



What Got Us Here, Won't Get Us There

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Contemporary Design Attitudes for Pluriverse: Review & Introduction to Industry Practice

Nithin Kuriakose

Indian Institute of Technology, Hyderabad
nithinchanganacherry@gmail.com

Abstract: Why do more complex problems arise the more we design? What are the design attitudes for societal transitions? How are they connected? How can we transcend such approaches to develop an attitude in professional practice? This study explores why we need better design interventions and also evaluates, differentiates, and simplifies the contemporary design attitudes that are shaped across the globe in the last decades which helps in solving complex or wicked problems for a better future. It also tries to find commonalities and differences between Ontological design, Speculative design, Pluriversal design, and Transition design as approaches and links its connectedness to Pluriversal thinking. In the final part, it talks about the learnings in developing these approaches in the industry.

Keywords: Speculative Design, Ontological Design, Transition Design, Pluriversal Design

1. Introduction

We live in societies that are always in transition and are not shaped the way we want. Climate change, forced migration, political and social conflict, global pandemics, and a lack of access to affordable housing, healthcare, and education are just a few of the issues we face in this century. And it's true that all of these problems are interestingly connected. But are we approaching these issues the right way? There are a number of attitudes that are and have been shaping across globe in the academia in the last two decades. In this report, it was studied why we need newer ways of thinking, and specifically out of these approaches, Ontological design, Speculative design, Pluriversal design, and Transition design are critically reviewed. It's important to note that there are a lot of similarities in the approach and all of these attitudes discuss the transition to pluriverse. In the first part, it simplifies all these contemporary attitudes that help in transitions, and in the second part, these approaches are experimented with to develop a newer design attitude in the professional practice, and learnings and challenges are also discussed.

2. Need for a Change

2.1 Dominant culture thinking

We imagine the world to be a certain way and construct it accordingly. And what we imagine is what dominant culture has made of reason. As many design scholars state, there is no universal solution for these. We all have our ideas and values grounded in colonization, patriarchy, industrial science, and capitalist expansion. And the ecological crisis (Plumwood, 2005) that we face today is both a crisis of the reason or of dominant culture. As Thomas Berry says, “We are in trouble just now because we are in between stories. The Old Story—the account of how the world came to be and how we fit into it—sustained us for a long time. It shaped our emotional attitudes, provided us with life purpose, energized action, consecrated suffering, integrated knowledge, and guided education. We woke in the morning and knew where we were. We could answer the questions of our children. We could identify crime, and punish transgressors. Everything was taken care of because the story was there. But now it is no longer functioning properly, and we have not yet learned the New Story” (Berry, 1977-1978). So we search for a new story! So imagining a post-colonial era needs unfamiliarising or decolonising our beliefs, attitudes and practices (Smith et al, 2021) and acknowledging the fact that there is no one solution for all.

2.2 Perverse incentives everywhere

Why do more problems arise the more we design? This leads to a very contradicting thought that how can solving problems create more problems. To bring in a simpler perspective, let's look at the famous example of the cobra effect. The term cobra effect was coined by economist Horst Siebert based on an anecdote of an occurrence in India during British rule. “The British government, concerned about the number of venomous cobras in Delhi, offered a bounty for every dead cobra. Initially, this was a successful strategy; large numbers of snakes were killed for the reward. Eventually, however, enterprising people began to breed cobras for income. When the government became aware of this, the reward program was scrapped. When cobra breeders set their now-worthless snakes free, the wild cobra population further increased” (Siebert, 2001). An incentive that has an unintended and undesirable result that is contrary to the intentions of its designers is often described as a perverse incentive. Today, this creation of services and goods with a polarization between passive consumers and the provider significantly generates a careless crisis in society. And it is worth stating that the “carelessness” of individual designers is also making this worse. This carelessness is an outcome of design being hyper-commercialised (& wealth-first) since the 1980s which to an extent cannibalized all other design roles. Market-led societies started shrinking reality to a single perspective. This, in turn, is shaping a breed of uni-dimensional, short-sighted designers who are looking for universal solutions & user experience within the realms of commercialization for all problems.

2.3 Wicked nature of problems

Interestingly the ecological crisis (Plumwood, 2005), the careless crisis (Manzini, 2015), and the commercialization (universalization) of design draw us to wicked problems; complex, highly connected, and the one which cannot be solved completely. Let's look at some of the problems mentioned earlier; climate change, forced migration, healthcare, political and social conflict, global pandemics, and a lack of access to affordable housing. These interlinked problems are observed at multiple scales with a multitude of causes. And makes it hard to define, and solve separately. It's never a quick process. As it is linked it brings in a lot of conflicting directions too. The below figure shows the mapping of connected problems we face as mentioned in the Future Earth, Risks Perception Report, 2019.

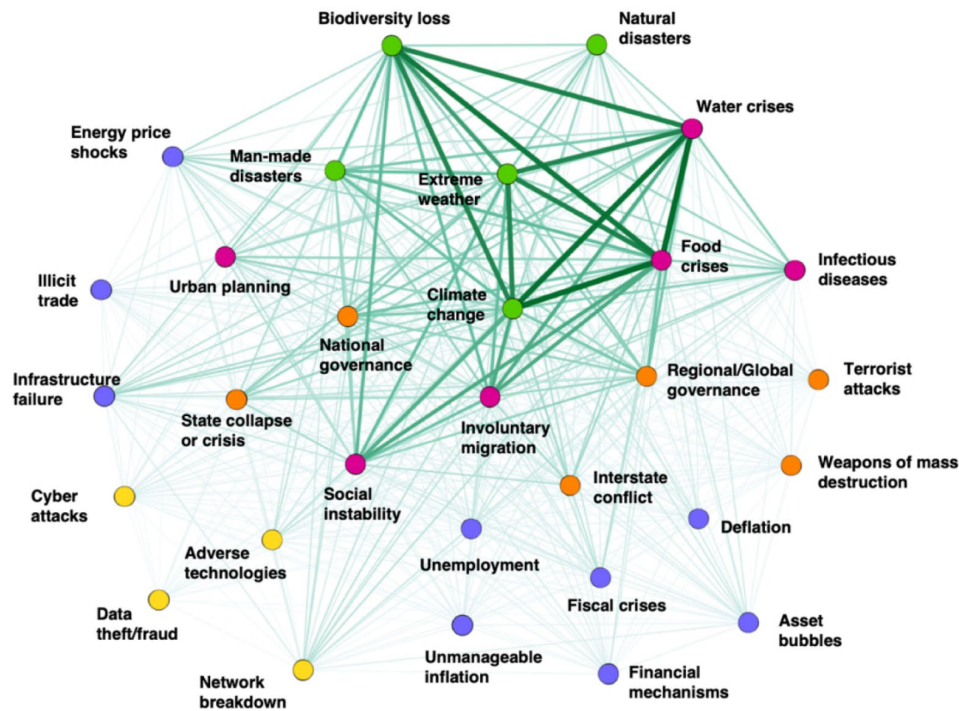


Figure 1. Future Earth Risks Perception Report 2020.

3. Design Attitudes

3.1 Pluriversal Design - A world where many worlds fit in

In simple words, pluriverse points to the advancement of transitions toward a world in which many worlds fit. It challenges the status quo and establishes the need for designing for different worlds. As per Arturo Escobar (Escobar, 2015), there are three overlapping dimensions:

- Pluriversal Studies;
- Transition Activism;
- Design and Communications.

Pluriversal studies define how we bring in the perspective of pluriversality and practice it. Some of the fundamental questions to ask would be:

- How did the One World World become so powerful? How does it work today? How is it made and unmade? Can it be rearticulated in terms of a plurality of worlds?
- Can this ongoing occupation be redressed, shifted, and rearticulated toward a pluriversal condition, that is, as the effective possibility of many worlds at a planetary scale?
- Can design be extricated from its embeddedness in modernist unsustainable and de-futuring practices and redirected toward other ontological commitments, practices, narratives, and performances?
- Could design become part of the tool kit for transitions toward the pluriverse? Rather than keeping on filling the world with stuff, what design strategies will allow us to have more meaningful and environmentally responsible lives?
- What do we want life to be? What do we want the human to be? What kind of human societies do we want?

He further says that the historical mission of our times is to reinvent the human – at the species level, with critical reflection, within the community of life systems, in a time (Escobar, 2018) developmental context, by means of story and shared dream experience. All together open the door for re-visioning design in ontological terms. Pluriversal design attitudes do not aim to provide solutions to all problems rather the outcome is the question that triggers the visioning and change (Leitão, 2020).

3.2 Speculative Design

Speculative design practice evolved from critical design. Although this term is new, (coined by Anthony Dunne in 1999) historically, it has been practiced in various fields like architecture, and automobile quite earlier. Unlike Pluriversal Design, Speculative Design proposes ideas, questions, and concepts. But both concepts acknowledge pluriversality and collective imagining. According to Dunne and Raby (Dunne & Raby, 2013) “world-building” still happens primarily through physical artefacts, or “parts representing wholes designed to prompt speculation in the viewer about the world these objects belong to”. In other words, rather than creating the world itself, their intention is to hint at, or conjure, societies, and cultures different from their own through the materials and forms of objects. In a way, it is to challenge how people think about everyday life.

As we know how science fiction writers have always been triggering conversations between scientists and society. Similarly, design fictions bring in perspective. Five characteristics of design fiction can be addressed as:

- The basic role of fiction, which asks what is the ‘what-if’ question at hand;
- The manifestation of the critique, which asks how the project is critical;
- The design aims, which question the possible consequences of the project;
- The materialization and form, which questions the form the project takes;
- The aesthetic of design fiction, which categorizes the project’s political perspective.

This humanities-based approach suggests that research methodology and validity might be found in the critical (i.e., ethical and aesthetical) capacity of individual stories.

Speculative design is frequently criticized for being elitist since it "often does not move beyond the sphere of the museum exhibit," while proponents counter that public workshops are an excellent way to prompt participants' queries regarding future-focused worries and problems. Critical making is a similar design research practice that aims to reflect on social and cultural values and beliefs related to technology (Ratto, 2011)

Projects in Speculative Design can be a possible dream, an imaginative future, or an alternative vision for today’s society. But the boundaries of speculations are limited within a possible fantasy or more precisely within scientific limits. Dunne and Raby divide the different futures into it Probable, Plausible, Preferable, and Possible. Some of the exciting projects in this space are:

- Recreating the role of extinct animals makes today. It involves speaking to a number of zoologists, explorers, radiologists, paleontologists, surgeons, and throat specialists to model some of the attributes like the sound of a mammoth [RCA, MA];
- Transfigurations by Dr. Agi Haines (Haines, 2014). It suggested potential surgically induced physical improvements. Each adjustment is made with the intention of imagining how these methods can "fix" a prospective issue the infant might have in the future. The fictitious range of speculative transhuman procedures to deal with environmental challenges.

3.3 Ontological Design

We live in a world that is increasingly populated with products and services that are clearly the result of individual thought. As was already mentioned, this causes a careless crisis in society. Anne-Marie Willis first suggested the idea of ontological design in 2006 together with her concepts of "worlding" and "thinging" (Willis, 2006). In simpler words, ontological designing is a way of characterizing the relationship between human beings and lifeworlds. Ontic refers to what is; ontology refers to the inquiry of what is, while ontological refers to the condition or behavior of what is. [9] In contrast to what most designers, cultural theorists, philosophers, and laypeople believe, design is much more pervasive and profound. Designing is part of what it means to be human; we design. We think, plan, and scheme in ways that anticipate our deeds and creations; hence, we are shaped via our designing and by that which we have created (i.e., through our interactions with the structural and material-specific cities of our environments). Thus this adds up to a double movement –we design our world, while our world acts back on us and designs us. Design is defined by design theorists in different ways. Design is a 'constructive forethought' where Carl Mitcham makes a distinction between proceeding by intention and doing this with the addition of systematic modeling –which he sees as central to the design.

He believes all professional practice involves the design, as in 'changing existing situations into preferred ones' Whereas, Donald Schön characterizes design as 'knowing-in-action', describing the design process as an intuitive bringing of experience to problems, which nevertheless are themselves treated as unique:

- the design object –the material or immaterial outcome of designing;
- the design process –the system, organization, conduct, and activity of designing;
- the design agency –the designer, design instruction in any medium or mode of expression, and the designed object itself as it acts on its world.

Thinking design ontologically provides this because it implies being in the world as a condition that is always already situated (the condition of worldhood). To design something new, you need to understand that worldhood and worldhood are defined by the things in it (Hermeneutic Circle). Anne also mentions that the ontological claim that 'design designs' is a much stronger claim than 'design affects' or 'has an influence on It'. The fact that teams of designers worked on the configuration of the mobile screen and interactions and by using this at the same time this equipment designing what I am doing.

3.4 Transition Design

Transition design is a very new design discipline termed by Terry Irwin of Carnegie Mellon School of Design. It stems from two ideologies; First, the notion that entire societies must transition in order to move toward longer-term, more sustainable, and more desirable futures; second, that these changes would necessitate intentional systemic change.

It also comes with huge stress on systems thinking in the problem-understanding stage.

"One thing about which fish know exactly nothing is water, since they have no anti-environment which would enable them to perceive the element they live in." —Marshall McLuhan, *War, and Peace in the Global Village*.

The Transition Design Framework, according to CMU, offers a logical basis for combining the transdisciplinary knowledge, skill sets, and behaviors necessary to comprehend, plant, and catalyze systems-level change. It is divided into four main categories of practices, knowledge, and skill sets relevant to understanding, seeding, and driving systems-level change (Irwin, 2015):

FOUR AREAS OF CO-EVOLVING KNOWLEDGE & SKILLSETS

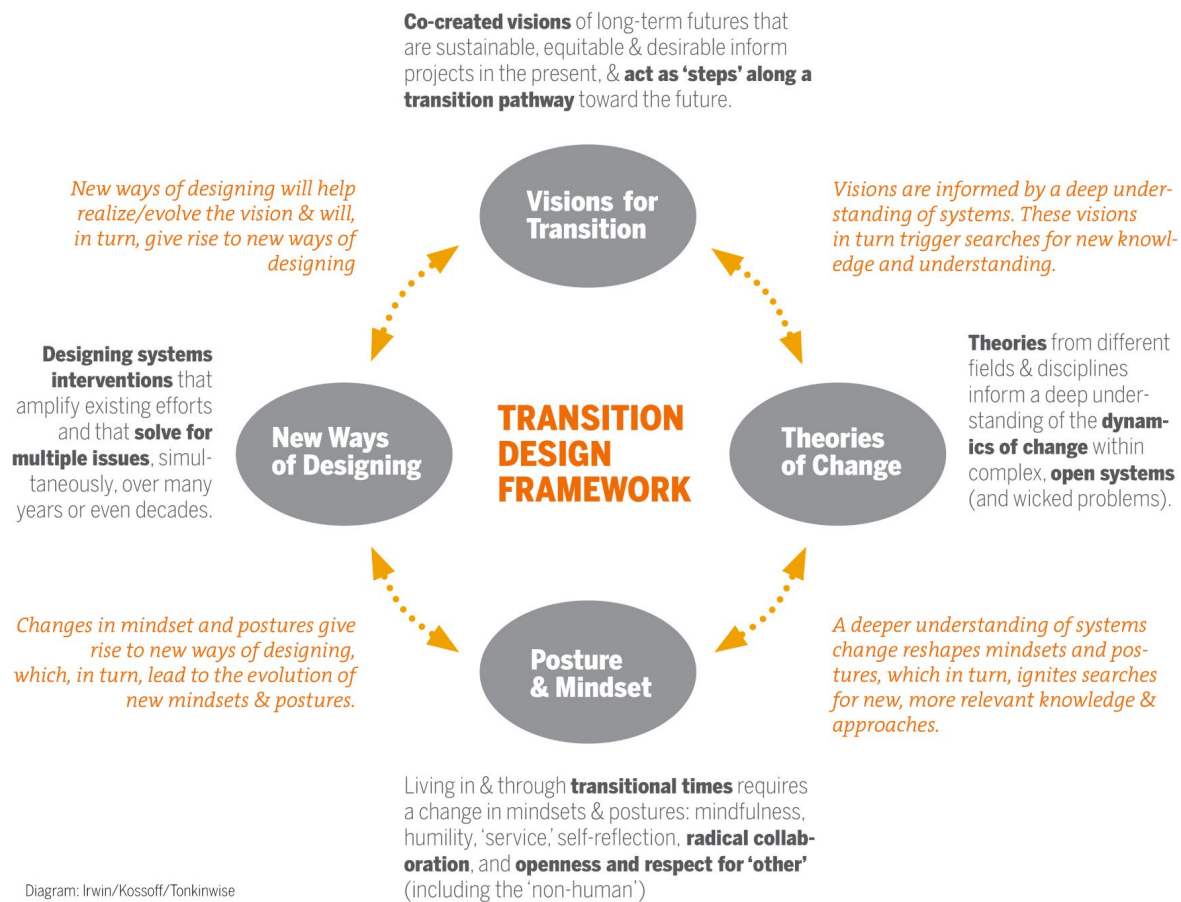


Figure 2. Transition Design Framework by CMU, School of Design.

- Vision: we need to have clear visions of what we want to transition toward;
- Theories of Change: we need a variety of theories and methodologies that explain the dynamics of change within complex systems;
- Mindset and Posture: we will need to develop postures of openness, collaboration, and self-reflection in order to undertake this work;
- New Ways of Designing: which will arise out of the previous three areas.

To understand the approach a bit more, let's look at a project. There was a recent one undertaken by researchers from Carnegie Mellon University to track & analyze the spread of Covid 19 and the response in the U.S. Going deeper we understand the Transition Design Approach used here had three steps; Problem Mapping, Problem Evolution, and Visioning [Futuring]. In the Problem Mapping stage, they mapped the problem into five categories Political/Governance Issues; Economic/Business Issues; Technology/Infrastructure Issues; Social Issues; Environmental Issues. Identifying newer insights in this stage helped to map the historical evolution in the next stage. Here they used the Multi-Level-Perspective Framework (MLP) developed in Europe a couple of decades ago. Finally, it ends by posing questions for the future.

4. Review & Analysis

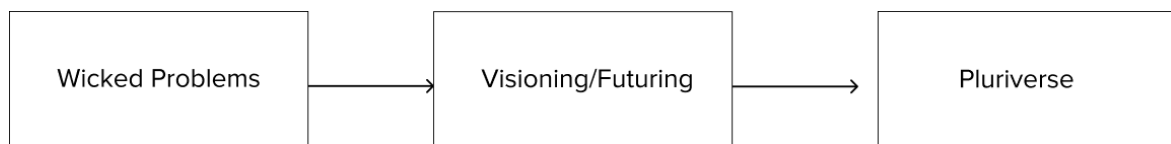
As part of this study, there are three outcomes planned for this study:

- Review, and identify commonalities between different design attitudes;
- Experiments & learnings in a digital design industry;
- Visualizing (non)/connectedness, map contemporary design attitudes to the traditional approaches.

4.1 Transition Design

When we look deeper into various aspects of these design attitudes, we could identify a lot of similar ideas and values. But at an abstract level, the following are the major five commonalities I could deduce.

- All four of them acknowledge the wicked nature of problems;
- And challenges the status quo in terms of thinking & approaches to these problems;
- Either states or proposes the need for an alternate vision/future;
- All the future visioning & transitions lead to Pluriverse against traditional narrowed Universal thinking;
- All of these are focused on helping a sustainable and resilient societal transition.



Pluriversal Design

Transition Design

Speculative Design

Ontological Design

Figure 3. Different design attitudes in the process timeline.

4.2 Connectedness & Non connectedness

In this session, I have tried to create a series of maps to understand the connectedness and non-connectedness of the design attitudes. The following one [Fig. 4] represents the connectedness of the new attitudes vs the traditional approaches like design thinking, universal design, and often misinterpreted inclusive design.

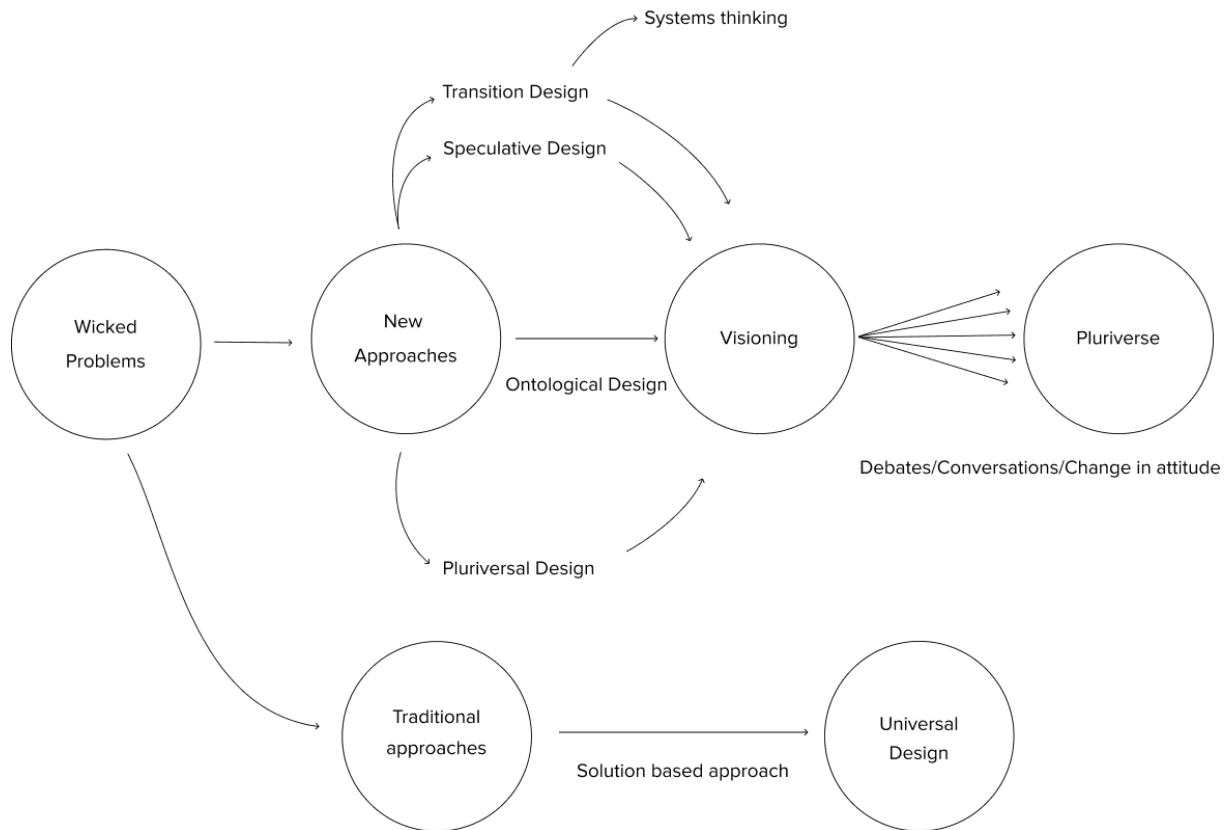


Figure 4. Connectedness of various attitudes.

Elliot tried mapping [10] the relationships/overlaps between speculative design and related approaches to enable discussions/visualize the dynamic range. He started this exercise to nuance discussions around what speculative design can be. Here I tried extending the map with transition design and social design perspective.

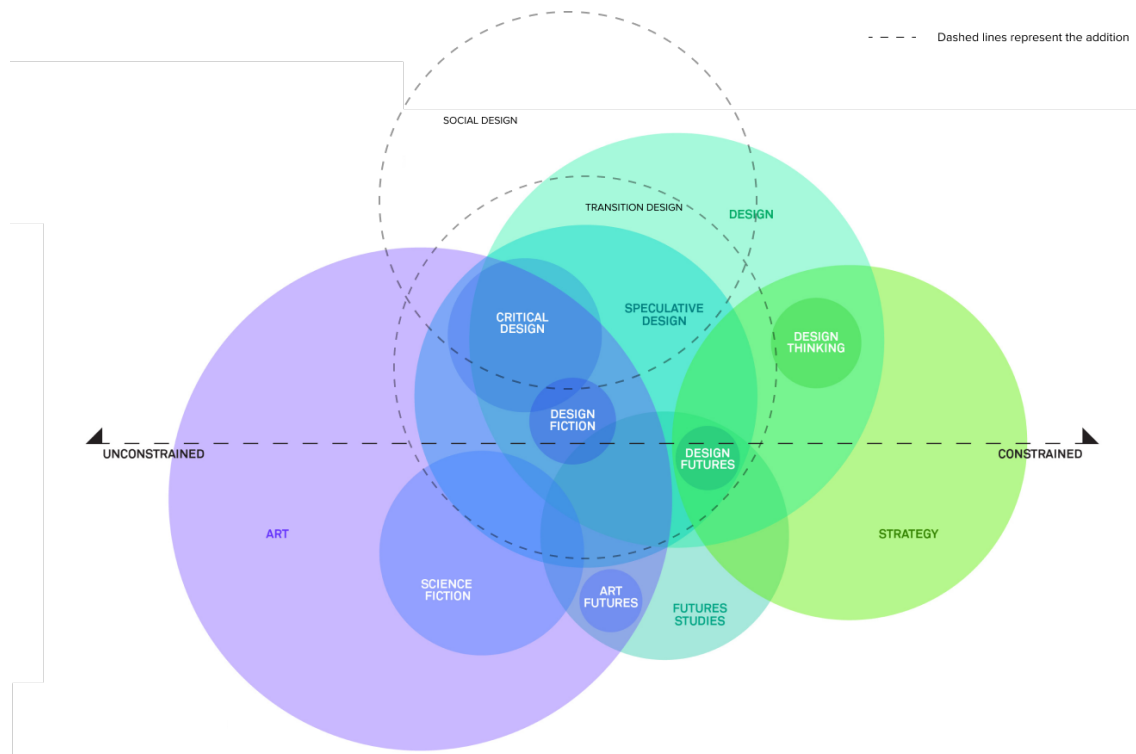


Figure 5. Extended mapping of Speculative design by Elliott P. Montgomery.

The addition is proposed to simplify the concepts to get an abstract view of these new attitudes and how it's connected. Pluriversal and Ontological designs are not added here as both of them encompass the thinking than being an approach. In the next magnified view, it's mapped.

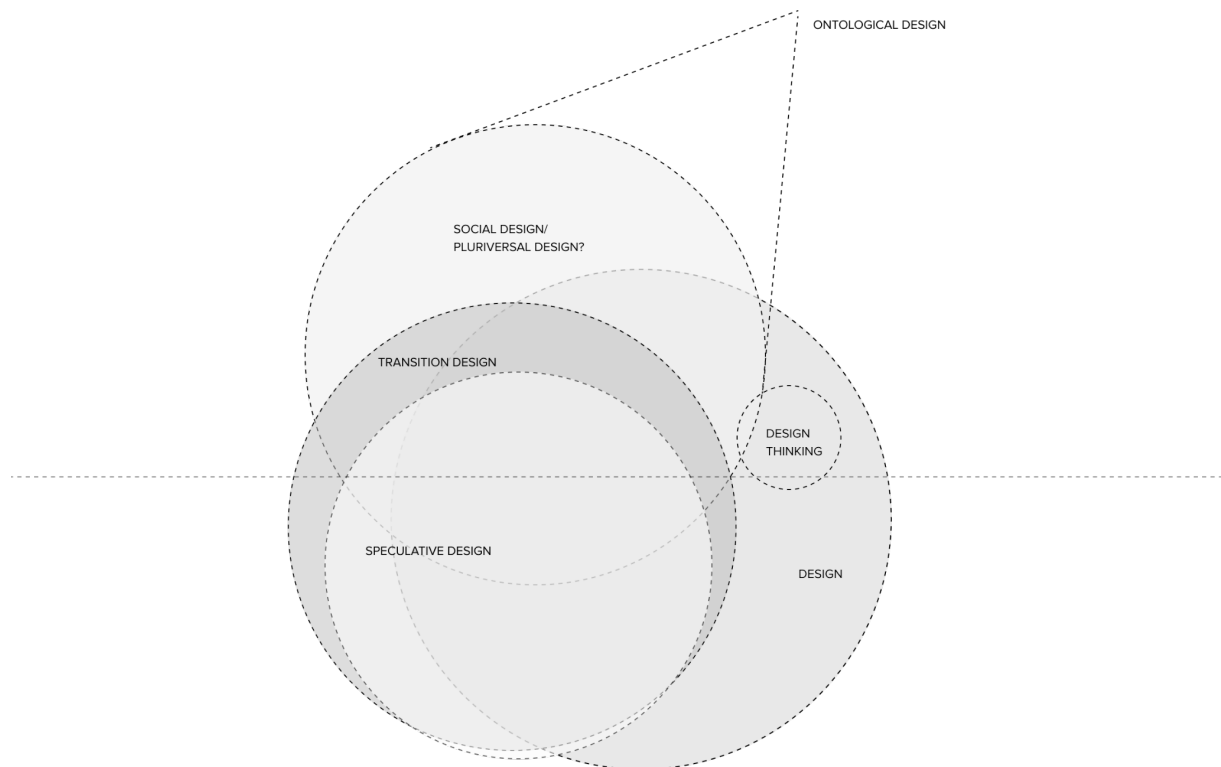


Figure 6. Revisited mapping with an ontological perspective.

The above one depicts that ontological design is the attitude change needed for designing across these newer disciplines.

5. Industry learnings

Although the design attitudes; Speculative Design, Ontological Design, Pluriversal Design, and Transition Design are deeply researched within academia, it's less spoken about in the industry. How can we transcend this as an attitude? What is a design attitude? According to Kamil Michlewski in his book *Design Attitude*, he concludes a design attitude is the “distinctive aspects of the professional culture of designers that form what I call design attitude” (Parmar, 2016) So in order to develop a new attitude through small daily interventions and bring in a new perspective from industry, in this study alongside the critique and review of the attitudes, I ran a few experiments in the professional practice and further added the learnings and reflections.

5.1 What made us here and why?

As a reflection and mentioned in the need to change section, the “carelessness” among design in the industry is because of the following reasons:

- The hyper-commercialization of design and designers. The past two decades saw significant growth in technology and the industry shaped a new breed of “designers” focused only on the commercial success of the products. User-centered design is twisted into a forced persuasive design;

- Perverse Incentives everywhere. In this pursuit of monetary or business gains, very little focus is given to the understanding of the solution as a whole and its implications like ethical or respecting user privacy. Today in the industry anyone can be a designer;
- The power of design is underutilized. Often what could be seen as the superpower of designers to envision future or alternative ideas are submerged over short-term gains.

Also, the above points are mentioned in no way to undermine the great work some of our fellow designers doing in the industry rather it is to point out the major trends observed.

5.2 Experiments & Learnings

I run an international team in Barcelona of 30 people including product designers, user researchers, motion designers, content designers, and illustrators working for a delivery product operating in 25 countries and 3 continents. So over a period of 4 months from August to November 2022, through 3-4 experiments I tried to understand the challenges of bringing in these newer thinking to professional practice both from a designer's and organisations' points of view. The major focus was to:

- Help the stakeholders/organization see beyond;
- Develop an attitude in designers based on the emerging design approaches discussed in this study.

HELP SEE BEYOND

In this, there were two directions I tried. Incorporating discussions part of every design deliverable and secondly long term speculative thinking.

For the former in order to use design to invoke debates and conversations to push innovation and user-centricity, we broke the typical user-centered approach used in the industry to help the stakeholders see the extremes. So the format we adopted was for every solution the designer to work on three options as follows:

- Preferable;
- Radical;
- Least preferable.

This approach was inspired by the futures cone by Hancock and Bezold (1994). In the preferable or the one with the typical user-centered approach, we were able to propose an immediate practical solution. But the challenge with this was, it was often biased towards persuading users for the organizational monetary gains and short-term wins without thinking about longer-term implications. Through radical designs, we were able to showcase design solutions that are uncomfortable to imagine. The intention here was not to adopt the radical option for implementation but rather to trigger conversations to influence upper management and stakeholder thinking. On the other side, the least preferable option helped the designers to push stakeholders on why we need to solve the particular solution for the users.

The purpose of the latter; Long term speculative thinking was to help the organization including other functions to see the future and align thinking to reach there. Here one of the experiments we tried was incorporating Voice AI in a futuristic smartphone. This was done with the help of engineering leaders to avoid creating fantasies. Also, similar to the first experiment, the idea was to use the superpower of design to visualize and influence other functions and organizations than the typical implementation-oriented proposals.

DEVELOP AN ATTITUDE IN DESIGNERS

This was more fun and more engaging, although, in all the experiments, designers are an inevitable part of it, developing an attitude was more of a designer problem at this early stage than an organizational problem. Here more than a big experiment, it was a collection of small thinking exercises. As shown below, during our usual critique sessions, I ran a small experiment to imagine everyone as a journalist in the future (in 2030) and to write a speculative piece of news about the product we are working on. It was a quick 15-minute thinking to seed more longer-term thinking on the society for the designers. In short, stimulating creativity and future thinking helped bring this into their daily work.



Figure 7. Industrial experimentation.

5.3 A Note on Pluriversality in Industry

The pluriversal nature of products is acknowledged by the industry unanimously and has been doing significant efforts towards the same. But to highlight, all these efforts are focussed on persuading the user to use than understanding the ontological implications rather it tries to leverage pluriversal advantage to expand its services and offerings for greater adoption. The industry has the upper hand in developing multiple tests suiting multiple locations or communities to adapt to the context and the need. So one could easily say “one app experience where many parallel app experiences exist”.

The change needed here is as same as the big picture thinking from an ethical and ontological implication where design can play a pivotal role. The experiments stated were intended towards understanding these early on for a better solution and subsequently a better future.

5.4 Challenges

Although these experiments were successful, there were also challenges to extend this in scale:

- Stakeholder expectations and awareness around the method;
- Getting a go-ahead from the upper management for such investments;
- It included de-familiarising what design is from a designer and organization standpoint.

On the other hand, to have a comprehensive and conclusive report on daily industry interventions requires a longer period for evaluation and standardize.

6. Conclusion

Although in this explorative study, not every detail of the approaches was not evaluated, there are some themes emerged and are as follows:

- The need for connected thinking in these disciplines is needed to develop a stronger design attitude;
- Having partnerships with educational institutions to bring in newer ways of thinking to solve complex and wicked problems across disciplines. Here one significant contribution to note is how pluriversal design education can be envisioned (Noel, 2020);
- How important it is to have a professional designer consider the perverse incentive impact in a society they design for;
- Pluriversal thinking is inevitable in the industry as well against one solution “universal thinking”.

As a future step, the plan is to develop a set of practices for the industry and help to expand the theory further through industry experiments.

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About the Authors:

Nithin Kuriakose is a designer based out of Barcelona with 13 years of professional experience in building products majorly in Asia, Europe & Africa. His academic research interests are in pluriversal societal transitions and specifically in Transition Design, Design

Activism, Design linguistics, Speculative Design, Pluriverse Design, and the Ontology of Design.

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