversity and complexity of other perspectives. Methods that prioritize efficiency, are advantageous for the designer or client, or deliver rapid returns on the investment of time and resources are now questioned. A focus on *relationality* — values trust-building, long-term commitments, and dedication to understanding constituents and their future prosperity — is coming to the fore.

Design is a core activity of every human culture — it is a fundamental, evolutionary impulse (arguably by other life forms, as well). In a general sense, every community practices the design of itself.[28] However, pluriversality is not simply "anything goes." Despite an interest in letting all languages of design speak and be heard, there are some languages that are incompatible with the concept of pluriversality. The languages of fascism or extremist groups, for example, suppress other voices and, thus, do not have a place within the idea of the pluriverse. There is a fundamental difference between a view of the world as embracing many worlds and one that does not.

27 Gutiérrez Borrero, "Resurgimientos"; Gutiérrez Borrero, *DISSOCONS Diseños del sur*; Fry, "Design for/by 'the Global South'"; Arturo Escobar, "Response: Design for/by [and from] the 'Global South,'" *Design Philosophy Papers* 15, no. 1 (2017): 39–49, https://doi.org/10.1080/14487136.2017.1301016.

28 Escobar, *Designs for the Pluriverse*, 5.

A discipline that is defined historically through exclusion, oppression, and dominance can neither sustain itself nor grow under a closed view. Definition by exclusion brings design to a contemporary reckoning. Pluriversal design counters a longstanding view of the design field and its methods, while simultaneously offering new ways of thinking that better recognize current conditions in the world. Pluriversality is not simply synonymous with diversity, equity, and inclusion—with simply adding "others" under an existing, dominant worldview as *convergence*—or only about culture. Instead, the paradigm shift is toward a new consciousness of divergence—toward embracing plural worlds and the existential relationships that define them. This new consciousness acknowledges the destructive consequences of ignoring or assimilating different worldviews under one perspective.

Interest in pluriversality is not merely about addressing the effects of colonization though decolonizing design,[29] design justice,[30] and studies of oppression within design.[31] These allied approaches contribute to pluriversality by developing the alternatives to the project of modernity. Neither is this approach a rant against the status quo or simply a critique of a universal worldview. Nor is the interest in pluriversality a case of railing against the status quo or simply a critique of a universal worldview. The Future of Design Education working group optimistically approached crafting a new, hopeful mission for the future of the field, in which a plurality of places and groups reclaim the right to divergent worldviews and design practices. In other words, Design of the Oppressed, Diseños Otros, Design of the South, and other approaches are all welcomed in pluriversal design. Pluriversal design, according to the authors of this paper and members of the Future of Design Education working group focused on this topic, is based on two premises: life-affirming work and approaches to practice that do not disrespect or destroy other worlds. This mission does not promote a generalized series of steps or methods applicable to all design practices. It values different ways of doing design. Furthermore, discussions began with agreement that a pluriversal approach to design facilitates communication across languages and cultures, ensuring that lived experiences are valued no matter how different they are.

Pluriversality is also the quality of an educational approach that broadens and diversifies the contexts and methods through which design is practiced. It lays a path for the development of knowledge by framing design at the core of diverse human experiences and identities. Therefore, pluriversality is futures-oriented in the lenses through which students view the richness of design as practiced in different epistemologies, ontologies, cultures, subcultures, global, and local places.

The central arguments underpinning the recommendations of the Future of Design Education working group on pluriversal design are that:

- The future of design education is relational as it emphasizes the interactions among natural, social, and technical aspects of life, rather than artifacts.
- Design is practiced everywhere and in ways that respond to differences in these relationships.
- An ontological view of design contributes to philosophies and methods that inform all design practice.

29 Tristan Schultz et al., "What Is at Stake with Decolonizing Design? A Roundtable," *Design and Culture* 10, no. 1 (2018): 81–101, https://doi.org/10.1080/17547075.2018.1434368.

30 Sasha Costanza-Chock, *Design Justice: Community-Led Practices to Build the Worlds We Need* (Cambridge, MA: MIT Press, 2020).

31 Van Amstel, "Introduction to *Diseña* 22."

- Pluriversality provides both broader and deeper understanding of complex issues, such as the production of plural realities and forms of existence, including those of the environment.

Positionality

Positionality typically refers to understanding and disclosing one's position or relation to the past and connections to the histories of various people groups, whether benefitting from or disadvantaged by past legacies.[32] For example, participants who discuss oppression and racial justice often account for how the past affected their views in the present. Positionality is also a stance on the future, in which an individual or a group reflects on where it is headed. In other words, position is both where we've been and where we'd like to be.

Collectively, members of the Future of Design Education working group on pluriversal design were diverse in race and ethnicity, age, geographic provenance, and spoken languages. Most were design educators, but the group also included students and recent graduates, experienced practitioners, and former educators who are now in practice. Geographically, they represented countries in Latin America and the Caribbean, Africa, South and Southeastern Asia, North America, Oceania, and Europe. The perspective of the group was overwhelmingly from the Global Majority: Black, Asian, Brown, dual-heritage, indigenous to the Global South, or racialized as "ethnic minorities."[33]

This heterogeneity meant the group had a varied understanding of design and design practice, as well as aspirations for what the field could be. Despite these differences, most members had experienced a Western design education—that is, they studied specific Western subjects, followed Western course models, followed Western research methodologies, and/or taught Western design history and approaches to practice. For many in the group, design education—especially as taught and practiced in the United States—replicates colonial practices in its traditional link to commodities, globalized (and therefore oppressive) aesthetics, and educational biases toward norms that are insensitive to local peoples and contexts. The master-apprentice relation common to studio-based learning, as well as the supervisory relation often observed in graduate studies, are key practices that contribute to the perpetuation of the coloniality of power in design education. Throughout the process of developing curricular recommendations, group members reflected on both what design is and what it could be in different contexts. Many were relieved by the shared challenge to a hegemonic educational model. At the same time, members found they were not as different as they anticipated. They discovered that their past design experiences were quite similar, humbly raising concerns they might not be radical enough in their recommendations.

A pluriversal approach to design education is consistent with this humility and openness to many approaches. During the writing process, team members reflected on their own cultural positions, as in the examples below:

32 Lilian Genaro Motti Ader et al. "Teaching & Learning Positionality in HCI Education: Reflecting on Our Identities as Educators and Facilitating the Discussion in the Classroom," in *EduCHI '23: Proceedings of the 5th Annual Symposium on HCI Education* (New York: ACM, 2023), 1–4, https://doi.org/10.1145/3587399.3587400.

33 Rosemary M. Campbell-Stephens, *Global Majority*, 2020, accessed June 19, 2023, https://www.leedsbeckett.ac.uk/-/media/files/schools/school-of-education/final-leeds-beckett-1102-global-majority.pdf.

Adolfo Ruiz: I am a white Spanish man, born into a working-class family in Barcelona. My parents and I emigrated to Canada when I was a boy. We settled in Amiskwaciy-wâskahikan (Edmonton), the traditional homeland of Cree, Dene, Stoney, Saulteaux, Blackfoot and Métis peoples. For over ten years, I have had the honor of co-developing creative projects with elders, youths, and government workers on Tłı̨chǫ lands—a self-governed Indigenous region in the subarctic zone. I hold various forms of privilege and consider it an ongoing responsibility to help challenge colonial narratives, to listen with an open heart, and to learn from the many knowledge holders that I am fortunate to work with.

Lesley-Ann Noel: I am a Black woman from Trinidad and Tobago in the Caribbean. I am a foreign worker in the United States, and this status makes me aware of both my privilege and lack of privilege, as a Black person, brought up and educated in another part of the world.

Neeta Verma: As a brown woman from the Indian subcontinent, I have never been more aware of my gender, color, ethnicity, or privilege. Studying design in India and the United States has allowed me to see two completely diverse cultural, social, political contexts within which "design" resides. My journey from a small town in India is a testament to the hard-learned lessons in "othering" and the joys of inclusion.

Victor Udoewa: I am a Black, currently disabled, Nigerian person from an immigrant family in the United States. I am also a male, cisgender, heterosexual, Christian, US-American-designer-person. I carry multiple layers of privilege and a lack of privilege, especially when broadening out to my educational experience, countries in which I have lived, income, etc. I am from an African indigenous people group called Ibibio. My name, Anietie, means "Who is like God?" When I write, I generally write from a perspective of African indigeneity, which can be different than other indigenous groups in other parts of the world. I reside and work in DC, the land of the Nacotchtank (Anocostan) who, due to persecution, fled to Theodore Roosevelt Island in the Potomac River, joined a neighboring tribe (Piscataway) in Maryland, and together left to go to Pennsylvania. They were a people group before, during, and after colonists arrived. I honor them and acknowledge the land on which I live, move, and have my being.

Frederick van Amstel: My ancestors colonized some parts of Indonesia and Brazil and I feel somewhat responsible for repairing the social and environmental damage they have done. As a white hetero cis man, I inherit a lot of privileges and false consciousness. Nevertheless, I have met kind, underprivileged people in Brazilian public universities that have opened my eyes to the history of oppression. Since then, I join them in their fights to turn privileges into rights.

These stories are so different. The authors could say that the only thing they have in common is the history of colonization. Since that would be a negative identity given by the colonizers, the authors found commonalities in their future histories: the pluriverse.

Ontological Design

The pluriverse raises philosophical issues that have far reaching consequences to design education. Some of the issues explored by the working group include analyzing different ways of knowing and how these stem from different

ways of conceiving the world in different cultures. For example, different cultures conceive the world as Mother Earth, Gaia, or Papatūānuku. This brought us to consider ontological design as an intrinsic element of pluriversal design. In the most basic terms, ontological design is based on a circular relationship between human (design) activity and the (designed) world — one shapes the other in a cyclical feedback loop. The creation of tools and technology leads to actions that modify ways of being in the world, which in turn call for new tools and technology. As design theorist Anne-Marie Willis wrote, "we design our world, while our world acts back on us and designs us."[34]

This cycle prompts thoughtful consideration of the responsibilities and consequences of design practice and education. Ontological design asks people to think about the extent to which tangible and intangible forms of cultural production are inseparable from ways of sensing, thinking, and being in the world. Such ideas move beyond seventeenth-century Cartesian thinking — beyond the dualisms and binaries of mind/body, us/them, nature/culture, human/non-human, etc. that marked the beginning of modern thought.[35]

From the perspective of ontological design, duality is an inadequate interpretive lens through which to understand complexity, since complexity is not binary and its boundaries can be fuzzy, morphing, or intangible. The presumption of all matter as the spatial extension of humans — a separate, lifeless mechanical system — is questionable under an ontological perspective. This view justifies a variety of activities that have negative implications for society and the planet. As Hispanic Apache philosopher Viola Cordova noted: the notion that "humans are somehow superior to the Earth itself, that humans are separate and apart from all else" hinders new thinking about environmental ethics and our place in the world.[36] Under an ontological view, the things humans make have *agency*; they shape ways of being for individual people, groups, cultures, and other living things. Ontological design is, in essence, a relational worldview that elicits careful consideration of people's place within this shared household we call Earth.

Ontological design led the group to consider the possibility of restoring a root meaning for economy, as an enduring system contributing to prosperity in the broadest sense, rather than the destruction of this household (Earth). The working group explored these ideas directly and indirectly. Individual member presentations preceded group discussions and were often rooted in places, cultural memory, and local knowledge. The approach was "to start with the ground on which we stand."[37]

The working group considered local narratives and historical knowledge as necessary to conceiving alternative futures for design education. Under traditions of the Global South and the Indigenous world, these ways of knowing became valuable "tools for criticism, futuring, and sustainment."[38] Rather than thinking of the past as romantic or nostalgic, new perspectives account for local knowledge, oral histories, and land-based knowhow. They suggest rethinking the complex problems of the present. As Terry Winograd and Fernando Flores wrote in *Understanding Computers and Cognition: A New Foundation for Design*, "Ontologically oriented design is … necessarily

34 Anne-Marie Willis, "Ontological Designing," *Design Philosophy Papers* 4, no. 2 (2006): 82, https://doi.org/10.2752/144871306X13966268131514.

35 Capra and Luisi, *Systems View of Life*, 23.

36 Viola Cordova et al., *How It Is: The Native American Philosophy of V. F. Cordova* (Tucson, AZ: University of Arizona Press, 2007), 210.

37 Alastair McIntosh, *Soil and Soul: People versus Corporate Power* (London: Aurum Press, 2004), 34.

38 Escobar, *Designs for the Pluriverse*, 12.

both reflective and political, looking back to the traditions that have formed us but also forward to as-yet uncreated transformations of our lives together."[39]

In taking on the task of curricular recommendations, important questions arise. As designers, are we truly aware that what we design affects our ways of being and knowing; aware that design can be ontological? With that awareness, how do we design intentionally for healthier ways of being and knowing? And if design is intentional—that is, if an ontological approach is not neutral—what does it mean for communities to be autonomous in working toward their own desired vision of the future, rather than succumbing to one, totalizing worldview? In other words, can design address a pluriverse?

Who would make such pluriversal design curricular changes? Design education often takes place in universities. While universities may be the right places to raise some of these educational shifts, one cannot ignore that they are constructions that remain specifically located, favoring certain geographies and cultures. Ivan Illich underscores this when he says, "Most learning is not the result of instruction. It is rather the result of unhampered participation in a meaningful setting. Most people learn best by being "with it," yet school makes them identify their personal, cognitive growth with elaborate planning and manipulation."[40] The two points emphasized in defining broader contexts of learning are, "unhampered participation" and the other "meaningful setting" both of which tie back to the idea that if we are advocating for a more inclusive approach, it will need to come from the deep-seated indigenous approaches and teachings that have pre-existed as forms of imparting knowledge and acquiring knowledge within those communities.

However, for a university to engage in pluriversal design education, it must be decolonized, or, at the very least, the design department must decolonize the university as much as possible. Decolonization in the academic space would mean decoupling the curriculum content from Eurocentrism. Simultaneously, anyone at a university engaged in pluriversal design education will need teacher education and upskilling to reduce the impact of their biases. They must learn other ways of designing as well as the value systems and ways of being from which they emanate. And they must improve their ability to create safe spaces for students of various identities, especially identities that have been historically and currently marginalized, oppressed, repressed, and suppressed. Nevertheless, perhaps university is not the best place where such education can or will occur. This presents an opportunity to recognize design education outside universities and commercial internships, bringing relationality to the fore.

As designers, are we truly aware that what we design and how we educate affects our ways of being and knowing; aware that both design and design education can be ontological? With that awareness, how do we design and educate intentionally for healthier ways of being and knowing? And if design is intentional—that is, if an ontological approach is not neutral—what does it mean for communities to be autonomous in working

39 Terry Winograd and Fernando Flores, *Understanding Computers and Cognition: A New Foundation for Design* (Boston, MA: Addison-Wesley, 1987), 163.

40 Ivan Illich, *Deschooling Society* (London: Harper and Row, 1971), 39.

toward their own desired vision of the future, rather than succumbing to one totalitarian worldview? In other words, can design and by that argument design education respond to a pluriverse?

Relationality

Pluriversal design education expands the idea of *practice* beyond conventional studio work on physical artifacts that are formally "almost perfect." Practice now includes participating in building communal worlds and taking responsibility for socio-cultural change, and the role of design technology in everyday life. While it is unlikely that the world will resist the colonizing effects of technology, it is important for design to pay special attention to valleys: to disparities in access power as the peaks grow stronger and taller; to resource depletion in the service of innovation that disproportionately affects the developing world; and to an economic sorting of people into increasingly disparate tribes of "haves" and "have nots."[41]

Many of the discussions that developed in the Future of Design Education working group implicitly revolved around the natural world. Multiple presentations rooted in Indigenous knowledge and the Global South described *the land* as a meaningful terrain, teeming with life and ancestral memory—a viewpoint that counters the Western dualistic separation of nature and culture. Philosopher Bruno Latour described modernist dualism as the Great Divide between nonmodern and modern cultures, defined partially by their relationship to nature.[42] By separating symbolic meaning from a rational, objective view of materials, modernists disregarded relationships between culture and natural forces and the land. This view embodies hierarchical and empowered design decisions that privileged human progress (in the name of urbanization and industrialization) over nature, often destroying animal habitats, reducing biodiversity, and increasing "the brittleness of ecosystems."[43]

Nature eventually *answers back* by exposing human dependence on the very ecosystems that humanity disrupts. The traditional ecological knowledge of Indigenous peoples and a systems view of life are useful starting points for addressing problems such as the breakdown of agricultural systems and depletion of natural resources. Longstanding sustainable design practices, earlier technologies, and biomimicry offer important insights that designers have only begun to explore. The Indigenous world offers both a way of knowing and concrete examples of environmental stewardship. For example, a 2018 *National Geographic* article cited research that the world's 370 million Indigenous peoples make up less than 5% of the total human population, yet manage more than 25% of the world's land surface and support 80% of the planet's biodiversity.[44]

Socio-technical systems define much of today's design work. They connect people in *new geographies* through digital devices and boundaryless software, yield increasing power to users, convert resource-intensive products to services, and share more information than ever before (adding 2.5 quintillion bytes of data each year). However, these systems also change the relationships between places and their future prosperity.

41 Ibid., 51.

42 Bruno Latour, *We Have Never Been Modern*, trans. Catherine Porter (Cambridge, MA: Harvard University Press, 1993), 103.

43 Loening, "Attitude of Human Ecology," 24–46.

44 Gleb Raygorodetsky, "Indigenous Peoples Defend Earth's Biodiversity—But They're in Danger," *National Geographic*, November 17, 2018, https://www.nationalgeographic.com/environment/article/can-indigenous-land-stewardship-protect-biodiversity-.

The dilemma to solve is a vicious cycle, a reinforcing loop in which ways of designing perpetuate, amplify, and accelerate negative systems effects, frequently in places not responsible for the perspectives and methods that produce them. Furthermore, the task is to value divergent notions of progress under the pressures of a rapidly changing world—to imagine ambitious futures well matched to place, rather than ones promoted by mainstream media as universally desirable.

Recommendations

The working group agreed on six principles to guide its development of *Core Ideas* and *Things to Know and Do* (Table 1). Adoption of these principles reflects that curriculum development itself should be a pluriversal design practice.

Table 1 **Six generative principles that guided work on curricular recommendations.**

Pluriversal Ways of Knowing and Making	Multiple lenses of culture, epistemology, globality, and locality, reveal the richness of design as practiced in different contexts and should drive the exploration and celebration of diversity. This contrasts with notions of universality. Curricular recommendations must privilege *divergence*, not *convergence*.
Respectful Relationality	Loyalty to one's own culture can impede relationships with people who hold different beliefs. Those who belong to the culture or subculture in power (or perceived to be in power) can dominate discourse. To avoid unhealthy power imbalances, educators must understand and respect all kinds of differences (gender, economics, race, culture, etc.) and not frame situations for students in terms of the educators' own lived experiences. Because power is relative to positionality and context, people can move in and out of power depending on the context. A temporal, place-based, and context-based understanding of power must be engaged, so that students understand that teachers, students, community members, government leaders, anyone can move in and out of power depending on the context and the relationship. Our goal is to participate in respectful relationality that does not use power as a tool for achieving one's goal, but instead using power to serve others in the context of relationships.
Pluriversal Design Methods and Content	New approaches must deconstruct and dismantle theories and methods guided by an assumption of universal experience. Design experiences must sensitize students to diverse cultural experiences, including their own, encouraging them to add to what already exists rather than replacing it with a new order. With the knowledge that local culture is neither homogeneous nor without problems, the aim of design education is to equip students with attitudes and methods for empathic, critical, and creative analysis and distinctive contributions that are authentic to the social, cultural, and environmental setting. However, all students and facilitators are on different journeys, and each person may or may not be ready to let go of power, recognize privilege, and disagree with others. The educational space must be a safe space that allows differences to thrive and cultural identities to remain unthreatened. Educators and facilitators need training in how to guide students safely and slowly through dismantling and deconstructing without students becoming confused, losing their grounding, giving up, or being harmed. The goal is not to counter decolonization or surrender to absolute standards. Instead, it is to enhance one's process or journey through the celebration of one's own cultural roots and the acknowledgment of the cultural identities of those that are encountered over the course of the educational experience.
Pluriversal Design Research	Design research driven by pluriversal goals (rather than modernist rationality or Western methodologies) should lead to conversations regarding new possibilities for ways of being that extend to individual humans, groups, cultures, and other living things; worlds that the members of a culture, not academics, bring into existence. Such research must pay careful

	attention to the language and lenses through which designers recognize and capture the human experiences within different cultures, classes, ethnicities, genders, spiritualities, and species. Research methods are not without cultural biases.
Pluriversal Communication	Local origin stories, micro-histories, mythologies, and social practices represent the voices of cultures under study. These narratives may be rooted in the relationship to nature, time, or the cosmos. They may be ways of transferring knowledge across generations and preserving cultural memory. They are not only sources of background information or cultural histories for design students, but also creative ways of comparing, negotiating, and communicating new ideas of what the community thinks ought to be.
Spaces of Learning	While traditionally, the physical studio has been the locus of learning activities, the land and community are significant to understanding context and culture. Students need to learn respectful behavior and protocols for fieldwork in communities. The success of participatory methods depends on the relationships designers establish with people, not just implementation of procedures. These situated skills are as important as the mastery of materials and methods and can be evaluated by faculty.

The working group synthesized discussions into ten *Core Ideas* that follow (Table 2). Each idea has corresponding things for students to *Know*, *Do*, and *Be Familiar With*.

Table 2 **Core ideas and things to know and do.**

Core Ideas	Things to Know, Do, and Be Familiar With
1. Every community practices the design of itself, independent of expert knowledge. People in communities are practitioners of their own knowledge. (This is similar to *Design Justice* principles 6 and 10.)[45]	**What design students should know:** • What constitutes an expression of culture. • What is ethnography. **What design students should do:** • Apply ethnographic research methods including and going beyond interviews. • Apply co-creation and co-design methods. **What design students should be familiar with:** • Colonization and decolonization. • Neo- and auto-colonization. • Suppression of Indigenous cultures and worldviews.
2. Unlike modernist traditions, relational approaches to design address multiple ways in which things are connected: nature and culture; mind and body; us and them.	**What design students should know:** • How place-based communities understand fundamental relationships within the community and between the community and others. **What design students should do:** • Model the situation and problem at hand. • Think in terms of causal networks, rather than causal chains. • Activate networks of commitment within communities and organizations. **What design students should be familiar with:** • Modernist principles of universality, social progress, and scientific and technological objectivism as a contrast to pluriversal, ontological views.

3. Design is *with*, and *by* people, not *for* people. The role of the designer when working in a culture is that of facilitator, not decider. Designers should also disclose their intent when observing another culture. (This is similar to *Design Justice* principles 5 and 9.)[46]	**What design students should know:** • Problem framing is inherently subjective and must be negotiated and reaffirmed with and by stakeholders throughout the design process. • The designer is an observer, discloser, and facilitator. **What design students should do:** • Include all stakeholders in a collaborative design process, ensuring that all voices are heard. • Facilitate conversations through "propositional models" and prototypes that translate and respect various stakeholder views on the situation. • Actively engage stakeholders in the prioritization of competing wants and needs. • Use co-creation, co-design methods. **What design students should be familiar with:** • Forms and tools of storytelling. • Cultural histories of various under-represented groups. • Collective and consultative decision-making strategies.
4. There is no one universal design history.	**What design students should know:** • Alternative histories, not just Western histories that favor a Eurocentric canon and ignore influences from around the world. **What design students should do:** • Examine the culturally specific history of the communities with which they work. • Compare how different communities use or do things differently. **What design students should be familiar with:** • Cultural competence (being aware of one's own cultural beliefs and how they are different from another's). • Relevant existing historical research. • Relevant existing ethnographic research including and beyond interview-based research. • Local design traditions.
5. Designers need radical empathy in the design process.	**What design students should know:** • Radical empathy calls for more than basic understanding of the challenges people experience. • It is actively considering and connecting with other people's points of view and circumstances. • It requires work to keep participants and students of color safe, especially when various people in a design process, including the professional designer, may be at different points in their journey or unaware of their positionality. **What design students should do:** • Identify and describe the challenges experienced by various individuals and their communities. • Engage in respectful research and collaboration with community partners. • Propose and negotiate design solutions and analyze the impact on personal well-being. • Engage in ethical practices in work with cultural groups. **What design students should be familiar with:** • Relationality. • Interdependence.
6. The studio is not the only place where design happens.	**What design students should know:** • Traditionally, classrooms and studios have been the places for learning about and making design. • In understanding the diverse contexts for design, the land and community should be where learning takes place.

	What design students should do: • Engage people in their personal and community environments. Immerse themselves in the community. • Study local eco-systems for how the community coexists with the natural surroundings. Apply principles of systems thinking. • Apply concepts from indigenous histories inscribed in the land. • Practice cultural awareness and respect. Employ participatory methods. **What design students should be familiar with:** • Local systems and ways of living. • The general nature of field work.
7. Designers need to design for resilience. (This is similar to *Design Justice* principles 1 and 8.)[47]	**What design students should know:** • Vulnerable communities may be exposed to disruptive events that threaten their well-being. • Everyday design solutions have been developed to deal with a context of crises. **What design students should do:** • Be sensitive to anticipate disruptive factors that may affect a community or organization. • Design adaptive social responses to critical situations. • Envision future scenarios of resilience. **What design students should be familiar with:** • Resilience theory. • Crisis leadership. • Degrowth movement — shrinking rather than growing economies.
8. Design can ensure the preservation of marginalized cultures. (This is similar to *Design Justice* principle 8.)[48]	**What design students should know:** • Design can be used by cultures to imagine various alternative futures and, with that knowledge, prepare themselves and become resilient no matter which alternative future occurs (future-proof). • Designers can help reclaim or revive local design sub-cultures that have been marginalized. **What design students should do:** • Listen deeply and engage people in participatory processes. • Analyze local and immediate cultures for constituent origins, influences, and life goals for the future. • Analyze how ethical and normative beliefs underpin a design culture over time and how these are expressed in activities and the aesthetics of the objects it makes. • Analyze "modernity" as a driver of culture and its continuing viability as a model of progress. • Research and track how cultures evolve over time and assimilate or acculturate various influences. • Envision future scenarios for marginalized cultures or subcultures. **What design students should be familiar with:** • History and cultural context. • Ethnographic perspectives beyond interviews. • Foresighting. • Speculative design.
9. Designers should understand what *industry* means at micro- and macro-levels and at a range of production scales.	**What design students should know:** • Designers work with local knowledge and skills to leverage a community's economic health and sustainability. **What design students should do:** • Research and respect local networks and markets, supply chains, methods of production, and craft knowledge. • Amplify local expertise through social innovation methods.

	What design students should be familiar with: • Sustainable production methods. • Workforce practices. • Authentic cultural expression versus market commodification. • Non-monetary methods of exchange.
10. Designers need to "read" cultural values in the stories that communities share.	**What design students should know:** • Local origin stories, micro-histories, mythologies, and storytelling practices that support designers in finding the authentic voices of the communities in which they work. **What design students should do:** • Engage with the creative use of language, storytelling, shared imagery, and histories. • Explore local myths, legends, and folklore. **What design students should be familiar with:** • Cultural memory and ways of knowing. • Intergenerational transmission of knowledge. • Cross-cultural communication. • Cultural relationships to time and space.

45 Costanza-Chock, *Design Justice*.
46 Ibid.
47 Ibid.
48 Ibid.

Conclusion

A pluriversal future design education will prepare designers to deal with pluriversality, positionality, and ontological design. The composition and processes of the working group mirrored the educational practices it hopes to foster. Under these views, there are multiple ways of being in the world. The role of design is to disclose, facilitate, and revive worlds that authentically represent what members of the community determine *ought to be*. Such work makes good use of stories and traditions but goes further to model the values and beliefs they reflect in the design of policies, infrastructure, and socio-technical systems. Processes are participatory, share power across constituencies, and make sure all voices are heard. And the relationship to nature and the land is seen as consequential for the planet as well as the community.

Diverse worlds teach designers. They expand design approaches to recurring situations, broaden understanding of system relationships, and generate divergent possibilities. Exposure to the diversity of individual and group-based lived experiences discourages one-size-fits-all design solutions that impose the values of one subculture or culture on another, suppressing the unique richness of *place*. Cultural communities, therefore, are not only practitioners of their own knowledge, but teachers as well. If we want to have a pluriversal design education, we must learn about several ways of doing, understanding, and changing design as we teach.

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