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Walking towards the Pluriverse: Rethinking Design Education through Relational and Situated Creative Practices

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ABSTRACT | Starting from the premise that we cannot face a crisis with the same categories that generated it, this investigation seeks to contribute to the exploration of new conceptual and creative horizons that support the transition towards a world where many worlds fit—the pluriverse.

Drawing on the contributions of various feminist and decolonial theorists and practitioners – as well as a study conducted in an academic institution – we would like to advocate for *situated creative practices* that can actively contribute to confronting the “civilizational crisis” we are experiencing; that is, a crisis in the civilizational model that is no longer generating the conditions to maintain life (Escobar, 2020). The reference to “situation” has a double connotation: on the one hand, it refers to creative interventions in specific places and times, paying special attention to the geographical and historical particularities of a certain context and, on the other, it refers to practices in which the practitioner positions herself critically with respect to the context in which she intervenes, a crucial notion in feminist (Haraway, 2013; Lugonés, 2003) and decolonial theories (Vázquez, 2020). We wish to argue that such approach can be a way of developing a *relational design practice* (Escobar, Osterweil & Sharma, 2024), allowing designers to be more sensitive and attuned with the communities with whom they work with and the natural environment where they operate, including a consideration for the more-than-human agents involved (De la Cadena & Blazer, 2018).

In order to begin illustrating the practical horizons for this framework, we will present a design practice conducted with undergraduate students in the Collserola mountain, a natural ecosystem in the edge of Barcelona. Through walking, sensory mapping, exploration with AI, and prototyping, participants explored the interplay between embodied experiences, memory, future speculation, and design. Walking the park fostered sensory engagement, shaping students' understanding of the site, its history and its inhabitants (human and more-than-human). This informed the development of projects addressing environmental concerns and promoting sustainable practices through reimagined spaces or objects, envisioning alternative futures and challenging existing norms. The methodology encouraged non-canonical reflection, urging students to move beyond conformistic approaches while fostering future-oriented critical thinking. The practice yielded valuable insights for design education and its potential in becoming a practice that can actively contribute to (sustainable) transition processes on two counts: firstly, by showing how integrating walking and sensory mapping into design processes can challenge space determinism, and secondly by demonstrating the potential of speculative design and future studies to foster alternative imagination and address pressing issues like climate change, promoting planetary awareness.

By further advancing on a specific framework for design (situated creative practices) and presenting a particular experience (workshop with design students in Collserola), through this paper we wish to highlight the potential –and limitations– that design practice and pedagogy may have in contributing to the emergence of other, more just worlds.

KEYWORDS | Pluriverse, Situated creative practices, Walking methodology, Speculative thinking, Design and/or sustainability.

1. Introduction

This paper stems from acknowledging that we cannot address contemporary crises using the same categories that originated them. The myriad of social crises we are faced with today can be seen as the expression of a rather simple –but all the more difficult to resolve– new condition: we no longer know how we can thrive together, as human and more-than-human inhabitants, on a damaged planet (Tsing, 2017). This becomes particularly relevant when confronted with a *civilisational crisis*, that is, a socio-ecological crisis in a civilisational model that is no longer generating the conditions to sustain life (Escobar, 2020). This crisis is manifested in different contexts (environment, economy, society, etc.) and has direct consequences like the acceleration and intensification of climate change, a massive increase in social inequality, an ongoing deregulation of the labour-market, the rise of populism and mistrust in (political) institutions or the allure of xenophobic movements. In all these instances it seems that we no longer have a place where we can live decently together, and care about inhabiting a shared world (Latour, 2018). The myriad of societal issues we are faced with today can be framed as what is referred to in theories of change as *wicked problems*, or high-complexity and deeply interconnected issues that cannot be addressed from a unique standpoint; a radically new orientation to recompose our relationship to others and the world is at stake. That is why this paper is backdropped by the work of Escobar (2011), De la Cadena & Blaser (2018), Demaria and other scholars and practitioners, who have been advancing an alternative framework to the paradigm of 'development', under the umbrella notion of *pluriverse*.

A concept first taken from the Zapatista movement in Chiapas (Mexico) –under the dictum ‘a world where many worlds fit’–, the pluriverse represents perspectives that enact multiple worlds, ones that bring to the forefront the *buen vivir*¹, communal forms of living and the interdependence of all human and more-than-human entities. The pluriverse could therefore be framed within post-development and de-growth theories and movements, and strives to explore and develop (multiple) alternatives to an Eurocentric perspective on (sustainable) development (Kaul et al, 2022). In doing so, it represents a resistance to an universalist vision proposed by modern science, suggesting instead to expand the field of the possible for the emergence of new worlds: worlds where human life is in harmony with the life of the planet, where everyone has the conditions to live with dignity and where diverse ways of life are accepted and supported. Escobar has already advanced an agenda of ‘Designs for the Pluriverse’ (2018), where he discusses the potential of design (broadly understood) in becoming a pluriversal practice –that is, one that does not attempt to propose universalist solutions, but instead allows for different ways of life (with their corresponding epistemologies and ontologies) to emerge. We see this framing (of the pluriverse) as a useful lens to understand –from a systemic perspective– the challenges we face in an increasingly strained planet and design’s potential role(s) in driving or triggering just and sustainable transitions.

After introducing some concepts and notions related to the pluriverse –and aiming to contribute more concrete examples and approaches within design practice and education– we will present a pedagogical exercise developed with a group of undergraduate design students in Barcelona, explain its results and discuss both its process and outcomes. In doing this, we aim to advance the ongoing discussion on the need for a *redirective design practice* (Fry, 2008), with a clear conceptual grounding (the pluriverse) and a first example of concrete practice (case study).

2. Theoretical Framework

2.1. Designing Relationally

A base premise for ‘the pluriverse’ is understanding that everything exists in a deep level of relationality and interdependence. This ought to be understood in contraposition to the paradigm of ontological dualism championed by the modern-colonial matrix of power (Escobar, 2018), which sees the human as separated from the territory, culture opposed to nature and where human beings (or a very particular group of white, male, wealthy individuals based in the global north) decide the fate of the rest of the world and its multiple life forms. We might then consider new “designing practices based on the insight that the world does not exist ‘out there’, separate from us, but that we co-construct it with every one of our actions. (...) Such designing might become a force in transitions to the pluriverse, with a multiplicity of others and all living forms.” (Escobar, Osterweil & Sharma, 2024). Such understanding of designing demands designers to engage with concrete natural and/or human-made environments, as well as the different human and more-

¹ The term ‘buen vivir’ (roughly translated as *living well*) has its roots in South American indigenous cosmologies and it represents a critique to a unique idea of wellbeing based on (national) development and growth. Instead, at the centre of *buen vivir* stands a drive for a harmonious living of humans with their natural environment, the valorisation of other forms of (non-scientific) knowledge and ways of wellbeing that are not based (solely) on material elements (Gudynas, 2015).

than-human entities living in them, as opposed to engaging with the real from a distance with a false pretense of scientific objectivity (Lugonés, 2003).

2.2. On Situated Creative Practices

In order to further advance on design's potential roles in these processes, we would like to bring forth a particular perspective from the arts (fine arts, design, architecture), in which practitioners and researchers take on specific 'situated' approaches, in order to contribute to pluriversal agendas and transitions. The reference to 'situated' has a twofold connotation: on one side, it refers to creative interventions implemented in a specific place and time (and that would not make sense elsewhere) and, on the other side, it refers to practices in which the creative practitioner critically positions her or himself, a crucial notion within feminist (Haraway, 2020) and decolonial (Mignolo, 2011) theories. Such framing on Situated Creative Practices (SiCP) manifests a will to re-evaluate creative practices -and their learning structures-, at the same time as enabling practitioners' potential for making an impact in their direct social environment.

When speaking about the site and time-specific dimension of such practices, it is important to acknowledge the influence of approaches advanced since the 1960's within the fields of art, architecture, design and pedagogy. A common trait in these experiences is the articulation of a 'social' perspective (Bishop, 2005), calling for a renewed -social, political, environmental, cultural- responsibility of practitioners towards the contexts where they operate. The practices resulting from such processes can be framed as a sort of 'creative activism' and usually materialize via concrete interventions in specific historic-geographical contexts.

On the other hand, regarding the critical positioning of the practitioners, such approach is built upon the premise that knowledge is not the same everywhere or for everyone (Kaethler & Calderón Salazar, 2020), and that the only way to oppose the globalizing force of modernity is by critically identifying our place of enunciation, that is, the onto-epistemic place from where we operate. It follows that "a positioned self cannot assume to be the center of the world, a positioned self is always conscious of the radical plurality of worlds and histories around her" (Vázquez, 2020). Tim Ingold also challenges the concept of a global environment as a unifying force, arguing instead that it represents the culmination of human separation from the world (2010). This separation stems from our tendency to observe events from a distance, rather than actively experiencing them, locally. The Nasa indigenous peoples of south-west Colombia have brought forward the notion of *walking the word*, as a practice that allows them to ground their ideas and collectively -and constantly- negotiate them through walking (Calderón Salazar, 2021); such approach allows us to envision some strategies (e.g. walking) to advance in ever more situated practices.

2.3. Pilgrimage, Wander and Walk

"But the *dérive* includes both this letting-go and its necessary contradiction: the domination of psychogeographical variations by the knowledge and calculation of their possibilities." (Debord, 1981)

Our globalized lives tend to numb our senses, disengage from our surroundings and damage the environment. In this sense, the notion of localness isn't simply a narrower view; it represents an engaged, perceptual interaction with the components of our

inhabited world, not a detached observation. Subtle interventions like walking (Certeau, 1984) and more proactive initiatives like tactical urbanism (Lydon and Garcia, 2015) showcase the potential of citizens to creatively shape their urban spaces. Building on this, Catalan psychiatrist Francesc Tosquelles (1947) emphasized the cognitive power of walking, suggesting that it is not the head that counts, but the feet. He advocated for collecting the intuitions gathered through walking, viewing it as a cultural heritage inscribed in both natural landscapes and the anatomy of the places we traverse.

On another side, Guy Debord and the situationists began practicing the *dérive* (drifting), which involves aimlessly and unstructurally exploring cities, guided not by typical reasons like work or leisure, but by the inherent allure of the surroundings and their psychological and creative impacts (1981). This concept, although akin to the *flâneur*, is shaped by urban studies, particularly the work of Henri Lefebvre (as cited by Evans, 2013) on *The Right to the City*. Such approach also corresponds to feminist (and) decolonial theories like that of Maria Lugonés, who argued for a situated practice of engaged theorizing, under the figure of the *streetwalker theorist*: “done as a pedestrian, *una callejera*, *en compañía*, in the midst of company, and obliterating the theory/practice distinction, this theorizing seeks out, puts out, entrusts, invokes, rehearses, performs, considers, and enacts tactical-strategic practices of resistant/emancipatory sense making” (2003).

Finally, Michel de Certeau reminds us that walking serves as an intervention in space, leaving no physical marks (1984) while inviting the city and nature to co-create experiences. It necessitates a deliberate slowing down, fostering appreciation of our surroundings and the value of time (Bruscato Portella, 2024a). As an act of exploration and imagination, walking becomes the foundation for a new design approach, one which denotes the subjective visceral inner happenings of the individual. From this experiential standpoint, our understanding deepens as we immerse ourselves in the world, seeking knowledge and meaning. It is through this attentive engagement, inherent in the act of dwelling, that the world progressively reveals itself to us (Ingold, 2010, pp. 214–216).

2.4. Speculative Design for Transitioning to the Pluriverse

Speculative design is an approach where designers create products or objects linked to imagined scenarios of how things might be (Dunne and Raby, 2013, p. 2). These scenarios can occur in the future, alternative pasts, or even present situations. It requires people to suspend their disbelief and allow their imaginations to wander. Designers and scholars Anthony Dunne and Fiona Raby draw an analogy to thought experiments, showing the shared ability of both approaches to explore possibilities through imagination. This allows us to “step outside reality for a moment to try something out” (2013, p. 80). This analogy has become widely accepted in the field of design and even extends to the realm of art. Within the realm of design, the speculative design approaches serve to promote critical reflection among individuals. This reflection can not only generate new perspectives on current realities but also encourage people to envision their desired future. Such acts of imagination contribute to public discourse on contemporary issues like emerging technologies, climate change, and capitalism (Dunne and Raby, 2013).

However, Howell et al. draw attention to the Eurocentric foundations of the speculative design theories. They provide a critical perspective, emphasizing that the cone's depiction of time as purely linear and progressive neglects alternative viewpoints (as cited by Carey et al., 2022). The speculative design method, as a result, may overlook the social, political, and environmental contexts necessary for these artifacts to emerge, along with

their broader implications. This perspective underscores the need for a more nuanced design process, advocating for a shift towards a more plural, inclusive and life-centered approach. In searching for such alternative practices, we posit the possibility of speculative design experiments that serve as triggers for transitioning to the pluriverse. This would imply applying the ideas of a situated creative practice presented before and using the potential of speculative thinking (enabled by the 'what if' question, Figure 1) to open up the possibility of imagining and collectively building other worlds. The following section will present a case study of a pedagogical practice that one of the authors of this paper led with a group of undergraduate design students in the Collserola mountain, a natural ecosystem on the edge of Barcelona.

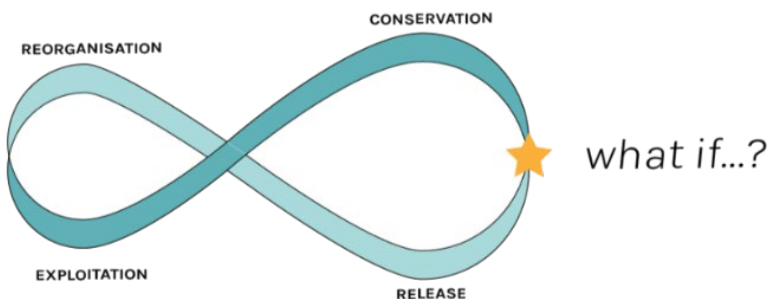


Figure 1. The diagram is an adaptation from the "adaptive cycle", considering the potential of speculative thinking to unleash the possibility of alternatives. Adapted from Holling et al., 2002.

3. Case Study: A pedagogical design approach at a park in Barcelona

The workshop "Take the Memory Out for a Future Walk" (Bruscato Portella, 2024b) made use of an interdisciplinary methodology to design new responses to urgent current challenges, fostering a deep interconnection with nature and all living organisms. The main question posed to the students was: "How might you envision the future of the Collserola Park?". The proposal was designed for a group of 25 people, aged between 17 and 23 years, during the Projects I course in the Bachelor in Design at EINA University School of Design and Art of Barcelona in 2022. The methodology was delivered by one of the authors of this research in five sessions, each lasting three hours and 30 minutes, for a total of 18 hours and 30 minutes.

The pedagogical approach started at a chosen area in the Serra de Collserola Natural Park and continued in the university's classroom, which is located next to one of the park's entrances. This geographic advantage was an opportunity for students to deeply engage with the nature around them and its challenges. This park, spanning 8,000 hectares in Barcelona, is a vital ecological haven under pressure from urbanization and recreational activities. Despite its biodiversity and scenic value, human impact—ranging from soil erosion and waste generation to wildlife disturbance—threatens its sustainability. Traditional awareness campaigns have proven insufficient in driving behavioral change (Abrahamse and Matthies, 2018). Instead, design and speculative thinking may have the potential to unleash radical new ways of thinking in relation to the natural environments that we inhabit, and all the beings that we share them with.

The main purpose of this pedagogical experience was to present an interdisciplinary methodology to design new responses to urgent challenges related to sustainability and the connection between nature and the different –human and more-than-human– entities inhabiting the Park. It is also aimed at:

- **Stimulate critical reflection:** Encourage students to reflect on the park's historical memory and envision its future possibilities amidst climate change and other uncertainties.
- **Embrace embodied methodologies:** Integrate walking and sensory cartography as design tools to enhance spatial, contextual, and proprioceptive awareness, placing students as active citizens and actors in the territory.
- **Promote a sustainable city, connected with nature:** Address and explore the perceptual breadth of space and cultivate a deeper appreciation for immediate natural spaces, to generate responsible stewardship for the environment.
- **Challenge with speculative design and future thinking:** Introduce students to methods for imagining alternative futures, urging them to embrace uncertainties and generate flexible design solutions.
- **Explore artificial intelligence's creative potential:** Introduce and experiment with artificial intelligence (AI) tools like Dall-e and Midjourney to enhance future visioning and design exploration.

By analyzing the outcomes, we unveil the power of a grounded sensory exploration (through walking) and speculative design in reimagining living spaces and fostering critical engagement with the non-human world.

4. Methodology

This didactic experience consisted of walking around the park and carrying out different conceptual actions subsequently, all within a period of 21 days, from November 22nd to December 13th, 2022. Classes were dedicated to a set of activities that allowed students to practice and acquire the competences of the subject, being the last one the final presentation. These phases or creative actions are detailed below in four pedagogical activities (followed in chronological order): 1) sensory walks and cartographies, 2) speculating on possible futures, 3) brainstorming with AI, and 4) drawings and materialization.

The pedagogical methodology (Table 1) weaved together art, design, ecology, earth science, and technology. Through dedicated walks within chosen territories, students drew sensory cartographies that captured the spatial essence. Engaging with AI tools, they then generated diverse future hypotheses and design possibilities. These explorations resulted in proposals that ranged from spaces and maps to relational objects in face of climate emergency, all informed by the affective encounters with the site. The methodology encouraged non-canonical reflection, urging students to move beyond conformistic approaches while fostering future-oriented critical thinking.

Table 1. Case Study Pedagogical Methodology.

Session	Activity	Learning Objectives
Session 1	Introduction	• Introduce the project brief and subject matter • Overview theory of speculative design and design references
Session 2	Sensory Walks and Cartographies	• Embark on slow, intentional and contemplative explorations within the park through walking • Foster sensory engagement, shape students' understanding

		of the site, its history and its inhabitants (human and more-than-human) • Translate experiences into hand-drawn cartographies to capture spatial features, affective memories, observations • Identify and highlighted issues and concerns to promote action
Session 3	Speculating on Possible Futures	• Introduce a taxonomy of uncertainty through thought-provoking questions to anticipate and imagine the park in upcoming years
Session 4	Brainstorming with AI	• Discuss ethical considerations of AI tools • Explore how AI could be used to enhance each student’s design process or avoid hitting creative blocks
Session 5	Drawings and Materialization	• Formalize concepts through detailed drawn models and prototypes resonating with chosen scenario • Debate results collaboratively

The first situated activity consisted of inviting students to embark on contemplative explorations within the territory of the park. By interacting *in situ*, students were encouraged to wander meditatively and immersively, engaging in mindful observation, recording sounds, making sketches, taking pictures, and reflecting on the space's past, present, and potential future. This situation provided a “direct experience (body and mind) of the place, where the spatial and sensorial stimuli are retained directly by the student without direct interference” (Espinheira-Gomes, 2022, p. 21). Back in the classroom, students made hand-drawn sensory cartographies, identifying and highlighting various issues and concerns within the park (Figure 2). These included: distribution of drinking water, waste collection practices, noise pollution sources, soil sedimentation patterns, differences in day and night lighting, views accessible from various points, and even services deemed lacking in the area, such as sustainability-driven educational centers. Additionally, certain maps pinpointed the presence and location of specific animal and plant species within the park’s ecosystems.

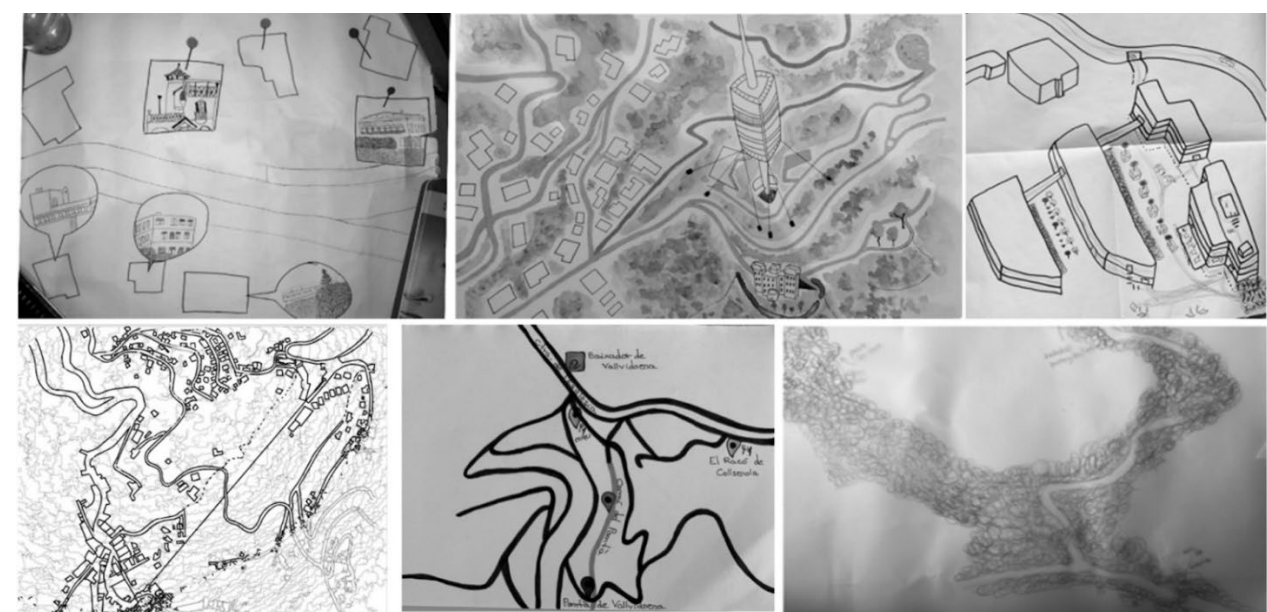


Figure 2. Examples of sensory mappings by the students.

In a second phase, we embraced a “possibilist” mindset to stimulate students in ways of being with uncertainty (Ichioka and Pawlyn, 2021, p. 15). Within uncertainty, students could see an opening to a pluriverse of possibilities, a “world where many worlds fit” (Escobar, 2018, p. xvi). These possibilities emerged from co-creative processes of futuring, in which all students participated as separate but intertwined roots of the human-nature ecosystem comprising the park. By referring to a framework designed by the researchers, they put together themes, opportunities and scenarios for the areas walked during the previous practice, guided away from certainty/uncertainty binaries and toward relational, pluriversal readings, acknowledging uncertainty as a fundamental condition of ethical cross-cultural partnerships, building their own “what if...?” hypothesis, and opening space for a pluriverse of possible futures ignited by imagination and agency (Table 2).

In a [...] future		There's a [...?]		Related to [...?]		
Beautiful	Black	Building	Monument	Animals	Superstitions	Imagination
Brilliant	Fun	Instrument	History	Cities	Ground	Justice
Creative	Queer	Device	Organization	Climate change	Science	Leisure
Decolonized	Reactionary	Disaster	Toy	Death	Space	Love
Just	Resistant	Festival	Product	Economy	Music	Residue
Fast	Sad	Flag	Public service	Education	Spirituality	Ocean
Feminist	Selfish	Food	Ritual	Energy	Home	Creation
Solidary	Intelligent	Game	Song	Natural	Transport	Feminism
Global	Sustainable	Piece	Route	environment	Dialogue	Heritage
Green	Exciting	Invention	Tattoo	Family	War	Experimentation
Technological	Volatile	Work	Tool	Agriculture	Walk	Seasonality
Cheerful	Wild	Kit	Video	Genetics	Food	Territory
Innovative	Wise	Manual	Clothes	Governance	Water	Listen
Happy	Hot	Machine	Public space	Health	Art	Touch
Open	Mystical	Map	Archive	Identity	Childhood	Mountain
Affectionate		Mask	Place	Neighborhood	Cure	Culture
				Roots	Migration	Urbanism
				Elderly	Furniture	Agriculture

These first possibilities of interaction were further explored formally using Generative AI's potential to test its limits and possibilities of image generation tools such as Dall-E and Midjourney, while enabling students to conceptualize or visualize their hypothesis. Our goal was not to replace drawing, model making, computer-aided design (CAD), rendering or any of the other conventional disciplinary design skills; instead, we wanted to critically inquire how AI could be used to enhance students' individual design process, or explore how it could be used to avoid hitting creative blocks. After discussing the ethical considerations and creative possibilities, students engaged in simple demonstrations of prompting to generate visual narratives, evoke sensations and engage in playful form exploration. Students embraced AI exploration in diverse ways. Some used the generated images as a form-finding tool to expedite or augment their existing process. Others sought to envision future projections for their chosen intervention sites. Still others discovered that the AI-generated outputs nudged them in unexpected design directions.

Notably, while most of the students found AI tools valuable, some preferred their usual working methods such as drawing or 3D modeling, suggesting personal preferences and existing skillsets that may not align with every digital tool. Finally, after explorations with AI tools, the students returned to hands-on work, elaborating drawings and 3D models of their proposals.

Ultimately, it is also important to highlight that the element of uncertainty was a persistent factor in this methodology, due to our inability to fully control the outcomes of each of the workshop activities, leading to unexpected results. This lack of predictability provided a fertile ground for speculative thinking, creative exploration and empirical learning, benefiting both the instructor and the students.

5. Results

In total, 25 projects ranged from experimental sculptures and sound devices to proposals for buildings, repurposed spaces, and urban furniture for the community. Each proposal was rooted in the students' affective and sensitive experience gathered during their exploration in the park, while simultaneously aiming to generate ethical and sustainable contributions for both humans and non-humans inhabiting the area. Several students explored different formulations for the concept of "memory" through their proposals. Some aimed to capture and preserve elements of the present or past, ensuring they stay alive even 100 years into the future. Others tackled present-day issues and challenges, offering concrete solutions with an eye towards improving the park's state for future generations.

To evaluate the effectiveness of our pedagogy, we analyzed the student projects with an emphasis on both individual and collective processes and outcomes, and the relational impact within the Collserola Park natural surroundings and community. Focusing on ecologic consciousness, experimentation, and agency, we looked for indicators of how students navigated uncertainty as a "fundamental condition of ethical partnership" (Archer-Martin and Stokes, 2023). Where the workshop was most successful in enhancing planetary thinking and agency was in relation to climate change, and in producing outcomes that were socio-culturally restorative, ecologically regenerative, or both. This became clear, through the design of a speculative public installation that visualized sea-level rise in Barcelona through an interactive 3D viewer (Figure 3) and raise awareness on the environmental impacts that this situation creates. Another example is the inclusivity of humans and non-humans materialized in a multifunctional fountain at Vallvidrera Reservoir (Figure 4) to cater both humans and animals in a future of water scarcity, blending functional, regenerative and resilient design.

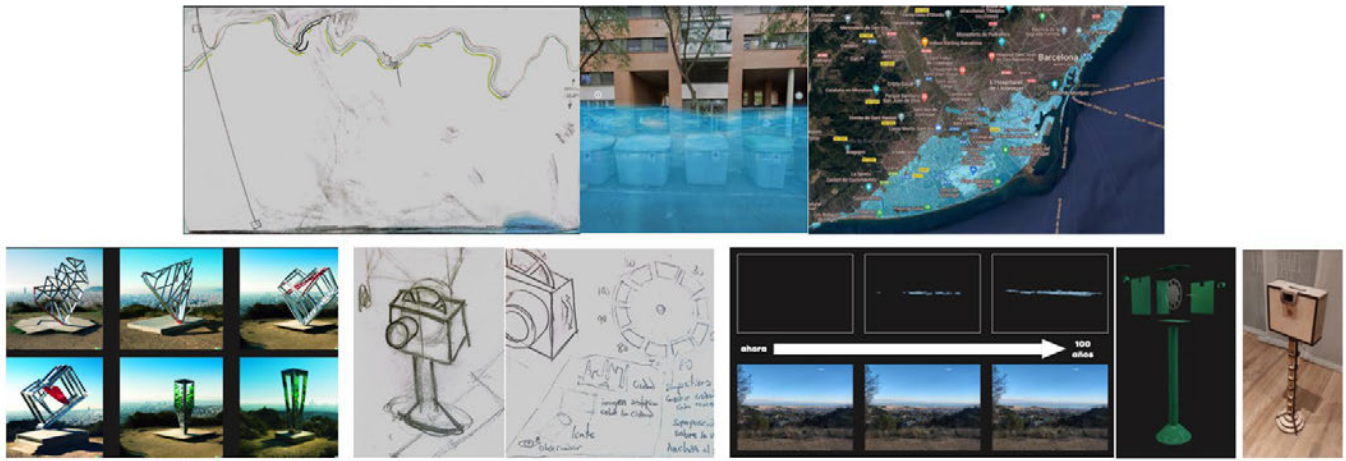


Figure 3. Project from student Pedro Figueroa. Hypothesis of Barcelona's flood and research with AI tool Dall-e: "Photograph of a large, polygonal methacrylate object inspired by the potential self-destruction of civilization, situated on a hill overlooking Barcelona in the background"; drawings and model for Bygone Waters project. From the binoculars, users would see the water levels over Barcelona and could change the number of years to see the flooding progress. 2022.



Figure 4. Project from student Carolina Abelleiro. Expectation and reality comparison; fountain which is not accessible to animals in the Vallvidrera Reservoir; map with walking paths and animals; research with Midjourney with prompt "A fountain where people, earth animals and birds can drink, and animals can bath integrated in the middle of the forest"; mock-up of the fountain for humans and non-humans. 2022.

Where our pedagogy initially appeared less successful was in demonstrating engagement with local community or natural resources knowledge through the project. Many of the works did not explicitly engage with –or include– local materials from the area, nor representations of the natural flora or local communities. One of the few exceptions was the aforementioned fountain, as well as another circular design project that proposed a light installation for poorly lit pathways where neighbors circulate, recycling discarded plastic bottles while connecting with situated historical context (Figure 5). One reason for the low local engagement might be that students were in their first semester, therefore at an initial phase of their design education, where notions of recycling, sustainability or community engagement are not yet present in their creative process mindset. Students, therefore, were not fully ready or equipped with the tools necessary for creating solid regenerative and ethical work. This may point to a broader deficit in the design curriculum that should be considered by educators, but may also indicate that indirect ecological and situated learning can take place with these

kinds of pedagogies. Ultimately, this revealed a misguided assumption that sustainable use of materials and community engagement should be taken for granted in the design process of undergraduate students, encouraging educators to think of explicit strategies to enhance these approaches in the students through didactic and pedagogical exercises.



Figure 5. Project from students Elisabeth Boix and Martí Forcada. The surprising unrelation between Google Maps and the two cartographies that illustrate the memories and routes taken by students in the Collserola; photographic research (1897-2022); speculations with AI tool Dall-e with prompt “Light stairs forest gravel plastic concrete”; Process and final model of the Calloway lamp. 2022.

6. Discussion

As western academia and conventional pedagogical approaches often discourage students from explicitly introducing both subjectivity and alterity into their work (Archer-Martin and Stokes, 2023, p. 192), this research posits the value of a situated perspective in design. This implies acknowledging that a disengagement from the concrete does not result in scientific objectivity (Lugonés, 2003) and our (research and creative) practices can be enriched by understanding our positionality and the relation with *others* (including more-than-human actors). This approach equips aspiring designers with skills to envision possibilities that intentionally adopt diverse positions and perspectives on self, others and the world (Bruscato Portella, 2024a). Moreover, it might advance discussions around the influence of the ecological crisis in the future of the design profession, to act agentially and to discover possibilities within constraints. Such approach might be understood as a condition for *designing relationally*, as it leads to practices that are embedded within the context that they operate and acknowledge the acute interdependence of all the actors involved.

The presented pedagogy shows the value of incorporating walking and drawing experiences, exploring experiential futures and speculative thinking into design education and research. On one hand, the fact of beginning the process by engaging directly with the territory in ‘wanderings’ or ‘dérives’ allowed for a grounded experience that attuned students’ sensibilities to the different stimuli present in the park –something that would have been rather difficult to achieve with a more archive or documentation-based approach. On the other hand, this experience demonstrates how these approaches can

stimulate creative thinking, foster deeper and embodied understanding of space, and encourage exploration of alternative, potentially more sustainable or disruptive futures. This could be evidenced by the ways in which the *Framework model for speculative hypothesis generation* (Table 2) enabled the design of scenarios that went beyond a straightforward 'solution', triggering instead other ways of thinking about our relation to the natural environment. By prompting students to move beyond conventional interpretations of space and engage with sensory mapping and speculative design, this project pushes against rigid design practices, encouraging the consideration of both human and non-human needs. This led to more inclusive and speculative design solutions, challenging spatial determinism.

7. Final Considerations

In this paper, we have attempted to contribute to the ongoing discussions on the responsibility of design in an increasingly strained (socially, ecologically, culturally, etc.) planet. We have done so by advancing on a specific framework for design (situated creative practices) that may represent a starting point for *designing relationally* and by sharing and discussing a particular experience with design students in Barcelona. In that sense, we find it important to disclaim the potential impact and shortcomings of our framing through one concrete example: one of the desired outcomes of the experience with the students was a change of mindset (or transitioning to another way of thinking and acting within the world), which cannot by its very nature be achieved in the short term. The workshop did, however, inspire action and stimulate new perspectives and immediate reflections on the issues at stake. This can be summarized by a comment of one of the participating students: "I can see more and more clearly the need to create spaces of connection with nature. I start from the selfish future situation that has destroyed the forests and has become completely urban. Because just as in the forest you can hear the sound of the wind before it arrives, we must be able to see our reality, before there is no return" (Student Zaira Soler, 2022). So as much as we cannot assess the effective transition to more sustainable scenarios, the proposed projects served as seeds or triggers that highlight the potential that design practice and pedagogy may have in contributing to the emergence of other, more just worlds.

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