DESIGN CULTURE (OF) THINKING

THEORY HISTORY CRITICS
Paola Bertola,
Polytechnic University of Milan, Italy
“There is a growing need for ‘research through design approaches’ to face contemporary challenges, that is to say we should structurally embed the ‘culture of thinking’ into design practices.”

Pier Paolo Peruccio,
Polytechnic University of Turin, Italy
“What are the new theories that gave shape to the discipline? What are the limits (geographical, cultural and temporal) of a World Design History? What are the contemporary places (e.g., magazines, fairs, museums) for debating on the problems and achievements of the designer’s profession? What are the new challenges of the design education?”

Márton Szentpéteri,
Moholy-Nagy University of Art and Design, Hungary
“In the age of unsustainability, theory, criticism and history writing are not only about reflecting upon, but of changing the world in practical terms.”
Always ordinary, never straightforward: Considering the work of Lorraine Wild

David Cabianca*,
*York University, Department of Design, Canada
*cabianca@yorku.ca

Abstract | Designer, educator and writer Lorraine Wild has had a distinguished career that spans nearly 40 years. While she has maintained a prodigious output of design work and writing, her contributions remain critically unexamined. Beginning with Aldo Rossi’s L’architettura della città (1966) and Robert Venturi’s Complexity and contradiction in architecture (1966), and later, Venturi, Denise Scott Brown and Steven Izenour’s Learning from Las Vegas (1972), this essay touches upon the impact these books had on visual culture on a broader scale. Lorraine Wild’s affinity and support for the mundane and vernacular or “unschooled” forms of graphic design falls in line with what would become postmodern narratives of the 1980s and 1990s, narratives put in motion by Rossi, Venturi, et al. This essay will consider a number of Wild’s designs with respect to how they reflect the conditions of modernity circulating at the time of their respective production.

KEYWORDS | LORRAINE WILD, VERNACULAR, BOOK DESIGN, CRITICAL PRACTICE, MODERNITY
1. Introduction by way of a detour

I wish to start this essay with a detour. The years 1966 and 1972 saw the publication of a number of books which were to have a significant impact on the production of architecture: Aldo Rossi’s *L’architettura della città* (1966), Robert Venturi’s *Complexity and contradiction in architecture* (1966), which was followed by Venturi, Denise Scott Brown and Steven Izenour’s *Learning from Las Vegas* (1972). Among architects, claims about their significance are rather self-evident, but what is not so self-evident is the impact that these three streams of discourse would have on other disciplines.

For a short period in the early 1970s, from 1972 to 1975, Rossi was asked to teach at the Eidgenössische Technische Hochschule (ETH), also known as the Swiss Federal Institute of Technology in Zürich. Prior to Rossi’s presence at the school, labour unrest and the protests of 1968 had shaped discourse at the ETH — like many schools of architecture across the globe — with a deference to the social and behavioural sciences. Given this context, Rossi presented an about-face bulwark of resistance to the growing influence of the social sciences. His insistence on architecture’s primacy as a form of material and cultural production has been described as nothing less than traumatic for a generation of architects. (Davidovici, 2018; Caruso, 2012) Rossi’s emphasis on architecture’s autonomy, where form and history were the only things worth thinking about, struck this group like a bolt of lightning. Rossi linked form with the collective memory of a place, which is to say that past architecture and urban forms have a way of “cascading forward,” a kind of domino-effect on future architectural production. For Rossi, form was always a reflection of a singular moment structured by an organizing principle: Form is a manifestation of a particular place during a particular time, which was by default linked to the social and political conditions which brought about its existence. Each era manifested form differently based on the particular conditions which resulted in its actualization, but whose cohesiveness is steered by common patterns of social habit and custom. (Aureli, 2012) While Rossi’s emphasis was on form per se, it was not devoid of social intent. By grounding architecture in the manner by which form had developed over the course of hundreds of years, Rossi sought to heal the rupture Modernism had generated between form and society.

Post 1968, many architecture schools linked the role of the architect with that of the social activist: form was a secondary — if not residual — concern. The impact of Rossi and Venturi’s respective books was to instil a revived interest in history within architectural

---

1 While Diane Ghirardo and Joan Ockman’s English translation of *The architecture of the city* would not appear until 1982, Rossi’s writings were familiar to a number of North American-based architects and architect educators who could read Italian. For an excellent study of the early link between Italian historicism of the 1950s and Venturi’s contributions which postmodernism of the 1970s

2 A few of the luminaries of this generation include Jacques Herzog, Pierre de Meuron, Roger Diener, Christian Sumi, Kaschka Knapkiewicz, Axel Fickert, Miroslav Šik, and Marcel Meili.
discourse, but while Rossi emphasized the traditions of the southern European city, Venturi looked to broader horizons. Venturi’s first book, *Complexity and contradiction in architecture*, included examples from the traditional European city as well as the commercial chaos of main street America. But it was Venturi’s later book, co-authored with Denise Scott Brown and Steven Izenour, *Learning from Las Vegas*³, that resonated with Swiss sensibilities. *LLV* brought a more pragmatic or realist sensibility to the discussion. In contrast to Rossi’s emphasis on the urban forms of the southern European city, *LLV* recognized the state of the contemporary city as it exists, full of suburban commuter centres, urban sprawl and the car’s dominance in urban planning. And while *Complexity and contradiction* recognized the messy reality that informs architectural decision making, *LLV* sought to remind architects of architecture’s forgotten tradition of communicating symbolic value.

This Rossi/Venturi influence fostered an interest in the mundane forms that comprise our world. In contrast to the heroic Modern quest for grand statements and self-absorbed spectacle buildings, the Swiss pursued an architecture of simplicity. Today, the works of Herzog & De Meuron, Diener & Diener, Peter Zumthor, and Marcel Meili among many others, are celebrated for their understated nature. From an urban design perspective, many of their built works follow Rossi’s sense of design decorum, his respect for the city and the forms that enhance activity on the street; and similarly, many of their works can be described as examples of Venturi’s simple “decorated shed”: spatially banal “boxes” that direct architectural pleasure to an articulation of the building’s surface treatment. The forms of these architects are common, which is to say that they might otherwise be indistinguishable from the commercial construction that makes up the majority of the urban fabric. While some may see their emphasis on mundanity a limitation, it recalls American poet William Carlos Williams’ claim that it is through contact with local conditions that gives rise to truth. It is a position that opposes the heroic modernist stance that from Williams’ perspective, represented a long distant world. An appreciation for the mundane brought one closer to the truth of life which included the subtle, nuanced world of “things seen.”

### 2. Post detour: The ordinary in graphic design

A fascination with the charms of common or vernacular form has always existed in graphic design, so it should come as no surprise that a book that presented a meaningful context for the mundane reality of commercial design practice should be of interest, especially a book such as *LLV* which deals with the manner by which form visually communicates⁴. But overall,

---

³ Hereafter referred to as *LLV*.

⁴ It must be noted that in the late 1980s through the 1990s, while graphic design underwent a significant technological transformation, it was (and continues to be) resistant to self-reflective critical discourse. The introduction of the personal computer (Apple introduced its first computer in 1984) and PostScript printing language (Adobe introduced PostScript in
graphic design was slow to formally embrace the ideas found in LLV. In the 1990s, “vernacular” was equated with “unskilled” rather than “ordinary.” The work of luminaries David Carson and Ed Fella was considered avant-garde design because it ignored accepted conventions. It seems a cliche to call it that now, but it was groundbreaking at the time because entrenched rules of propriety set limits on what was acceptable and the above designers, among others including Art Chantry, Elliott Earls, Jeff Keedy, and Carlos Segura, purposely flaunted the limits of acceptability — so much so that their work was deemed “ugly” in the infamous essay, “The cult of the ugly” by Steven Heller (1993) (Figure 1). But times change. 

![Design work included in Steven Heller’s essay “The cult of the ugly,” 1993.](image)


While current graphic design tastes do not reach the same levels of visual excess produced in the 1990s era of “grunge,” the fact remains that today’s work draws from some of the same sensibilities, including irregular word spacing, malformed typefaces, gaudy colour choices, and awkward text placements (Figure 2). Graphic designers are fascinated by the 1986), granted graphic designers unprecedented visual freedom. Typesetting was no longer constrained to a right-angled grid, and typeface design was no longer solely the domain of “experts.”

Always ordinary, never straightforward: Considering the work of Lorraine Wild

vernacular because it is without pretence (Caruso, 2008). Unlike graphic design that is a product of a formalized education, the vernacular exists outside the self-conscious parameters defined by institutionalized learning. It is about presence rather than appearance.


3. The Persistence of Lorraine Wild

It is here that I wish to draw attention to the work of a designer who has always had an interest in the vernacular, as poet William Carlos Williams describes, “the essential contact between words and the locality that breeds them.” (1920, p. 10). Lorraine Wild has always sought out complexity in her work, often purposely juxtaposing conflicting ideas of propriety against orthodox Modernist sensibilities. Perspecta 19, the Yale School of Architecture student journal (Figure 3), is an early example of Wild’s interest in “the richness and ambiguity of modern experience, ... elements which are hybrid rather than ‘pure,’ compromising rather than ‘clean.’” (Venturi, 1966, p. 22) Wild’s design drew the ire of her faculty at the time, most notably the strident Modernist Paul Rand.

Wild’s design was ground breaking. Contrary to Modernist “rules of clarity,” Wild used a single typeface to typeset the journal: The body text was set in Bodoni roman, but the various levels of hierarchy (pull quotes, subheads and footnotes) make use of Bodoni bold and bold small capitals. The darker colour applied to such secondary information goes
against the grain of convention, but in no way impedes legibility. Perhaps most revolutionary for the time, Wild’s use of Scotch rules reintroduces a historical motif newspapers used to divide sections of information and aid navigation. The design was “impure” because it mixed both modern and historic design vocabularies, or more accurately, design tropes. To Wild, design can be viewed as a repository of figurative allusions. Hers is an engaged approach to design because it places the designer at the center of the visual communication process. The designer acts as both the conductor (in the sense that one orchestrates visual content through a conscious will) and conduit (in the sense that the designer provides the means for visual expression) through which form is generated.

Figure 3. Wild’s design for Yale Perspecta, no. 19. (Wild, L. (designer), (1982). Cover and interior spread of B. Healy, & N. McBride (Eds.), Perspecta: The Yale Architectural Journal, (19).)

Wild’s interest in the immediacies of context and the ambiguities that are otherwise passed over can be traced to a formative experience she had while still in high school:

“I think it’s really funny that I spent the last three months of my high school education working on a paper about Michael Heizer — he had been invited to do a piece at the Detroit Institute of the Arts, and he ended up tearing up the museum grounds by dragging a giant piece of stone across the lawn. This caused a major fuss in Detroit (and got the curator, Sam Wagstaff, fired) but the whole incident inspired me: how could such a simple act carry so much meaning and elicit such an intense exchange of ideas?” (Wild, 2018)⁶

Her question underscores the inherent complexity (and contradiction) of unified narratives. Even at this young age, Wild understood that moments of conflict are symptomatic of a bigger issue. These moments of acceptability or repression, reflect the limits of a discourse,

⁶ Emphasis in italics is mine.
Always ordinary, never straightforward: Considering the work of Lorraine Wild

or as has often been the case in Wild’s writing, they reflect the discipline bearing down on what it is willing to accept.

Wild has always maintained theoretical underpinnings, either explicitly through her writing, or through more diffuse forms in her design work. Her writing has ranged from optimistic, “I’m interested in how designers strategize for the future.” (Wild, 1998, p. 15) to the less sanguine, “[S]uddenly, the ‘graphic’ in graphic design seems constrained or parochial.” (Wild, 1996, p. 21) But all times, she has looked to the affairs of culture and society, imagining a place where graphic design most vividly communicates the tone of the present. The presence of theory may not be explicit, but her past work — whether writing or design, on through to her current output — reflects an awareness of contemporary directions in design. It is an awareness of shifting societal interests displayed in many of her essays, which often begin with a narrative that describes some mundane or seemingly innocuous personal experience that slowly builds to a unveil a significant conflict currently percolating in graphic design. Wild’s approach to writing falls in line with one of her idols, the multifaceted designer Alvin Lustig who asserted that “My relationship to all subjects is unfortunately always personal, so I will start out in that fashion.” (Lustig, 1958, p. 12) Lustig first penned those words in 1952, at a time when the cool detachment of Modernism was just beginning to make an impact on visual culture. Lustig’s apology runs counter to the universal flattening that Modernism was to level against personal experience.

Wild uses personal experience as merely a symptom of a greater problem that she will soon unpack through reflection and analysis. It is a method to approach design in an oblique manner, not through dogmatic declarative statements or dry academic analysis, but rather though local idiom. Her contact (with language — to borrow yet again from William Carlos Williams) is through lived experience, not the language of the ivory tower, and this makes sense given Wild’s own explanation of writers whom she admires:

“...When I think of my own critical writing, I think of three people whose criticism I love(d): Alvin Lustig, whose writing always sounded like you were in the room with him, and he was telling you what he thought, then and there, and his thinking was not polemical, but wide-ranging and open (as opposed to Paul Rand’s essays, which seemed like he had worked them over to the point that he could then chisel them into stone tablets). Lustig made me realize that it might be more useful to write about what I was experiencing, instead of writing on historical subjects (although I’ve done that). My other model (and I know this sounds now like a cliché) is Lester Bangs — but I was reading him while I was at Cranbrook already, his criticism in the Village Voice was alive, hilarious, committed... again, evidence of someone who really, really cared about what he was writing about. Another writer whose work I admired at the same time (or maybe a little later, the ‘80s) was Michael Sorkin. He had the nerve to say things that other people would say but not commit to paper.” (Wild, 2018)

It is fashionable to describe her work as critical, but I abhor the word (though I have used it). “Critical” is a word which elicits respect, as though somehow, its use bestows greater depth and insight upon whatever it is attached. But no, in fact, “theoretical” is more appropriate.
To be attuned to the vicissitudes of modernity is to be theoretical. In this regard, I share the same view as Mark Wigley, former Dean of Architecture at Columbia University, that “Theory is by definition critical, in the sense of opening up to the other. Critical theory just means not being asleep.” (2015, pp. 265–266) (Full disclosure: I was taught by Wigley when I attended Princeton University.) In a constantly shifting landscape, the ability to absorb, digest and apply current tenets of culture in the production of contemporaneous work is extremely difficult. Wild has an uncanny ability to “read the tea leaves of culture,” as it were. This is a proposition Wild openly admits, all of which is the reflection of a conscious effort on her part.

“As I began to read post-modern theory I began to think more about the web of communication, ambiguity, and the opening up of singularity — all of which resulted in more pluralism. And by eventually ending up in California, it was clear that the plural, the impure, the synthetic, and the multi-cultural were more ‘true’ to both the time and the place that I was working in.” (Wild, 2018)

Wild’s sensitivity to the “time and the place” of her local context is to be a recurring theme in her work. Her high school experience turned out to be formative one. She recognized that ambiguity was closer to the reality of life than stringent adherence to abstract concepts:

“I realize by bringing up the Heizer piece it sounds like I’m only talking about art, but that experience helped me to see what the intentions in avant-garde modern design were as well. And as much as I love it, I could not help but notice that the intentions of modern design were either subsumed into the greater commercial culture or it was simply overwhelmed by commerce. But to my mind while this does not cancel out the power of avant-garde modernism, it does place it in a context that admits that the ideas in modernism were not “timeless” but instead reflected their moment in as vivid a way that I would hope my (or my students’) work would also reflect the realities of our moment.” (Wild, 2018)⁷

While this explains the structure that guides Wild’s content, there is a much more telling reason which explains the origins of her interests in the continual discord that shapes culture:

“I think my introduction to real 20th-century modernity came in the form of my very astute AP English teachers at Lake Shore High School. They combined the reading of largely 20th-century literature with readings of criticism. The call-and-response of that experience set me up to understand the trajectory of Modernism; and this was followed by additional readings on contemporary art of the ’60s (Minimalism, conceptualism).” (Wild, 2018)

It is a given trope to link the timeliness of a given catalogue’s design with the timeliness of the exhibition itself. Afterall, curators often plan exhibitions as a reflection of greater societal interests and public engagement (Burdick, 1996). At the centre of Wild’s work, what

---

⁷ Emphasis in italics is mine.
Always ordinary, never straightforward: Considering the work of Lorraine Wild

makes it both pleasurable and lasting, is a concern with form: “I love form, sometimes for good reasons, and sometimes for bad: if I didn’t, I couldn’t function as a designer.” (Wild, 2000) Given the premise that Wild’s work harbours theoretical content, what aspect of modernity preoccupies her thoughts and shapes her practice now? The question is not merely rhetorical. It is a key to understanding the development of her work over time. Such a premise is not immediately fulfilled by the single artefact, as Michael Rock surmised, “Because the nature of the designed object is limited, individual objects are rarely substantial enough to contain fully rendered ideas.” (2013, p. 95) Unlike architecture, whose singular and opaque nature shields it from explicit representational statements (unless the client has an interest in one-liner gag architecture), graphic design is ephemeral and in general, communicates a client’s message in a direct manner. In order for the graphic designer to interject her own theoretical position, she must do so over time, via numerous projects, and without supplanting the intentions of the client. “Ideas develop over many projects, spanning years. Form itself is indexical.” (Rock, 2013, p. 95) If we examine a number of pieces from Wild’s oeuvre, common themes and preoccupations slowly emerge (See also Blauvelt, 1998, pp. 60–75).

In the 1980s, Postmodernism was at its zenith, and viewed in this light, her poster for the Rice Design Alliance (Figure 4) is perhaps one of the strongest examples of Wild’s response to local context. A relatively early work in her career, this poster for a conference on gardens displays a mannerist treatment of the text, which is shaped to echo the forms of the topiary in the accompanying photograph. Classicism is further achieved using Perpetua, a typeface modelled on inscrptional lettering, and the use of capitals and small caps (the use of italics throughout also recalls their use in early printed books, when the italic form was considered equal to the roman (upright) variant and used to print entire books). Another break with Modernist convention: the poster is essentially typeset in relatively small point size. Only the title is set in a large display size, and that too achieves a classical tone via the use of Gill Floriated whose self-conscious reference to a “plant-like” imagery still retains classical inscrptional proportions. What is unusual about Wild’s designs is that while she rejects the aloof or detached nature of Modernism, the quality of her designs — its attention to detail, its response to content, and its awareness of history — means that it still retains its value as an elegant solution without appearing “dated.”
Figure 4. For a short period after graduating from Yale University, Wild taught at the University of Houston School of Architecture and produced for a number of Houston organizations including the Rice Design Alliance (Lynam, 2020). (Wild, L. (designer), (1984). Rice Design Alliance Gardens [Poster].)
Always ordinary, never straightforward: Considering the work of Lorraine Wild

Wild’s design for Perspecta was noticed by American architect John Hejduk, who subsequently asked her to design his monograph, Mask of Medusa. (Lynam, 2020) The book’s cover typography makes use of American woodtype vernacular (Figure 5). The letters are uneven in proportion. Certain details of the letters are awkward, such as the lack of overshoot on the tops and bottoms of the “O” and “S,” resulting in overly compressed counterforms. A dark agonism or alienation underscores much of Hejduk’s architectural work at its heart. Hejduk found the notion of the ideal New England small town to harbour currents of hidden psychological darkness: terror is never explicit, but rather exists just below the surface. As if tapping into this unease, Wild’s design for Hejduk’s monograph is structured in a way that presents an enigma. The reader is thrust into the book if approached in conventional means: an illustration of the head of Medusa, followed by permissions and two separate “Introductions” written by Daniel Libeskind in 1984 and 1978. These are followed by a series of texts written by Hedjuk arranged in chronological order. But the table of contents is located nearly one third of the way into the book, at page 158. The contents spread splits the book in two: Texts are found to the left (pp. 1–157), and design work is placed to the right (pp. 159–457). It is a subtle play on the conventions of book design, but one with great effect: Texts and architectural designs are given equal weight, neither is subservient to the other. They are two books to be read in tandem.
Wild’s choice to use an American vernacular woodtype is an oblique nod to the reintroduction of historicism and the “unskilled” vernacular that would soon take centre stage in graphic design.

Continuing the theme of an “unskilled” context, the CalArts recruitment poster for the Program in Photography (Figure 6) makes use of an Alan Sekula photograph framed by a conventional typeface (Gill Sans), a dot matrix printout, and puerile hand-scrawled text. The coarseness of the typography is offset by the masterful interweaving of the differing paragraphs in line with their respective hierarchy. This complex weaving of texts is further enhanced by changes in rag alignments, point sizes and leading. These purposeful misalignments and paragraph intrusions recall the mistakes of a typesetter who has miscalculated and run out of space yet in Wild’s hands, they create a delicate visual play without hindering communicative value. The underlying message is that CalArts — and by association, its students — is not afraid to take chances. And while the school welcomes experimentation, it still demands a high level of technical proficiency.

Figure 6. (Wild, L., & Keedy, J. (designers), (1987). California Institute of the Arts Program in Photography [Poster].)
The USC Dean’s Hall housing poster is perhaps one of the clearest examples of Wild’s ability to read the whims of contemporaneous culture (Figure 7, left). When compared with the poster by Müller-Brockmann of 1958 (Figure 7, right), the two designs share similar diagrams — they merely differ in their respective dressing. Both are responding to the state of modernity at the time when they were produced: Müller-Brockmann’s vision is clear, authoritative, and monolithic; Wild’s is similarly confident, but her design rejects the mould of universality, its imperfections harbour a growing dissatisfaction with unified narratives.

And as a final example, the catalogue for John Baldassari’s exhibition at the Los Angeles County Museum of Art is quintessential Lorraine Wild (Figure 8). The book dances ever so lightly between bland corporate anonymity and indulgent idiosyncrasy. Wild has achieved a balance that is so fine-tuned that it is easy to dismiss her design as straightforward. But an examination of the details tells a different story. The book is printed using five colours — the regular CMYK process inks plus an extra Pantone™ blue to match a tone often used by Baldessari in his artwork. To further maintain a link to Baldessari, section dividers are “cut short” using a toned paper akin to cheap newprint, but owing to the use of the extra blue ink, dividers could never be mistaken for a cheap photocopy or print job. Perhaps most smartly, Wild presents a detail of a Baldessari painting on the cover, the eponymous title for the exhibit, “PURE BEAUTY”. Wild uses one of Baldessari’s paintings to headline the book, and as both a wink and a nod to painting and book title, the “white painting” book jacket wraps a raw half linen book cloth, like a taut canvas stretched over a wooden frame.

At this point, I wish to return to my opening. Ed Fella made the vernacular into art, but Lorraine Wild made the vernacular into graphic design. Like the vernacular, her work is ordinary. This is not a pejorative description. Wild’s work is ordinary, but never plain or straightforward. It makes use of numerous mannerist tricks to elevate design beyond the banal defaults of utilitarian commercial taste. Wild has always “skimmed the surface” of commercial design, to be situated just slightly “off” the conventional and banal. It is what has always made her work interesting. “Ugly and ordinary” was a phrase used to condemn the work of VSB, but like Denise Scott Brown, I choose to adopt it as a badge of honor (Scott Brown, 2007, p. 16). Venturi and Scott Brown sought not to condemn the America around them, but to learn from it, to see it as a potential source for design invention. Similarly, Wild continues to look to the state of design — the design of the now — with each commission. It may seem dismissive to refer to visual styles, but she has navigated Modernism, Postmodernism, Grunge, Neo-Modernism and the current label, Global Style, and as she has done so, Wild has always presented something more, something to remind the observant reader that the design they hold in their hands is an example of “both-and” — its truth is in its totality. It embodies the difficult unity of inclusion rather than the easy unity of exclusion. (Venturi, 1966, p. 23)

As a historian and educator, Wild is by definition preoccupied with history. And as an active practitioner, she is already operating from an intellectually robust position. Part of architecture’s locus of operation involves an awareness of precedent, of what has come before. Such an awareness or self-conscious directive mandates that the architect designer simultaneously define herself in the present and distinguish herself from the past. But while graphic designers are not taught to operate with the same level of self-consciousness, Wild has always maintained an interest in the context that surrounds her, whether it is an immediate needs of a design solution, or current tastes of the general public, or a filial position within the canon. The ordinary appearance of Wild’s designs belies the richness of their actual complexity.

References


Always ordinary, never straightforward: Considering the work of Lorraine Wild


Roettinger, B., Michlig, C., & Tumlir, J. (Eds.), (2013). In the good name of the company: Artworks and ephemera produced by or in tandem with the Colby Printing Company. Los Angeles: PictureBox/ForYourArt.


Wild, L. (1996). That was then, and this is now: But what is next? *Emigre*, (39), 18–33.


---

**About the Author:**


**Acknowledgements:** The author wishes to acknowledge that this paper draws on research supported by Canada’s Social Sciences and Humanities Research Council (SSHRC).
Anticipatory Design and Futures Literacies: A Need and a Hope

Andrew Morrison*, Manuela Celib, Laura Clèriesc, Palak Dudanid

aOslo School of Architecture and Design
bPolitecnico di Milano
cELISAVA Barcelona School of Design and Engineering
dOslo School of Architecture and Design
*andrew.morrison@aho.no

Abstract | Design universities face challenges to their curricula, pedagogies, research and professional practices in the context of a world beset by increased complexity and rapid change. In this framing type paper located in an experimental relational ontology we take up the context and conditions of such change and the development of what we term ‘design futures literacies’. These are literacies that are realised in and through designing within a futures view that engages with transformation in the here-and-now, but are linked to near and far futures, and ways to encompass these in the present. We frame this in an experimental, emergent transdisciplinary pedagogy that joins systemic and cultural aspects of ‘taking care ahead of time’ or anticipation, and how it is connected to design futures literacy development. The paper is situated within an integrated design view of a large educational research project into design futures literacies.

KEYWORDS | ANTICIPATION, DESIGN FUTURES LITERACY, ECOLOGY OF DESIGN FUTURES PEDAGOGY, ‘BECOMING-IN-THE-MAKING’, ‘FUTURES NEGOTATION BY DESIGN’
1. Scope and Status

It is 2020 and as we gather to celebrate CUMULUS’ achievements in contributing to design education, practice and research it has become even more undeniable that we live in a world that has increasingly become more complex, systemically and politically (Attali, 2011). We are heading rapidly towards the storm of climate disaster in which scientific evidence gives us just a decade to avert irreversible rises in temperatures and resultant environmental, human and economic demise. At the December 2019 UN Climate Change Conference COP25 in Madrid, leading wealthy nations blocked key agreements about the urgent need to limit carbon emissions and halt irreversible climate change. Within just a few months the Covid-19 global pandemic spread rapidly ushering into the present numerous challenges, intersecting uncertainties and unprecedented consequences. These contexts and conditions, and their present and emergent demands have accentuated that design education needs to urgently encompass critical, active and prospective futures literacies.

We suggest that Design and specifically Design education cannot sidestep these global, societal and environmental contexts, conditions and challenges, as Findeli (2001) argued in the context of 21st century literacies almost a decade ago. Concerning young design students’ education, much remains to be done to augment and alter current curricula to prepare them with skills, competencies, tools and methods to work professionally and in research and consultancy. We see this as a matter of helping demarcate for and by design not only what the future is but what it might become (Urry, 2016). How might Design work to creatively and productively offer and proffer inspiring, potential and actual alternatives in shifting the very shaping of survivable futures?

We take up this challenge in a position type paper that addresses two key propositions. The first is design education that is placed in the context of increasing global complexity and change in an age of the Anthropocene, that may be understood through what we term ‘anticipatory design’ (Celi & Morrison, 2017; Celi & Colombi, 2019). Given the focus of this conference and this track on ‘Design Culture (of) Thinking’, anticipatory design may be understood as emerging via dialogue between Design Studies and Futures Studies (Celi & Morrison, 2017). On the one hand is the approach of thinking through designing and prospective inquiry of Design Studies. On the other hand, is knowing arrived at via strategic foresight and decision-making of Futures Studies. Between the two lies Anticipatory Design that allows us to focus on ‘taking care ahead of time’ (Morrison, 2019) within conceptual, systemic and action-oriented learning designs and designs for learning.

The second, related proposition is that design education may be further framed in terms of context and conditions through the development and application of the notions of ‘design futures literacies’. These are not only literacies, as skills and competencies, centred on knowing about the future but ones located in design processes, practices and artifact creation.
This entails also recognising that we are entangled in ‘the present of the future’ (Witzgall & Stakemeier, 2017). Here, the global pandemic has literally dropped the complexity of systems and adaptive futures needs and responses into our present educational realities and their linkages to social, economic, political and cultural contexts. Design education more than ever needs to draw prospective speculative inquiry and design back into actions today. It must question profit and expansion-based logics (e.g. Frase, 2016). Equally, it needs to explore potentials and alternates to growth ensconced in approaches to the circular economy (Charter, 2019). This is important when the environments within which students and graduates live, work and generate design are themselves in flux and are in sore need of deep and durative systemic actions for not only human sustainability but also planetary survival (Wallace-Wells, 2019). In the transformative context of South African design education, Snaddon and Chisin (2017) present such an approach within a ‘futures-oriented design pedagogy’. Such a pedagogy, as Adam and Goves (2007) noted, is about ‘future matters’, that is both materially and in importance. In educational terms, for Osberg (2010) this is also a primarily a matter of ‘taking care of the future’.

For us such a view on care and education incorporates an anticipatory design view on design pedagogy as ‘taking are ahead of time’. This refers to what is central to notions and practices of anticipation and to its materialisations and performances of ‘design futures pedagogies’. Conceptually and pragmatically, this is to make bold, informed choice and change in risky times, as Biesta (2013) addresses in his book The Beautiful Risk of Education. We argue that design educational risks needed to be framed and enacted in what we call ‘design futures literacies’. These are knowledge and practices that are not only about multimodal 21st century literacies and complex and emergent futures, but ones that are realised in and through design. At one level they are encounters and enactments and reflections that acknowledge ‘future matters’ within design. Meta-cognitively and pedagogically, these design futures literacies are themselves modes of making and shaping futures (Yelavich & Adams, 2014). They are part of Design increasingly understood as a pluralistic making and shaping profession linked not separated form transdisciplinary analytical knowledge building. In the contexts of complex changes in climate, culture and capital mentioned above, Design is compelled to engage, productively and reflexively, with given and emerging demands, needs and potentials for rapid change. What is of great importance is how to develop, trail and review design futures literacies that may critically generate future prospects (Candy & Potter, 2019) while learning to adapt to complexity and uncertainty.

Design needs to continue to more valiantly and forcibly cast off its modernist, functionalist origins. In this paper we address this through transdisciplinary relational ontological exploration of design pedagogy between anticipatory design and futures literacies. We adopt this perspective to allow for a view about working with design futures literacies that is in a process of creative yet pragmatic becoming. In Deleuze and Design, Brassett and Marenko (2015: 1) see this becoming as a matter of materialising possibilities, realising creative activities and enacting of layers of affect.
2. Anticipation and Design

Attention to anticipation has been propelled by a recasting of the approaches of forecasting and foresight central to Futures Studies. Championed by Roberto Poli and in the related International Conference on Anticipation series, the notion of anticipation has developed from two primary directions. The first has been from with systems perspectives (e.g. Poli, 2010) and the second from more culturally inflected views (e.g. Morrison, 2017). The approach has argued for an alternate space and means to address matters pertaining to expectations and aspirations, co-creativity and prospective inquiry in addressing, shaping and understanding futures connected with the present (Poli, 2014a; 2014b; 2015). Poli and Valerio (2019) have highlighted the importance of agency in shaping futures, though their focus is not from within design and anticipatory knowledge making but systems theory frames. Design has emerged in the past three decades in particular as a diverse, rich mix of methods and tools, theories and concepts. The large, heterogeneous and transdisciplinary body of research in design also needs to be accessed in a changing, anticipatory informed Futures Studies we argue (Snaddon, et al. 2019; Morrison et al., 2020).

Recently, in its pedagogy and its research, Design has sought to address futures as cultural (Appadurai, 2013), participative and realised via prospective iterative inquiry located in shaping sustainable and survivable futures. This propels us into the complexities of systems, participants and stakeholders, non/human agency, interests, identities and cultural dynamics. Together the making and analysis of design futures needs care-ful attention (Vaughan, 2019). This entails perceptive, imaginary thinking and design-ing (Lury, 2018), the latter about attention to the dynamic practices and reflections of making and shaping futures. We argue further that this is a matter of ‘urgent design’ (Morrison, 2019).

Design education is one domain that is future facing; it needs to face-up to working with uncertainty. Here, there is no ‘future proof’ solution but a set of anticipatory skills and attitudes that we should encourage students to develop. As with creative processes, the ability to anticipate also needs to be trained. This includes keeping an open mind, recognising cultural biases, imagining contexts where concrete solutions make occur, while always mindful of possible engagement, influences and impacts along with connected responsibilities. Design education thus garners a mix of domains and approaches in a layered
and linked curriculum that is increasingly informed by numerous other disciplines and practices as it works within and between them. If we follow the formulation of anticipation being about caring ahead of time, we are able to invigorate the term through design with the temporal, the spatial and the performative.

Further, we suggest the term allows design to access and appoint anticipation to design as making and shaping futures, a reflexive mode of ‘becoming-in-the making’ as it were. In short, this is about not merely an adjectival antecedent to design or a dismissal of other domains and views. It allows us to engage more fully with devices and tools from Futures Studies such as Voros’ (2003) generic foresight process framework and access Celi’s notions and framings of Advanced Design that are concerned with long term perspectives and ongoing innovation. This may be in the uptake of design fiction (Celi & Formia, 2015), regarding aesthetics (Celi & Formia, 2017) or with respect to politics, publics and design co-creativity (Mazé, 2019).

Taken together these aspects amount to what Zamenopoulos and Alexiou (2007) labelled ‘an anticipatory view of design’. By this they meant design is about both envisioning futures and working as a catalyst for change. More recently, Celi and Morrison (2017) mapped differences and overlaps between Futures Studies and Design Studies in their contribution to the Handbook of Anticipation. They note that:

> Design deploys prospective techniques such as sketching and prototyping to carry concepts, potential and possible directions further into development and distribution, thus making visible products, services and interactions that are embedded in designerly processes of abductive reframing. (Celi & Morrison, 2017: online)

Building on design’s abductive, assemblage-like modes of inquiry, amongst others, design research and education have also been characterised as making and shaping anticipatory knowledge. This Celi and Colombi (2017) interpreted in relation to trends, as shifting between potential futures and concrete actions. Such views have been further framed in terms of the changing conditions and forces of the Anthropocene. Here Celi and Colombi (2019) address issues of design futures literacies as needing to build awareness.

3. Design Futures Literacies

Design education is central to the genesis and the longevity of CUMULUS. As Design Studies has emerged in its own right as a transdisciplinary domain, research into design has flourished. However, research into design education and attention to design literacies has been less evident than other areas of inquiry at a time when literacy studies in education have blossomed. There, literacies have morphed into a complex of digital and multiliteracies (Cope & Kalantzis, 2009, 2015). Most recently this has extended to connected learning (Ito et al, 2010) and learning out of school via the concept of learning lives and a fluid ontology (Erstad, 2013) as well as ‘learning futures’ (Facer, 2011).
Design education has also morphed from the original industrial design-infused Bauhaus studio models to digitally tooled and mediated design education (Ehn, 1998). Design education has moved into real world settings, though in innovation in participative design methods and modes of research. In learning terms, Jornet and Roth (2018) argued such changes can be understood as transitive and intransitive, where the focus is on growing or coming into being. For design education, this is possible due to its fluid disciplinary ontological processes and pedagogies that place the learner at the core of activities and articulation.

Just as language-based and book-centric literacies in higher education have been augmented by a mix of media, modes of making and producing (Sheridan & Roswell, 2010), so too have design educators and students been shifting design pedagogy and research beyond the studio and gallery and into the work place and popular and public cultural arenas. Design today is multimodal; it has shifted into intangible services as well as tangible activities in the world; it encompasses individual and shared expressions and is materialised through co-created experiences, in making, consumption, mixing and reorientation. At the same time design is seen to be pluralistic (Escobar, 2018) and in need of more fully acknowledging and accessing diverse cultures and knowledge forms, such as Burns (2015) argues on learning about sustainability from ecological systems and indigenous wisdom.

Many of these matters are also future matters and matter for the future to return to the earlier notion. The term ‘futures literacies’ (FL) has been championed by Miller (2007, 2018) especially via UNESCO. Futures literacy ‘is the capacity to explore the potential of the present to give rise to the future’ (Miller 2007: 347) in a sequential model of awareness, discovery and choice. For Miller (2007: 360):

By combining an openness to the potential of the future with a greater ability to invent stories that make sense of the present, FL produces strategic insight without prejudicing the autonomy of people in the future to see different options and hold different values. Still, FL is only a tool.

Most recently Miller has assembled a collection of writings on futures literacies from across the globe. They point to the growing awareness of learning with and for futures. However, and despite it featuring in the field of Anticipation Studies, Miller’s work seldom connects directly with or is co-authored with the field of design.

We see an urgent need for design to develop 21st-century design pedagogies that are anticipatorially reframed as ‘Design Futures Literacies’. We coin the term to highlight that design is central to these literacies in domain area knowledge and experience but in that design is also a verb and a means and series of rich methods for realising futures literacies. Here we could further demarcate a set of 21st century literacies that are easily located online. However, these too do not include design as a making mode of expertise and understanding.
Missing for us is that design is an ontologically relational and fluid knowledge domain (Marenko & Brassett, 2015) that uses a variety of senses, modes of representation, mediation and communication. It makes material in material experiments; it seeks to find ways rather than merely map found routes. For Stuedahl (2015) this is a matter of making connections and relations between design, participation and learning. We ought here to heed the earlier words of Margolin (2007: 15) who cautioned us to consider how to create an ethics of designing as ‘a collective task for the design community whose grasp of the future will continue to determine how we live in the present’.

Grasping the future in terms of connecting anticipation and futures literacies via designing may further be understood as creating ‘new perspectives of how individuals, groups, institutions, systems and cultures use ideas of the future to act in the present’ as is posted in the 3rd International Conference on Anticipation (anticipationconference.org). The agency of educators and students in realising their ideas and collaborations is central to this pursuit (Morrison et al. 2019). Soo too, is the making, manifestation, creativity and critique that are needed in imagining, developing and assessing relational ontologies in ‘futurescaping’ via design (Raymond, et al., 2019). This may entail a radical rethinking of design education where pressures and needs - climate to resources to pandemics – will have to be reconfigured to meet earlier presumptions of boundless consumption, exponential growth and profit before planetary sustainability.

5. An Ecology of Design Futures Pedagogy

We take up such views in a transnational, transdisciplinary design educational research project called FUEL4DESIGN, with focus on discursive, pragmatic and design cultural core elements and relations to situating design knowing. The design futures literacies we address connect teaching and learning to provide an education for young designers for designing for complex tomorrows through six related actions and open access tools (Figure 1).

Recently, in education research (Jackson, 2016; Cope & Kalantzis 2017), and in design-based pedagogy entailing futures (Snaddon, et al., 2019), interest has emerged on learning ecologies. The FUEL4DESIGN (F4D) project may be positioned as an exploratory and experimental project, rich in envisioning, keyed into action via developmental design processes and reflexive modes of becoming in and through design activity.

The main objectives of the project are to develop, test and implement new approaches and resources to provide learners and educators with innovative and adaptable tools to imagine, perform and enact a plurality of futures by design. This is to equip design learners and educators to deal with real-world issues on techno-digital futures, climate crisis, and political instability. We will connect experimentation and design theory via invention, imagination, speculation, and through design-making activities such as via prototyping, scenario building, and foresight, with the aim to insert and hybridise futures methodologies into design creative processes.
Focusing on anticipatory skills and future making actions, F4D addresses the professional development of educators actualising and nurturing a design teaching approach through the exchange of good practice and cooperation inside the project network and with stakeholders, and using educators as multipliers of anticipatory design inquiry. To support this, the project offers specific ‘devices’ for a Design Futures Literacy initiative that includes a Design Futures Lexicon to build a bottom-up and shared vocabulary for working with design futures, supported by a set of Futures Philosophical Pills that allow educators to better diagnose ideas, and practices of the future to inform prospective design education.
Anticipatory Design and Futures Literacies: A Need and a Hope

Figure 2. 50 Futures Design Words, one of the many resources from module Design Futures LEXICON on FUEL4DESIGN project site (top); the CHIMERA combines words from the LEXICON randomly online (bottom).
We have developed student-centred, hands-on training approaches called Design Futures Scouting to support iterative methodologies for futures making through design and empower teachers to teach future related design providing skills to generate and frame future scenarios that are plural, performative and multidisciplinary. A ‘Design Futures Toolkit is also being delivered, with innovative practices and pedagogies to nurture and connect design curricula with design future driven activities. The tools will allow both the students to tinker with future through design practice and the educators to activate and to assist reflection on the project processes and practices through a roadmap.

Futures Literacy Methods will in 2021-2022 provide a training course of modular units in multidisciplinary futurist design learning. The methodologies will be gathered in a Design Futures Manual that will draw together content and experience and provides routes to work with other HEIs, policymakers and EC level futures literacies strategies and programmes. The Design Futures Manual aims to increase the uptake of design future and anticipatory subjects to address skills shortages affecting future thinking, and - as a final output of the project - can be considered as an instrument to tackle gap between design education for futures and emerging and pressing societal and environmental challenges.

Figure 3. The REFLEXICON card game from the LEXICON (left); turned into a web-based interactive (right).

Figure 4. BALLUSION Workshop from the LEXICON with AHO PhD students (left); a Zoom and Miro Lexicon Workshop at the RSD9 Conference (Dudani & Morrison, 2020) (right).
The project has completed the first two devices with work underway on the next two on process redesign and futures tools. The *Future Lexicon* addresses matters of futures inquiry in design to better demarcate what is meant in the growth of terms connected to potential, probable, possible and projected change. It moves beyond traditional static glossaries and is designed to engage students through novel design learning activities, needed in sharpening the definition of concepts and their application in contexts (Figures 2-4).

*Philosophical Pills* furnishes educators with a systematic matrix of philosophical insights in ways which are tailored to expand, deepen and intensify the criticality and reflectivity in futures design education. Each Pill can be read in a systematic grid and theoretical framework where concepts descriptions intersect with fields of application, clarifying potential use through various practice narrations (Figure 5).

Connected to these two items, we have delivered two short term design teacher training events and two intensive study programmes with Master’s and PhD students (Figure 6). This was done to trail and circulate our inputs and their outputs, and will be connected with two proposed trans-national ‘multiplier event’s for futurists, design educators and professionals.

---

**Figure 5.** (Top) Introduction to Future Philosophical Pills (left); Future Philosophical Pills shown as cards (right).

**Figure 6.** (Bottom) The workspace template for using the Pills (left); Design Master’s students trying the cards in a classroom setting (right). Photo by UAL.
The Design Futures Scouting module has a generative approach to describing futures scenarios rooted in design practice and it is designed to be forward looking, student-centered and participatory. This Design Futures Scouting module proposes an exploration of emergent futures by integrating disciplines using methodological tools that encompass quantitative and qualitative methods, and desk and field research, acknowledging design action as the main driver and tool which engages in materialising futures. Through this process, students will enact their own framework of futures.

The Design Future’s Toolkit, is being built on a systematic methodology and extensive research on the current available methods collections and toolkits for futures and design. A selected but expanded set of tools was trialled in a transdisciplinary workshop in order to understand their usability (Figure 7). The kit consists of different devices that can be associated with different functions and different outputs and objectives. The intent is to offer designers, students and teachers an array of guided opportunities starting from the goal they want to achieve.

Figure 7. Screenshots of tools explored by the module The Design Future’s Toolkit (left); one selected tool trialled with PhD design students in an online workshop (right).

6. Conclusions

Design is one of few multi-disciplines that works creatively and pragmatically with the future. It does so through acts of making and projection to produce products, services and interactions beyond the strategies and demands of the here-and-now. Design is poised to play a far more vibrant and proactive, yet prospective, role in addressing real, emergent and unforeseen needs where literacies of and for tomorrow need our shared attention today and in medium- and long-term futures. Yet we are ‘designing in dark times’ (Staszowski & Tassarini, 2019) and as we stated earlier there is an urgency for design in the window of opportunity to avert unstoppable climate change. That said, our future products and services will likely demand increased attention to care and ethics while design will continue to be experienced as a matter of problem finding (Marenko, 2018).
Design may work with what is just beyond reach, with the emergent and the planned, but also with the imagined and the prospective. These are its best capacities. Yet, when a Master’s in Design takes five years, today’s intake of new students will only start work in 2026 with four year’s direct contribution to what we might go so far as to label the ‘Decade of Urgent Design’. Yet we will have 10 sets of master’s graduates in that period. In 2019, 299 design school members from 56 countries were listed in CUMULUS, so this could amount to a massive series of graduates during the five-year period. These are design graduates that typically go into work with design companies and bureaus, with various public sector interests, community stakeholders and public participation.

These students will work directly in this decade of urgent need and rapid change. It is this they need to be prepared to meet and to work within by their teachers and via research and knowledge of changing professional practice. To some extent, along with others they will work to avert the storm; in other senses they will find themselves right in the heart the storm as they strive to confront, re-negotiate and co-creatively fathom and fashion alternatives to assumed practices and values.

Figure 8. The LEXICON was embedded in a narrative based game-like activity called OCTOPA’S JOURNEY. Developed in collaboration with the Amphibious Trilogies project and design-friction.com, the activity involves participants in an interplay of movement words from the LEXICON and satirical scenarios switching between time, place and personal choice.

This is apparent in a collaboration between FUEL4DESIGN and a related art practice project into extended choreography and mediated design communication. This is realised in a satirical and playful online activity relating to amphibious adaptability in the context of the Arctic, movement related language, historical and emerging geo-politics and the changing trade and cultural dynamics of the Northern Sea Route (Figure 8).
For our graduates and ourselves as educators, a ‘futures negotiation by design’ will need to be enacted when expectations and pressures mount as the ‘deep-time’ and systemically intertwined forces of the Anthropocene become manifest. This is especially so while we are adapting to and together working our way through the uncertainties of the global pandemic. Our design futures literacies do not seek to propose solutions or patterns but a critical set of opportunities to ask apposite, awkward questions and support diverse debate (Poli, et al., 2020). They reach onwards and outwards to collectively imagine and discuss possible futures paths through envisioning practices that are anticipatory and remain hopeful in character.

As we end the tumultuous 2020, it is undeniable that we face urgent needs to prepare students to be able to work, prepare, meet, imagine and anticipate futures. These are days and worlds, lives and interactions, actors and systems that we need to envision in the short term, in the mid-range and for the distant future. It is these timescales that need to be connected and related, located and projected if we hope to design within, into, for and with creative and critical futures shaping that will ensure survival. We see design education as central to wider collaborative societal and planetary futures. In these wider futures, design futures literacies are ones that elaborate on futures literacies. Design futures literacies work to connect purposes, forms and practices of reflexive design education realised through continual, critical and anticipatory ‘becoming-in-the-making’.

References


**About the Authors:**

**Andrew Morrison** is Director of the Centre for Design Research (www.designresearch.no) at the Oslo School of Architecture and Design (AHO) in Norway and leads the ERASMUS+ funded project FUEL4DESIGN. He researches various domains of design, including futures design and education.

**Manuela Celi** has a PhD in Industrial Design and is an Assistant professor at the Design Department, Politecnico di Milano. Recent research concerns design future-oriented practice and Advance Design (*Advanced Design Culture*, Springer, 2015). She coordinated the FARLB basic research project TREND hub on deepening trends in design practice.

**Laura Cleriès** has PhD in Materials Science (UB), is a designer and Head of ELISAVA Research and Director of the Master in Design through New Materials. Current work focuses on futures research methodologies, as well as in materials innovation.

**Palak Dudani** is a systems-oriented designer and researcher with an interest in culture, social systems and future of urban life. A recipient of two international fellowships, she has a Master’s in Design (AHO), and has previously worked with humanitarian aid organisations and start-ups.

**Acknowledgements:** This paper is an outcome of the FUEL4DESIGN project (Future Education and Literacies for Designers) (www.fuel4design.org) funded by the ERASMUS+ Strategic Partnership Programme of the EU (Grant Agreement 2019-1-N001-KA203-060181). The project members are: Oslo School of Architecture and Design (AHO) (project leader, Norway), ELISAVA (Spain), Politecnico di Milano (Italy) and University of the Arts (UAL) (U.K). We would like to thank the anonymous conference reviewers together with our colleagues, students and participants who contribute to the project’s dynamic present and futures.
Authorship and automation in digital design culture

Giuliano Galluccio
DiARC - Dipartimento di Architettura, Università Federico II di Napoli
giuliano.galluccio@unina.it

Abstract | The nature of the transformations produced by the diffusion of digital technologies within design, production and construction in architecture is radically reconfiguring the architect’s role as “author”. The contribution aims to analyze the cultural implications of this assumption, examining the consequences that both building process management systems, such as Building Information Modeling, and parametric form-finding strategies by algorithm-based technologies are affecting the traditional authorial model in architectural practice. The text compares some significant theoretical positions and design experiences to highlight the epistemological changes in contemporary approaches to design process which, from an eminently intellectual activity that can be traced back to the work of a single defined author, is seemingly shifting to a different authorship that operates in a collaborative environment, thus determining a co-evolutive relationship between man and computer, to which is delegated an increasingly wide range of autonomy.

KEYWORDS | AUTOMATION, AUTHORSHIP, BIM, PARAMETRIC DESIGN, DIGITAL ARCHITECTURE
1. Introduction

Since their first diffusion in the ‘70s, ICTs in construction industry are becoming a consolidated reality and are today experiencing an even wider adoption. Despite many researches, by the second half of the last century, were already underway to investigate the relationship between computer science and architecture (Russo Ermolli, 2020), the development of computational machines to process ever increasing amounts of data at lowering cost is allowing digital technology to find application where the growing complexity of design-related issues, together with the fragmentation and the raising number of actors and of specific skills involved in the construction industry, is expressing a demand for change in design process management (Campioni, 2017).

Indeed, the “atomization” of the building supply chain seems no longer suitable to deal with the general need of construction quality, especially in consideration of the technical potential of file-to-factory technologies and computational design processes, which are leading to the progressive dissolution of traditional professional figures and are shrinking design with its implementation, bringing conception and production together and making the design, engineering and construction phases more interdependent. In their overlapping, therefore, digital building processes are increasingly configured as activities of "complex thinking", characterized by being dialogical, as a result of an interdisciplinary comparison that goes beyond the specificity of one single discipline; hologrammatic, incessantly animated by the comparison between the whole and its parts; recursive, so that the sequencing of phases is replaced by a reiterative deepening, in which each local update involves a global modification, and vice-versa (Morin, 1977).

Hence, digitalization implies profound transformations in design culture, changing the identities of the operators involved and their mutual relations, the tools used for design concept, development and management and, eventually, the goals of the building process itself.

2. Digitalization and the role of authorship in design practice

2.1 Digitalization between informatics and information

According to Lluis Ortega, the dissolution of authorship caused by the progressive automation of design processes is one of the main issues emerging from the introduction of digital technologies in architecture. Digital is undoubtedly a "challenge" for established praxis in the construction industry, which is impossible, in any case, to ignore: whether it is considered, as a mere instrumental update, to be devoid of a substantial cultural impact on architectural practice; whether it is understood as a communicative medium with an influence on the whole design process, from conception to realization, up to the introduction, already in the heuristic phase, of automatic thinking and artificial intelligence procedures; eventually, whether it is associated, as a co-evolutive system, to a new way of
considering the relationship between designer and computer, whereas man and machine collaborate in an epistemic extension of design (Ortega, 2017). Among these paths, undoubtedly the most debated in contemporary design is the latter, which opens to the understanding of the different ways digital can take within design processes, in terms of morpho-technical exploration, design optimization and performative control. Moreover, it is above all the presence of data, in ever raising quantities and of increasingly quality, to require the designer's ability to extrapolate those "structures" of information that, regardless of the technological nature of the tools in use, have always been essential for communication within the ecosystem of operators responsible of design’s physical realization.

Engelbart describes, in the Sixties, an "augmented architect", foreseeing some of today’s topical elements: the importance of data and information; the relationship between man and machine in terms of demand and response; design as an automated creation of multiple scenarios. In this vision, the architect’s figure seems to hover between the observer and the examiner of different options deriving from the automatism of computational systems’ generative potential, which replaces the representative capabilities of traditional tools (Engelbart, 1962).

In this sense, the very cognition of digital, from a "tool" to mere speed up operational processes, is evolving towards a greater awareness of how it constitutes a design "ecosystem", within which computer is no longer just an object, but it’s rather becoming an "intelligence" with which architects can start a real dialogue, based on a grammar of data and information. In this way, we can consider the emergence of the potential attributed to digital design tools and the transformation of designer’s role closely related to each other. Digital in architecture would even trace new epistemic boundaries of design disciplines, proposing itself as an alternative value system to traditional principles of design culture, reframing a unique cultural environment.

In this regard, Negroponte underlines that the difference between "computerized" (merely digitalized) and "computer-aided" processes lays the foundations for a "New Humanism", in which human being can "exploit the unprecedented potential of computers to create and solve problems in a completely different way, collecting and analyzing in a short time a huge amount of data and using new techniques and tools to guide and improve the design and quality in construction, in order to save time, money and reduce waste of materials and resources" (Negroponte, 1969; 1995).

2.2 Digitalization and Automation as a style

The ease, made possible by the first CAD systems, to create complex geometries from curves generated as interpolation of control points (Spline) and the subsequent manipulation of surfaces with multiple curvature degrees (Nurbs) triggered the birth of a proper architectural style, known as "Parametricism". For Patrik Schumacher, "Parametricism" was born out of a global convergence, rooted in digital animation techniques and programming methodologies
(scripting), configuring itself as the latest style to succeed the Modern Movement, pointing out the effects that digitalization would have on the way designers work and their formal results (Schumacher, 2009). As a style, defined by the aesthetic outcomes of his process, Neil Leach questions the meaning of terms such as "digital design" or "digital building", referring to objects and artifacts that can be recognized in terms of style. According to Neil Leach, digital can be related to certain types of tools, as well as to certain types of processes that lead to the definition of a project: a building can be designed through digital methodologies and tools, but, as a physical fact, it cannot be defined itself as digital. Digital could therefore not be related to an architecture, a product, but rather to a process, or to the tools allowing to operate in that process (Leach, 2015). From a stylistic, and therefore phenomenological point of view, Leach wonders whether a building produced by digital processes could be defined digital, and what characteristics do these methodologies attribute to digital architecture, to "digitalism" or "parametricism", so that it is stylistically recognizable and referred to digital architecture. The Guggenheim Museum in Bilbao (Figure 1) and the Disney Hall in Los Angeles (Figure 2), both works by Frank O. Gehry (recognized as one of the inspirers of the parametricist movement), present similar stylistic traits, although they were built in two different decades (in 1997 the first; in 2003 the second) and were designed using completely different instruments.

Figure 1. Guggenheim Museum Bilbao designed by Canadian architect Frank O. Gehry and inaugurated on 1997.
Calling into question the theory of affordance (Gibson, 1979), Leach addresses the birth of digital architecture to a misunderstanding of the role assigned to digital technologies, which might allow innovation in architecture, but only in an indirect way. The question, in these terms, is about the new relationship established between meaning and signifier, that is, to a perceptual mechanism: an architecture may be considered digital if, from an aesthetic point of view, we find it as the result of a digital process, thus it is possible to make a transliteration from the technique that contributed to its creation to its phenomenological and stylistic characteristics.

Scott Johnson poses two questions about this: the first is the possibility that designers may begin to think differently because of the use of digital tools in design, and the second, consequently, is if the very outcomes of digital design processes should seem different, i.e. whether the digital has phenomenological characteristics that can be read as such, regardless of the awareness of the process that led to its creation. In the form of "binary oppositions", in which two representatives of "yes" or "no" present their positions, Scott Johnson's contributions do not give an univocal answer, but rather the sense of a debate that, to date, is still ongoing (Johnson, 2000). Yet, it shows how digital in architecture is often
read in terms of design aesthetics, determined by our understanding of digital processes, rather than design knowledge.

2.3 The Author as a Selector

Computational design allows a different transposition between thought and action, between reading and interpretation of phenomena, opening the possibility to analyze multiple scenarios in search of a wide range of solutions. The shift to a simulative paradigm from a representative one (Ross Sheer, 2014), driven by the rise of computational tools of form-finding and topological optimization as well as file-to-factory production systems, has lowered the access threshold to the exploration of unusual morphological solutions, resulting from evolutionary and selective processes (Frazer, 1995). In these cases, the traditional approach, typical of the authorial design method derived from the Renaissance tradition and based on the priority of design over its physical realization, seemingly loses its centrality in view, on the one hand, of the collaborative logics supported by the diffusion of BIM-based simulative platforms, on the other hand, in the forehead of the growing weight that automation assumes in computational processes. In this sense, the contribution of digital machines and software is topical, as they "are devices to get together wide design freedom and strict control over creative outcomes" (Corbellini, 2016). If in the first case this is made possible by the "automatic feedback" that parametric design systems, based on algorithmic scripts, can manage in the relationships between local and global modifications in the model, in the second case an ambiguous cause-effect relationship of generative processes emerges, in which the "cultivation" of forms assumes autonomous and random connotations, while the role of the designer is to check the plausibility of the "fruits" of these evolutionary mechanisms. One of the most interesting examples of recent years is, in this sense, the MaRS project, developed by the Living Lab design unit of Autodesk (2017; Figure 3, 4, 5).

The reconfiguration of the new offices at the Innovation District in Toronto has been led through the generation, evaluation and evolution of thousands of different design solutions, developed by the computational power of visual programming software according to the interaction of multiple constraints.

In Notes on the Synthesis of Form, Christopher Alexander already warned about how design problems of such complexity risk remaining unresolved, rather discouraging designers and leading to arbitrary solutions (Alexander, 1964): the post-digital era designer is confronted with a selective process in which the risk is to make a choice that, eventually, finds its justification not in a logic based on the evaluation of results, but rather in the very fact that it has been made. Digital design should, instead, always be the result of a considered choice, albeit among a wide range of possible outcomes. These solutions, however unexpected they may appear, are the result of a research driven by the designer himself, who has the task of "freezing" a configuration, in the "infinite" generative dynamism of algorithmic systems, establishing when the design process is really "finished" (Mitchell, 1990).
Figure 3. The Autodesk new offices project in the Toronto MaRS innovation district exploited the potential of generative architecture design, introducing qualitative assessment systems in the quantitative processes of space programming. The power of computational systems has allowed to generate, evaluate and evolve thousands of design options, in order to satisfy all the performative architectural requirements.

Figure 4. In the case of The Living project, an advanced unit of Autodesk for research and development, the many parameters involved (acoustic comfort, solar lighting, visibility, aggregation preference, minimization of disturbance factors, etc.) worked as input drivers,
selected by the architect, for the generation of thousands possible outcomes, selected by the software.

Figure 5. The well-being of workers was the declared design goal: new ways of working required new ways of designing working places.

If, according to John Chris Jones, digital represents the key to a scientific reconfiguration of design process, through which overcome the artisanal paradigms of "trial and error" also typical of heuristic design processes (Jones, 1970), according to Chris Anderson digital would open the door to an epistemology based on algorithmic, abductive and non-causal methods (Anderson, 2008), which, as Mario Carpo points out, allow to consider a computer not as a good engineer, but as a good craftsman. The main feature of digital design methodologies is in the possibility of "searching without sorting", delegating to the analysis potential of computers the burden of verifying infinite design solutions to allow the architect (a sort of post-digital craftsman) to select the “best fit” according to automatic procedures, but also to his own sensibility (Carpo, 2017).

3. Sharing authorship between Automation and Collaboration

3.1 The Authorship of processes

The multiplicity of agencies involved in digital processes, in which the traditional disciplinary boundaries dissolve in the wake of an ever-increasing demand for innovation, implies first of all, as Giovanni Corbellini observes, a greater weight assigned to process than to design itself, often explicitly manifesting its role through the emphasis on the use of diagrams,
schemes, simulations and analysis in the formulation of operational strategies, opening the doors of the so-called "project kitchen". Corbellini affirms: "What was once jealously hidden today is made explicit; in other words, the processes of conception and negotiation with reality have reached an importance comparable to that of their formal outcomes and physical concretization itself" (Corbellini, op.cit.).

While the movements associated with parametricism, as postulated by its theorist Patrick Schumacher, aim to explore the morphogenetic potential of computational tools through the use of selective and evolutionary criteria for the implementation of form-finding processes, BIM-oriented tools have evolved from a mere managerial system to a real collaborative, integrated and simulative design tool, in the direction of an increasingly effective control of the building process in relation to a closer link with industry and standardization. From a systemic, object-based point of view, such as BIM, one must "start with the end in mind". That is, if in this case emerges an absolutely teleological view of design process, in Bruce Mau's vision, for example, design should keep completely heuristic. As Bruce Mau affirms: "the process is more important than the result. When the result guides the process, we will only go where we have already been. If the process drives the result, we may not know where we are going, but we will know that that is where we want to go" (Mau, 1998). In this sense, Ortega notes that: "Computer's capacity to serve as a mediator between designer and design turns the designer into a controller of controls, a catalyst, a meta-systematizer. Instead of a deductive linear teleological process, design becomes an inductive process with a systematic and circular approach that feeds back into itself and prioritizes performative aspects over that which is merely descriptive" (Ortega, op.cit.).

### 3.2 The Authorship of Objectile

The possibility of generating infinite design variables by the increased computational power of the computers available today allows designer to pose himself in a completely new way towards the role of automation. Architect seemingly acts as a selector of alternatives generated by the automatic combination of parameters that designer himself has decided or deduced from the results of computer-aided simulative evaluations. According to Bernard Cache's definition, in turn borrowed from the book that Gille Deleuze dedicated to Leibniz and the Baroque, the architect is no longer an author of objects, but of "objectile", i.e. systems of variable relationships that change according to the variation of the informing parameters (Deleuze, 1988; Cache, 1998). As Ortega writes: "Parametric systems mean that designers develop algorithms rather that objects. The model of the designer as author of objects is replaced by the model of the designer as author of objectiles. The term objectile (or "object-matter") is contrasted in geometric terms to the concept of subjectile. The second has to do with open surfaces, while the first has to do with closed surfaces or solid volumes. Objectile designates non-standard objects, which are variable and numerically designed". On their participation in the exhibition Non-Standard Architecture, inaugurated at the Georges Pompidou Centre on 10 December 2003 (Figure 6,7), Bernard Cache and
Patrick Beaucè proposed a theoretical manifesto, "Vers un mode de production non-standard", which states that "the writing of software is at once the major genre of contemporary culture and at the same time the privileged terrain of a confrontation of the forces which organize production in our societies" (Cache & Beaucè, 2007). Considering the actual rise of AI and the worries about a progressive automation in decision-making, the first generative design experimentations in the 2000s pose a relevant question about sense-making in computational design processes, which seems strictly related to the role of designer and his awareness about consequences of digital technologies in the construction ecosystem, in the socio-economic contexts and in urban planning.


Figure 7. NOX (the Netherlands), Lars Spuybroek. SoftOfficeUK, Warwickshire, UK, 2000-2005. “Non-Standard Architecture” exhibition, Paris, 2003-2004. The aim of the exhibition “Non-Standard Architecture”, was to investigate how the “digital chain” is likely to change the whole economy of architectural production, from conception to
realization, with social implications in the establishment of new relationships between designers and performers and between designers themselves (Donà, 2004).

In spite of an aesthetic and stylistic recognizability of digital processes in architectural works, it is legitimate to dwell, as Bernard Cache does, on the real need to contribute to these "metamorphoses", beyond the technical possibility of doing so: "Under what conditions can a term like non-standard architecture have meaning? Perhaps it is easier to begin answering in a negative way. If, indeed, non-standard architecture consists of generating more or less soft surfaces which will be then called a building by transferring them to a battery of production software in order to create very expensive kinds of sculptures which no longer have any relation to the historical and social sedimentation that makes up a city, then we are only perpetuating the Romantic myth of the artist-architect" (Beaucè & Cache, op. cit.).

3.3 The Authorship of the Many

As described by Carpo, Cache and Deleuze’s objectile theory implies a "multi-layered" model of authorship, or "split agency", where there is a so-called principal author, the creator of the generative algorithm, of the first genetic code of the design, and a theoretically infinite number of other authors who interact with it and modify its parameters with the original models’ variables. In this way, the “first” author has the task of establishing the model variability and the range within which its values can be modified, while the others can adapt the model to local needs (Carpo, op.cit.).

In the same technical definition of parametricism, therefore, there is a crucial reconfiguration regarding authorship: if algorithmic design is based on the creation of variable systems, who does materially design each variation and who will choose the best solution? At the dawn of the so-called "Web 2.0", it was considered that the best vehicle to share responsibilities was the mutual collaboration through the participating actors, whose role would tend to transform as the very sequentiality of the processes abandoned a telescopic development through linearly organized phases in favour of an iterative circularity of exchanges and sharing of responsibilities. The possibility to leave every decision to a Google-like search of already existing solutions, no longer through science but through searching, places the architect’s role within a sort of collective intelligence (Levy, 1994) for which the value of the most recurrent element among a group constitutes itself the best solution.

Since the nineteenth century, with the first industrialization and the birth of specialized engineering professions, building became an activity denied to the community because it was no longer linked to artisanal crafts, but to industrialized practices of the mechanistic era (Nardi, 1986). This led to the birth of new professional figures who had to carry out distinct activities and, at the same time, as Tomàs Maldonado outlines, the shift of the "creative will" of people towards the “phenomenon of patents” (Maldonado, 1992), of which the maker movement seems to be a revival. In the same way, as Mario Carpo notes, the evolution of BIM Based collaborative platforms, file-to-factory production systems and digital mass
Customization are determining a widening of the concept of authorship in architecture, which had remained substantially unchanged since Leon Battista Alberti, in his *De re aedificatoria*, marked the difference between the architect and the master builder. As Carpo wrote: "The family of software known as Building Information Modeling (BIM), originally a management tool used to facilitate cost estimating and the exchange of information between architects and contractors, is fast becoming a fully-fledged design platform, and imposing its collaborative logic on all involved. BIM’s faster, interactive feedback loop between designers and contractors transcends the traditional separation between conception and execution inherent in the Albertian model and embedded in most current business models. Yet digital designers, who so often resent - more or less overtly - the diminishment of their modern authorial privileges, appear to be keen to envisage a lesser degree of design determination when this is to the benefit of a higher order of indeterminacy, which they often like to attribute to nature itself" (Carpo, 2012).

4. Conclusions

Rather than a sudden "force of nature" to be resigned or opposed to, digital should be understood as a phenomenon, the result of a long evolution, to be "shaped" through an informational interpretation that allows to transfuse in the contemporary age the centuries-old legacy of knowledge, practices and techniques of the "oldest discipline in the world". Digitalization has involved in the same way both professional and industrial realities of recent birth and those more deeply rooted (Russo Ermolli & Galluccio, 2021; Figure 8). The cognitive principles underlying digital technologies do not arise from the use of computer devices, but could allow digital to trigger a transition in construction industry, rather than a revolution, taking into account the peculiarity of a sector characterized by the coexistence of established traditional practices and structures and methods typical of advanced industry. The integration of digital culture within the consolidated processes of design, production and construction seems a matter of identification of languages and techniques according to their acceptability from the culture of our time, assessing the risk that, in the wake of a "positivism" in digital key, the discomfort and alienation that has connaturalized the relationship with architecture in post-industrial society.

The complexity of design instances and the collaborative nature of the new digital tools for integrated design stimulate an open approach to innovation, starting from the dynamics that exist between the different operators throughout the supply chain. In this context, in spite of the fatalisms that follows the rise of Artificial Intelligence and computational automatism, the role of the designer is crucial, for he assumes the task of evaluating the conditions of innovation sociotechnical acceptability: a human, ethical and political sensitivity at the same time, particularly aimed at intercepting vectors of transformation in changing and emerging contexts.
Figure 8. New Toronto Courthouse, Toronto, by RPBW (2016). Even within a long-term architecture firm such as RPBW, where the artisanal and personal sense of authorship is deeply felt, BIM-oriented collaboration has allowed to take into account the different specific skills required, helping to create an effective outcome resulting from a collaborative sharing of design responsibilities. BIM, digital design and file-to-factory processes are integrated in the Workshop’s workflows, which continue to evolve through a critical selection by architects of the most advanced technologies.

References


**About the Author:**

**Giuliano Galluccio**, Ph.D. student in Architecture at the Department of Architecture, Università degli Studi di Napoli Federico II, is involved in researches about the role of Information Management for the optimization of design, production, construction and management processes of the built environment.
Banham’s ‘Unhouse’ as Anti-Interiority: Towards Twenty-First-Century Theories of Design and Domesticity

Dr. Helen McCormack
The Glasgow School of Art
h.mccormack@gsa.ac.uk

Abstract | The British architectural historian, critic and writer, Reyner Banham, formed the concept of ‘unhouse’ in a period of intense technological transformation during the middle years of the twentieth century. His unhouse proposed the seemingly radical idea to dematerialize the walls and roof of a house, to remove the strictures that tie buildings, and thus people, to the encumbrances of what he termed: ‘the dead weight of domestic architecture’ (A Home is Not a House, 1965). This paper situates Banham’s unhouse within a category of dominant architectural and design theory that suppressed or diminished the importance of interior spaces and their relevance to human wellbeing and social relations. It suggests that in exploratory designs from contemporary projects, including Philips’ Microbial Home (2011) and Superflux’s Mitigation of Shock (2017-19) the designers create immersive experiences in future interiors, pointing to the development of new theories of design and domesticity in the twenty-first century.

KEYWORDS | BANHAM, UNHOUSE, TECHNOLOGY, DOMESTICITY, INTERIORITY
1. Introduction

When the British architectural historian, critic and writer, Reyner Banham, proposed the concept of the ‘Unhouse’ in 1965, it appeared to be the inevitable conclusion to a number of themes and ideas that he had been researching, writing and commenting upon for many years. In his essay, ‘A Home is Not a House’, published in *Art in America*, in 1965, Banham argued that technology was now able to provide the answer to human needs and therefore the idea of what constituted a home was not necessarily a house, or a building. His Unhouse proposed the seemingly radical idea to dematerialize the walls and roof of a house, to remove the strictures that tie buildings, and thus people, to the encumbrances of what he termed: “the dead weight of domestic architecture.” (Banham, 1965, p.73)

Banham had been ruminating on the promises of technology and the implications of this on new ways of living in the middle of the twentieth century. He had previously feared the demise of the Modernist project in Italy, where he had criticised architects and designers in that country for reverting to architectural styles of the previous century. Referring to this ‘backlash’ as Neoliberty, Banham highlights how design styles such as Art Nouveau had become anachronisms in the twentieth century; such forms had been replaced by technology, he argued:

“Art Nouveau died of a cultural revolution that seems absolutely irreversible: the domestic revolution that began with electric cookers, vacuum cleaners, the telephone, the gramophone, and all those other mechanized aids to gracious living are still invading the home, and have permanently altered the nature of domestic life and the meaning of domestic architecture.” (Banham, 1959, p.235)

Therefore, by 1965, Banham had already imagined how modern technology would replace the need or desire for any historical or historicising architectural or design styles, promoting the work of avant-garde artists and designers, such as Alison and Peter Smithson, in Britain, before turning his attention to the work of modern architects in the United States of America. ‘A Home is Not a House’ is the culmination of these ideas, suggesting that buildings themselves would become obsolete in the near future. Presented as an accumulation of technological services, including landscape flood lights, TV and stereo speakers, radio and tape deck, electric cooker and refrigerator, the unhouse would cater for all essential human needs, providing a convenient and transportable ‘standard of living package’. Combined with a ‘power membrane’, which would furnish a curtain of hot or cold air around the Unhouse, the design proposed that the exterior building or fixed structure might be dispensed with altogether. (Banham, 1965, p.77)

While recognized as deliberately provocative and slightly eccentric at the time, Banham’s ideas have acquired a certain currency again, in the early years of a new century, in a similar period of immense technological transformations. Faced with the challenges of climate change, mass movement of people, and globalized economic systems, the Unhouse, which suggested new features of solar power, natural insecticides (the universal pest lure and deconstructor) and environmentally-friendly noise reduction or anti-noise pollution,
demonstrates certain practices of sustainable design behavior that has influenced some recent architects and designers, perhaps most notably are those architects and designers engaged in speculative or critical design projects and methodologies.

Overall, however, the Unhouse does not represent a freeing up of humans from their environment, with a low-cost, itinerant lifestyle choice. Rather, this paper proposes that Unhouse exists within theories or ideas that might be described as ‘anti-interiority’, themes that originate within Modernist architecture and that have been challenged over recent decades. (See, for example, Reed, 1996. Colomina, 1996, Sparke, 2008, Hollis, 2018, Bachelard, 2014). It situates Banham’s Unhouse within a category of dominant architectural and design theory that suppressed or diminished the importance of interior spaces and their relevance to human wellbeing and social relations. This paper argues that architecture and design in the twenty-first century, whilst acknowledging the prescient nature of Banham’s concept, accounts for the significance of social meanings that are ascribed to the interior. For example, in exploratory designs from more contemporary projects, such as Philips’s Microbial Home (2011), and Superflux’s Mitigation of Shock (2017-19), the designers seek to create immersive experiences in near future interiors. Subjective encounters with internal spaces are incorporated with much thought and consideration for human patterns of behavior; of domestic rituals, self-sufficiency, comfort and embodied materiality. Banham (and others) sought to expunge the interior of historical ‘weightiness’ but in doing so merely avoided the intrinsic, and sometimes, difficult nature of our relationship to our interiors, and the ways in which physical interiors are not simply reflective of our personalities but are, importantly, the summation of our interiority as human beings.

In his biography of Reyner Banham, Nigel Whitely describes the Unhouse as a shift from “form and hardware to service and software.” (Whitely, 2003, p.208). Effectively, Banham might be said to be simply repeating Modernist attitudes to domestic life in the interior, as elements of our being that ought to be streamlined, updated and restructured, in an: “almost universal expendability.” (Banham, 1965, p.79). The Unhouse neglects or deliberately rejects consideration of the ‘mess’ and subjectivity of life in the domestic interior as this was not an important factor in the delivery of new technologies. However, the opposite might be said today as domestic technologies are grounded in user experiences and are described in this paper to explain how new theories of interior space are emerging from architecture and design practices engaged with the many layered meanings of interiority, embracing the significance of ‘home’ that Banham and others appeared to overlook.

2. Philips’s Microbial Home 2011

Philsps’ Microbial Home project in 2011 proposed a cyclical consumption/production process that returned the space of the kitchen to the sorts of sustainable functions familiar to nineteenth-century homes, with home-grown produce, minimal waste and often
incorporating the raising and slaughtering of home-grown livestock. The concept for this kitchen is far removed from the industrialised efficiency of the Frankfurt Kitchen, the prototype for all modern kitchens subsequently, concerned with the speed, productivity, and accuracy within which a housewife could carry out domestic tasks. (See designs by Margarete (Grete) Schütte-Lihotzky, 1926-1927). Not only is the Microbial Home probe striking in its rejection of serialized, systematic tasks, but its design concept foregrounds human-centred actions that place significance on domestic activities often associated with ‘chores’ and suggests empathetic attitudes that relate to domesticity as lived experiences. For example, in their press release, Philips describe:

“Using a variety of tools, the group started to define a design direction for more “human” appliances. The result was a “new domestic quality”, with characteristics such as “affection”, “ritual”, “reliability” and “ease of use”. These factors were used as criteria to assess designs throughout the process. And it was decided that four products were to be made. Not lookalikes but individuals with certain resemblances.” (Philips’s Press Release 2011).

The purpose of Philips’s Microbial Home is to suggest new ways of creating sustainable, energy-efficient, homes that reconnect humans with the natural environment. The probes designed consisted of: a bio-digester kitchen island that would breakdown human and vegetable waste, producing and capturing methane gas that would then be used to light the kitchen; a larder in the form of a large preparation and/or dining table that incorporated a central section, divided into smaller compartments for storing fresh food, this would be cooled by evaporation, another by-product of the bio-digester system; a machine called a ‘Paternoster’ that would grind down biodegradable plastics, incorporating mycelium, a fungus used to speed up decomposition, and that would, in turn, produce edible mushrooms; a beautiful sculptured glass beehive, or ‘urban beehive’, that allows the viewer to watch the bees build natural honeycomb and harvest the honey produced.

All of these different components are free-standing, although they are interconnected by their shared function of recycling of waste and energy, each piece of furniture is autonomous, reminiscent of kitchen or household furniture before the introduction of modern ‘fitted’ kitchens. While these objects present rather strange, almost anachronistic shapes and structures, with one British newspaper reviewer commenting that Philips’s design represents a ‘Steampunk’ kitchen style, it is the language used by the designers to describe this project that is most pertinent here. (McGuirk, 2011). In the twentieth century it would be difficult to imagine kitchen designers placing such significance on words such as ‘ritual’ or ‘affection’ and the emphasis placed on a ‘new domestic quality’ signals a shift in attitudes to the ways in which domestic life is considered in current design practice. Philips’s designers attempt to re-introduce gas lighting to the modern kitchen, an obsolete technology which, by necessity, may require to be utilised in the future. However, the glimmering, soft glow emitted from the gas mantle over the dining room table of the microbial kitchen seems appropriate, enhancing the features of the ritualised performance of ‘slow’ dining in a sustainable household. In this sense, Philips’s Microbial Home
incorporates many features associated with domestic life before Modernism’s rationalizing processes sought to eradicate the ‘wasted labour’ expended on washing up, preserving and preparing food, sweeping, dusting, and dealing with waste more generally. In the twenty-first century, architects and designers are revising attitudes and proposing solutions to these domestic tasks in order to counter the unsustainable practices ushered in by Modernism’s obsession with technological answers to human inconveniences. (Dilnot, 2011, pp.119-121).

In doing so, architects and designers are considering the social elements of life in the domestic space; those kinds of activities that Modernists tried to disassociate with a productive home life, the routines of housework familiar to many women in particular, and how these connect to durational processes of familial bonds and relationships.


While Philips’s Microbial Home represents working prototypes, functioning objects that propose future real-life solutions, Superflux’s project, Mitigation of Shock (2017-2019) applies methodologies developed by critical or speculative design, to imagine near future scenarios but based on current reliable data. (Dunne and Raby, 2013, pp. 2-3). Superflux chose the domestic interior as a space to imagine a how human life will be sustained in the near future. The focus of the project was a typical London apartment in 2050. The designers describe their aims to create an interior that is both familiar and unfamiliar:

“We built an entire future apartment situated in the context of climate change and its consequences on food security. People could step inside this family home and directly experience for themselves what the restrictions of this future might feel like. Instead of leaving visitors scared and unprepared by the challenges of this world, we shared methods and tools for not only surviving, but thriving there”. (Superflux, 2017).

With Unhouse, Reyner Banham also imagined the near future, where technology would answer to every human need, helped along with one or two ‘natural’ processes, such as a Darwinian ‘pest lure’ which would eradicate any bugs and other wild creatures that might try to cross into the perimeter of the Unhouse by means of capture and natural destruction between prey and predators. Little did Banham imagine that in 2050, insects and other small mammals would be encouraged into the home as a vital food source, as speculated by Superflux.

Banham’s Unhouse was clearly a product of his own political and social beliefs that humans should be liberated from the encumbrances of property owning, home maintenance and the historical burden that home ownership entails. His counter-cultural generation embraced a whole range of new experiences that liberated them from the constrictions of previous generations and while Unhouse might appear to offer the owner of a ‘standard of living package’ a nomadic lifestyle, situated within open country, offering individuals the opportunity to be ‘in nature’, the extent to which Banham attempts to obstruct nature in the
Unhouse is surprising. For example, the most extraordinary feature of the project might be the 'Power Membrane':

“The basic proposition is simply that the power-membrane should blow down a curtain of warmed/cooled/conditioned air around the perimeter of the windward side of the Unhouse, and leave the surrounding weather to waft it through the living space, whose relationship in plan to the membrane above need not be a one-to-one-relationship”. (Banham, 1965, p.77)

Of course, this incredibly wasteful use of energy, even if it is imaginary, is typical of the kind of drain on natural resources that Clive Dilnot describes in his history of how we became unsustainable. (Dilnot, 2011, pp.119-121). No such luxury of resources is afforded the inhabitants of Superflux’s 2050 apartment. First exhibited at the Centre for Contemporary Culture in Barcelona, in 2015, the design of this apartment foregrounds the interconnections between humans and the natural world. As with Philips’s Microbial Home, the future sustainment of human life will depend on bringing nature into the home, cultivating crops, growing vegetables, and sourcing alternative food stuffs, including roadkill and snaring urban animals. Much of the living space in the apartment is given over to enormous computers that monitor the growth of these domestic crops, using hydroponics and fogponics, methods of growing crops that use a minimum of water and energy. The apartment hums with the noise of primitive technology (hacked together from everyday consumer items and outdated computers), the lighting is harsh, projecting a clinical, purplish glow throughout the apartment. Superflux managed to grow mushrooms, cabbages and chillies, among other vegetables, in this space and there are scattered signs that sourcing other kinds of food preoccupy its inhabitants, ‘city foraging, breeding mealworms, and canning foodstuffs’ are all part of domestic life in this place. Superflux explain that their project is intrinsically hopeful, despite its dystopian vision:

“By focussing on a residential space in an urban environment in the Global North, we were able to communicate with demographics who have the capacity to minimise climate change by changing their current patterns of consumption and who might assume they won’t personally be impacted by the effects of climate change.” (Superflux, 2017)

The constructed interiors of the apartment reflect this statement by Superflux, they have been designed to look very much like an ordinary ‘open-plan’ London flat:

“Once a comfortable living space designed for a world of automated living, global trade and material abundance, the apartment has been adapted to a future it was never meant to inhabit … Scattered around the apartment are fragments from a future that never quite materialised”. (Superflux, 2017).

Despite this unintended purpose, the apartment maintains an atmosphere of optimism, of family life continuing on in this space, with children’s toys placed alongside daily newspapers displaying headlines warning of impending food shortages. The well-used sofa, discarded clothes and mugs of just-finished drinks also indicates that people inhabit this place, people
who are thriving and not just surviving. Importantly, and in contrast to Reyner Banham’s future vision, in this space, where the word outside presents extreme challenges, the emphasis is not on a ‘standard living’ or basic living idea, but on the ways in which humans might adapt to different kinds of existence while, at the same time, nurturing close human and non-human relationships. Banham’s world is very much that of the single man and he emulates a ‘bachelor lifestyle’ in his Unhouse, unhampered by any sorts of dependents such as children, elderly relatives or even pets. In the Unhouse technology makes the fantasy of the 1960’s single, male lifestyle achievable:

“But a properly set-up standard-of-living package, breathing out warm air along the ground (instead of sucking in cold air along the ground like a campfire), radiating soft light and Dionne Warwick in heart-warming stereo, with well-aged protein turning in an infra-red glow in the rotisserie, and the ice-maker discreetly coughing cubes into glasses on the swing-out bar – this could do something for a woodland glade or creek-side rock that Playboy could never do for its Penthouse.” (Banham, 1965, p.76)

Such a standard of living package may seem luxurious but its focus remains on meeting basic human needs and, in this instance, the basic living needs of a single male with aspirations to live an alternative lifestyle whose understanding of this seem as conventional and mainstream as any other, slightly hippy, single male of the period. With hindsight, Banham’s goals for his standard of living package are hardly radical at all. Fifty or so more years later, it is Superflux and other twenty-first century designers and architects who are proposing radical solutions or responses to real world problems. Encountering the apartment in Mitigation of Shock, the viewer or participant understands the significance of the interior to the wellbeing of its inhabitants, not just as shelter from the elements, but as a space that exists as a consequence of human and non-human co-dependence, within the walls of this fabricated interior are the combined hopes for the existence of living species, orchestrated and coordinated by human beings’ potential for empathy and compassion, encouragement, development and adaptability. What is sometimes referred to as human-centred design is palpable in Mitigation of Shock, whether intentional or unintentional, as the designers state:

“Whilst the project is based on gaining better understanding of the ground level implications of global warming, it also acknowledges coexistent trends and forces such as infrastructure, transport, energy, water, housing, individual tech savviness, autonomy and agency of communities, amongst others. The ensemble of these core influences skillfully manifests within the finest details of the space, pointing out the complexity of the projected future world and the interdependencies between various game-changing factors.” (Superflux, 2017)

In fact, Mitigation of Shock reveals a sharp of awareness by these designers of the meanings associated with ideas of the social in design. Their emphasis on ‘interspecies relationships’ and ‘direct engagement with these living entities’ account for an understanding of the social aspects of life lived within interior spaces, and the ways in which reconstructing or reflecting on such spaces need not lead to a “shrinking of definition of the social itself.” (Latour, 2005, pp. 6-9). In contrast, it might be argued, that Banham’s Unhouse, by releasing itself from the
encumbrances of home, stability, rootedness, situatedness, is deliberately ‘unsocial’, its existence needs no connection to any social meanings that are usually associated with home or interior spaces where home-life is conducted. In many ways this is a complex position as interior spaces ought to reflect the richness of our lives as social beings; homes are the repositories and animated states of our interactions with other beings and, in this sense, homes are constructed from the consequences of our existences as social beings and therefore require to be considered as expressions of our interiority, our interior lives.

4. Anti-interiority in Banham’s Writings and Unhouse

If Banham’s Unhouse is unsocial it is also argued here as inherently anti-interiority, or a deliberate attempt to overlook or not consider the ways in which buildings and their interiors shape our interior selves. In his anti-historicism, Banham is also indulging in a kind of revelry in ‘throwing the baby out with the bathwater’, neglecting to understand the emotional and visceral attachments that many of us feel towards our homes and interiors and how these, might, indeed, constitute an embodied materiality, a storehouse of all of our subjective experiences. (Ionescu, 2018, p. 2). It is clear that in forming his concept of the Unhouse, Banham was interested in progressing some of the main objectives of Modernist ideology that he understood would change society’s adherence to cultural conventions, particularly historical styles of architecture, but also to the manners and patterns of human behavior that he believed tied us to out-of-date, burdensome domestic obligations. This is demonstrated by the type of architectural influences that he refers to in his writings. For example, in his essay, ‘Neoliberty: The Italian Retreat from Modern Architecture’ (1959), he cites, Adolf Loos, Frank Lloyd Wright, Herman Muthesius, Cubist painters, as well as Futurist leader, Marinetti. He writes that Modern art and architecture makes possible:

“The promise of freedom from having to wear the discarded clothes of previous cultures, even if those previous cultures have the air of tempi felici. To want to put on those old clothes again is to be, in Marinetti’s words describing Ruskin, like a man who has attained full physical maturity, yet wants to sleep in his cot again, to be suckled again by his decrepit nurse, in order to regain the nonchalance of his childhood. Even by the purely local standards of Milan and Turin, then, Neoliberty is infantile regression.” (Banham, 1959, p.235).

As with Adolf Loos, Marinetti here casts the nurturing aspects of domesticity, of a man’s memory of his childhood nursery and the association of this with a backwards looking sensibility. Longing for the past is connected to nostalgia and infantilism; especially for Loos, as the interior spaces of previous decades, or those reflecting period styles, represent for him all that is abject and wretched about domestic life:

“His [Loos] 1903 review of interior designs by a competing architect mocked their studied tastefulness by imagining them as settings ‘for birth and death, the screams
of pain for an aborted son, the death of a dying mother, the last thoughts of a young woman who wishes to die.’” (Reed, 1996)

Loos’s now notorious essay ‘Ornament and Crime’ (1908) is an extreme attack on historicism and significantly aligns ornament with uncivilised culture and behaviors. However, Loos’ language, like Marinetti’s is expressed in a fierce anti-domesticity, and as Christopher Reed has argued, led some Modernists to suppress domesticity in all its subjectivity; as a means of revealing interior thoughts and emotions. In this sense, Reed and others have suggested that Modernists’ critique of ornament is, in fact, a criticism and rejection of interiority overall.

For Reyner Banham, writing in the 1960s, in a period defined by technocracy, the promise of new materials, new technology and international communications, appeared to offer up new ways of living which he enthusiastically embraced. Nevertheless, this paper has argued that in his zeal for an alternative lifestyle choice, he disregarded the significance of the material connections that human beings develop to our interior spaces. In recent years, challenges to Modernism’s dominance of theories of architecture and interiors have revealed the layered meanings that are incorporated in domestic interiors in particular. For many, significantly for women’s lives and associations with the interior, much has been uncovered by this reassessment of the history of domestic spaces and domesticity. Such revelations mean that for designers and architects today, the subjective experiences of lives lived in homes and houses must be considered, and the development of domestic technologies are signaling the way for very different theories of design and domesticity in the twenty-first century. As described in this paper, projects such as Philips’s Microbial Home and Superflux’s Mitigation of Shock, point the way in imagining more pluralistic theories of design and domesticity, where technology acts as a facilitator or mediator in domestic roles, acting in tandem with human and non-human activities, rather than dominating these. Unlike Banham’s Unhouse, technology in the near future will not be harnessed to exclude domestic life but to encompass home-life, reinforcing and enhancing domestic rituals, acknowledging the durational processes of daily life within the home.

When Banham writes: “Recall too the homeless, starving couple in Miracolo a Milano (1951) whose first wish was a crystal chandelier, and you know something bitter about Milanese mental processes”, he is most revealing of his misunderstanding of the nature of human needs and wants. (Banham, 1959, p.232). In her book, Crafting Design in Italy From Post-War to Postmodernism, Catharine Rossi remarks that Banham’s disparaging ‘tag’ of Neoliberty was also a misreading of the situation in Italy during the period. She explains that: “Neoliberty proponents challenged orthodox modernism’s industrial progressivism, and rejection of history but also reflected the desires of a largely middle-class market that preferred historical warmth to modernist asceticism.” (Rossi, 2015, p.108). Therefore, the emphasis that Modernists placed on domestic technologies of the future were misplaced and for many, in fact, represented an alienating experience. The opposite might be said today with the development of digital technologies that foreground human experiences in their design and production. For a younger generation of architects and designers, Banham’s Unhouse might appear to be a radical departure from conventional ideas of home and
domesticity but it is worth reminding ourselves of his generation’s attitudes to home life and
domestic obligations as the reverse of interiority or anti-interiority and of Modernist self-
denial of the intricacies and messy nature of our interior lives.

References
chamblas-francois-perrin12
Ionescu, V. (2018). The Interior as Interiority, Palgrave Communications Humanities and Social
Sciences Business, 2018: https://www.nature.com/articles/s41599-018-0088-6
London: Thames & Hudson.
Portobello Books.
Schütte-Lihotzky, M.G. (1926-1927). See http://collections.vam.ac.uk/item/O121079/frankfurt-
kitchen-kitchen-schutte-lihotzky-margarete/
Guardian, November 21.
a Project of History’, Design Philosophy Papers, 9:2, Taylor and Francis Online, pp. 119-121;
https://www.tandfonline.com/toc/rfdp20/9/2?nav=tocList
Rossi, C. (2015). Crafting Design in Italy From Post-War to Postmodernism, Manchester University

About the Author:

Helen McCormack add an author bio that describes research interests and
main achievements in a maximum of 40 words. [LEAVE BLANK UNTIL FINAL
ACCEPTANCE] [_DCs Author Bio and Acknowledgements]
Bodies of Evidence: making in/visible histories in South African Design Education

Nike Romano
Cape Peninsula University of Technology (CPUT)

Abstract | This paper explores the transformative potential of first-year design student’s co-affective encounters with ancient Greek vases within the context of calls to decolonise the academy in South Africa. Located at a university of technology, the research engages critical arts-based strategies that disrupt the Eurocentric cultural hegemony that is embedded in art and design history. Given that ceramic pot making is a familiar art form in Africa, the lesson invited students to make the own visual/written narrative vases in response to ancient Greek counterparts. Unlike mimetic exercises that reproduce the same elsewhere, the assignment afforded students an opportunity to ‘figure out’ knowledge for themselves. The process of learning-through-making had ontological affects as students positioned themselves as generators of knowledge and becoming-designers. At the same time, the paper explores the transformative potential of critical arts-based pedagogies within the current debates around decoloniality and ethical practices within design education in South Africa.

KEYWORDS | CRITICAL ARTS-BASED LEARNING, RESPONSE-ABILITY, ETHICO-ONTO-EPISTEMOLOGICAL, DECOLONISATION, DESIGN EDUCATION
1. Introduction

This paper responds to the recent South African #Rhodesmustfall and #feesmustfall student protests that called for equitable access to higher education, Africanisation and decolonisation of the academy. Concerned with developing design education strategies that seek to work affirmatively with difference, the paper critiques art and design history as disciplines that are both founded on and embody Eurocentric cultural hegemonies that are ‘embedded in both theory, institutional and pedagogical practices’ (Braidotti 2013:2). In thinking about what decolonising design might look like, the research concentrates on what content is taught and how content is taught in order to understand the ontological effects of dominant Eurocentric discourses and practices within South African Higher Education (SAHE). Accordingly, the paper draws attention to the relationship between epistemology, ontology and ethics.

The discussions around decolonising the curriculum in SAHE include an interrogation of pedagogical practices and experimentations with different modes of learning. As a design educator for example, I seek to work with art and design histories in ways that do not render those students whose indigenous knowledges and histories that have systematically been excluded to experience feelings of deficit due to lack of cultural capital (Bourdieu 1979). Moreover, contrary to deficit discourses that tend to position students as unable to deal with complexity, the pedagogical challenge becomes one of engaging open-ended processes that build students’ confidence in engaging with discourses without fear of getting ‘them’ wrong.

Grappling with the inherent paradox of working within the western art history paradigm – whilst simultaneously trying to dismantle Eurocentric cultural hegemony – is a useful starting point for the inquiry that explores curriculum and pedagogical strategies that conceptualise difference as an ongoing differentiation in which new commonalities are imagined (Thiele, 2014:202). Located in first year design theory course at the Cape Peninsula University of South Africa (CPUT) the case study describes a pedagogic intervention that invites students to think-make with ancient Greek vases in order to draw attention to their subjectivity in relation to the ancient objects. In/formed by Roth’s (2014) post-constructivist curriculum*-in-the-making and Sellers’s (2014) becoming-curriculum, the intention is to position students’ lived experience as central to their learning and becoming as young designers in contemporary South Africa. In paying attention to these co-affective encounters, I think with Oliveira who proposes a decolonizing ontological framework that posits design as a “socio-technical mechanism of inquiry, re-enunciation, and re-narration” that is not only directed at “looking back and re-framing certain material practices” but is also “a project of understanding the relationality of things beyond their mere objecthood” (Shultz et al, 2018:93).

To begin, I discuss some of the complexities associated with the teaching and learning of art and design history, thereafter I provide background and context to the course that I teach. This is followed by an elaboration of the critical posthumanism/feminist new materialism
Theoretical framework in which the research is located. I then discuss pedagogical imperatives and methodological strategies before addressing the case study itself.

2. Art History Teaching and Learning

The teaching and learning of art and design history in South Africa is both a complex and ambiguous practice. As the gaze of art history shines light on the mantle of Western European superiority, so it simultaneously obliterates indigenous cultural production. On the one hand there is an overabundance of images and research to draw from within the Western canon, yet at the same time there are gaping holes of absence of history here at home. It is within these lacunae that the research explores co-affective encounters with art and design history with a view to making visible students experiences and knowledges and showing how these knowledges are central to their learning.

Following Kiem’s conception of “decolonizing design” as a political project in which design is “both an object and medium of action”, the inquiry adopts strategies that put art and design history to work in order to reveal the generative possibilities that these disciplines, or practices, offer teaching and learning. To put it differently, Kiem underscores the need to interrogate the ontological effects of design in order distinguish between designs “that facilitate the productivist drive towards devaluing and appropriating human and non-human natures, and designs that facilitate a process of delinking and redirection into other modes of being/becoming” (Shultz et al:82). By the same token, Ansari argues that the thrust of decolonising design rests in the way that “design brings into being new ontologies and ontological categories and their corresponding subjects and subjectivities”. In this regard, he critiques the predominant trend in design education that prioritises a representational approach to history whereby students learn about individual movements and their associated aesthetics as opposed to conceptualising history as performative which would allow students to develop a better understanding of how “modern technical systems came to mould and shape modern humans” (Shultz et al:88).

3. Background and Context of the Course

3.1 The Extended Curriculum Programme (ECP)

The case study is located within the Extended Curriculum Programme (ECP) of the Design Foundation course of the Faculty of Informatics and Design at CPUT. The aim of CPUT’s ECP is to increase the throughput rate of “at risk” students who, due to their secondary education backgrounds, are not adequately prepared for higher education/university study. In addition to providing students with extensive pedagogic and curricula support, ECP also offers students psycho-social support as they make the transition from school to university learning, towards the mainstream programmes that they will join the following year.
Typically, the ECP course comprises seventy students most of whom come from previously disadvantaged backgrounds. Not only are the majority of them learning in their second language, but many have never studied art or design before.

3.2 The ECP Design Theory course

Rather than follow a chronological approach to teaching history, that reinforces Western Enlightenment notions of linearity and progress, the ECP Design Theory underscores critical thinking skills, response-ability (Ettinger, 2006); (Haraway, 2016) and an understanding of the ontological effects that are generated through encounters with art history in and across time. In paying attention to the aforementioned criteria, the course sets out to disrupt the dominant norms and practices in higher education as well as within design education in particular. In giving prominence to students’ indigenous knowledges it is hoped that the dominance of Eurocentric modernity within the institution is weakened and that students will produce artefacts that materialise different futures and imaginaries.

4. Theoretical framework:

Located within critical posthumanism/feminist new materialism theoretical frameworks, I refer to three feminist theorists who theorise the process of diffraction as a way of conceptualising difference differently in order to spotlight the ethical affects that thresholds of interconnection, co-existence and becoming offer curriculum design in a differentiated world. They are Donna Haraway, Karen Barad and Bracha Ettinger. I will discuss each of them in turn.

4.1 Haraway’s situated knowledges and “staying with the trouble”

In her seminal theory of situated knowledges (1988), Haraway exposes the unequal power relations embedded in the Western Eurocentric ideology that conceptualises knowledge as being rational, abstract, universal and value free. Instead Haraway considers the material specificity of situated knowledges, and thereby positions theorisation and conceptualisation as embodied and contextualised lived practices. In other words, following Bozalek & Zembylas, “the knower’s social location and subjective embodiment is seen as having a direct effect on the knowledge produced” (2016: 115). In her critique of prescriptive and homogenised Eurocentred knowledge production that reproduces the same elsewhere, Haraway brings into play the process of diffraction as an optical metaphor to explore the effects of the patterns of difference rather than reproductions of the patterns of difference themselves (1992:300). More recently, Haraway advocates “staying with the trouble” and “recuperation in complex histories that are as full of dying as living, as full of endings, even genocides, as beginnings” (2016:10). She writes “I am deeply committed to the more modest possibilities of partial recuperation and getting on together” (2016:10). In this regard she subscribes to sympoesis as “a carrier bag for ongoingness, a yoke for becoming-with, for
staying with the trouble of inheriting the damages and achievements of colonial and postcolonial naturalcultural histories in telling the tale of still possible recuperation” (2016:125).

4.2 Barad’s Agential Realism

Barad’s agential realist model reveals the entanglements between knowing, being and ethics, that she terms the ethico-onto-epistemological and, in so doing, highlights the implicated roles of both the material and the discursive in the production of knowledge. Building on Haraway’s reading of the process of diffraction, Barad proposes diffractive methodology as a process of “reading insights through one another” (2007: 25). A key element of Barad’s agential realist framework is the notion of intra-action (as distinct from interaction). Arguing that the latter is premised on separate individual agencies that precede their interaction, ”intra-actions” are conceptualised as the mutual constitution of entangled agencies. In other words, discrete agencies do not precede their intra-actions, rather they are generated through encounter and are therefore only "distinct" in relation to their mutual entanglement, as opposed to an absolute sense (Barad, 2007: 33). In adopting diffractive methodology, the research explores the affective mutually-transformative ontological and epistemological encounters between the ancient makers, students, their vases and myself in order to show how they matter.

4.3 Ettinger’s Matrixial response-ability

Feminist philosopher Bracha Ettinger’s matrixial theory of trauma, aesthetics and sexual difference is grounded in her practices as psychoanalyst and visual artist (Pollock, 2010). Modelled on the co-emerging and trans-subjective relationship of the becoming m/other and becoming child in the final trimester of pregnancy, matrixial theory offers insights into ethical teaching and learning practices that, like Haraway, hinge on the notion of response-ability. Characterised as compassionate, hospitable and asymmetrical, Ettinger argues that this relationship is humans’ primary relational model that is non-verbal, pre-phallic and conceives of subjectivity as difference-within-difference rather difference based on binary splits between self and others. Importantly, she argues that humans can access the matrixial the through encounters with art – both as artist, or viewer. Coining the term ‘artworking’, Ettinger draws attention to the performative function of art as the “transport station of trauma”, which offers the potential for healing as an "ethics-in- action".

5. Pedagogical imperatives

5.1 Inclusion/exclusion; assimilation

The calls to decolonise were spurred in part, by the pressure exerted on students to assimilate into the dominant culture of whiteness in the academy. In addition to feeling
marginalised due to lack of social and cultural capital, the epistemic violence perpetuated by Eurocentric curriculum and pedagogy further entrenched the process of othering. How then can we develop pedagogies that redress feelings of inclusion/exclusion and assimilation? It follows that in addition to doing things differently, decolonising design pedagogies need to undo the ongoing damaging effects of the past. In this regard, Canli proposes undoing “as an act of passivating, unravelling and no longer contributing to material-discursive configurations that privilege certain bodies while oppressing and dehumanizing others” (Schultz et al, 98).

5.2 Making visible invisible histories and challenging stereotypes.

As previously touched on, one of the ongoing effects of coloniality is the double action of obliterating indigenous knowledges and replacing these with stereotypes that further dehumanize and humiliate those who have been colonised. It is the task of educators and students alike to undo these practices and generate relatable futures and imaginaries that speak to indigenous heritages and culture practices. One way of encouraging students to insert their subjectivity into their designs, is to work with personal narrative.

5.3 The importance of Narrative

Guided by Haraway who writes “it matters what stories we tell to tell other stories with” (2016:12), the design theory course gives prominence to students’ visual and written narratives in order to celebrate individual stories and at the same time to trouble homogenising stereotypes of “African” or “South African” styles.

6 Pedagogical strategies and methodologies

6.1 Critical arts-based teaching and learning

While a growing body of literature on critical arts-based research explores the relationship between arts-based learning and socially just pedagogies in the global north (Finley, 2014; Bagley & Castro-Salazar: 2012), not enough local research has been conducted around the kinds of learning and knowledges that can be generated through critical art-based pedagogies within institutions of higher education in South Africa. This is particularly relevant in the context of the debates around decolonising the academy because arts-based research offers a/effective possibilities of responding to the challenges that teaching and learning face on many levels.

Bolt's investigation into how we come to know the world through handling it provides a useful starting point for the discussion on how arts-based teaching and learning practices can support marginalised students in utilising diverse means of expression of their lived experiences beyond the limitations of written and spoken language (2004: 49). In other
words, the process of learning through making can afford the time/space for students to ‘figure out’ knowledge for themselves (Bolt 2007:30). These spaces are not defined by writing and drawing, nor are they limited to writing and drawing. Instead they become spaces of potential where the split of either/or expands to accommodate the multiplicity of and/and. Consequently, the coded language of academic discourse that renders invisible other forms of knowledge creation "entrenches hierarchies of relevance whose work it is to include that which is seen to advance knowledge" is troubled (Manning, 2016: 32). This approach is particularly useful for ECP design pedagogical praxis which aims to support academic and visual literacies that challenge the dominance of the discursive approaches over embodied learning-through-making and therefore resonates with some of the concerns raised within the decoloniality debates.

6.2 Relationship between the scripto-visual

Concomitant with critical engagement is the need for students to articulate and express their ideas and beliefs with confidence both in spoken/written and visual language. This can be challenging for many of our students who, as previously mentioned, are learning in their second, sometimes third language and have had minimal exposure to the disciplines of art and design at secondary school level. Furthermore, the decentring of language, and in this case the foregrounding of the visual, not only offers design students modes of communicating that they feel more confident in, but it also challenges the cultural hegemony of language embedded in the academy.

One way of overcoming a sense of deficit is through embodied creative pedagogical engagements that offer transformational potential for students who are encouraged to find modalities and forms of expression other than those that reproduce stereotypical constructions of their subjectivity or dominant tropes of representation (Hickey-Moody et al, 2016:213–214). For example, arts-based research practices extend beyond the restrictions of logo-centric modes of research and therefore offer the possibility of surfacing other resources and materialities that would otherwise remain invisible. This is particularly useful for design education praxis that draws on students' affinities and resources with those literacies that are not necessarily understood as traditionally academic.
Another important contribution as suggested by Liamputtong and Rumbold (2008) is that in addition to offering rich ways to access experiential knowledge arts-based research methods blur the boundaries between researcher/practitioners because they are predicated on relational exchanges that cast teachers/students/researchers as equal participants within the research process. In the spirit of decolonisation, students and educators need to examine how our modes of seeing have been shaped by the dominant culture of the historical moment (Boler, 1999). Given my own privileged positionality, this is particularly helpful in considering my own complicity in colonial and apartheid structures from which I continue to benefit. Hinging on the characteristic features of critical arts-based research that
include fluidity, reconstructions of relationality, critical resistance and positive social change, Finley conceptualises the critical arts-based research as a democratic form of practice that enables a critical examination of visual cultural codes and ideologies to resist social injustice (2017: 24). Similarly, within the current context the contested space of inequality in SAHE, it becomes necessary for teachers and learners to co-create socially just pedagogies that acknowledge, respect and work affirmatively with differences in order to open up spaces in which transformation can flourish.

8. Case study

The case study that is outlined below is based on a project that has run annually for the past five years. It describes an art history intervention that is structured around ancient Greek vase painting that seeks to illicit student’s personal narratives through their encounter with Ancient vases. Given that ceramic pot making is a cultural practice which is an established tradition in Africa, it made sense to engage students’ familiarity with this art form whilst they learned about the history of ancient Greek vase painting. To begin the students compose a personal narrative about an important life event. Once they have finalised their story, they translate it into a visual narrative in the form of a story board. Thereafter they choose a silhouette of an ancient Greek onto which they trace their story and create a final artwork. The project is structured in such a way that students assess their own work and compare their designs with the ancient counterparts in an effort to distinguish their work rather than to try and imitate the ancient designs. I am hesitant to generalise the themes that students have surfaced in the making of their vases. However, some of the themes that recur each year include rites of passages – such as the birth of child, initiations marking the transition from boyhood to manhood, and death of a loved one. Themes of violence are also prevalent, for example many students write about their experiences of domestic violence, gender-based violence and crimes associated with rampant gangsterism. There are also many references to sporting achievements and disappointments as well stories about love and romance, unrequited love, heartbreak, regret and remorse. While a more detailed account of this case study can be found in my previous chapter (Author: 2018), this paper will engage with the following concerns. The first deals with the notion of transformation. The second focuses on ontological effects of learning through making. The third expands on the ethics of response-ability.

8.1 Transformation

Following hooks (2009) who places emphasis on the role that educators play in nurturing students’ critical thinking skills as students bridge the gap between learning and lived experience, the assignment sought to find ways in which student could actively respond to the imperatives of decolonisation through their design practice. In other words, through their embodied critical engagement with both academic and visual literacy skills, students
troubled dominant discourses and engaged our visually dominated world by both "reading" images, and “writing” with them (Freire et al, 1987; Giroux, 2013). By prioritising student’s visual and spoken/written voices in relation to the ancient vases, the assignment set out to mitigate the effects of marginalisation and feelings of "deficit" arising out of a sense of lack of cultural capital (Bourdieu, 1979). Put differently, the bringing to the fore of their ‘non-dominant’ subjectivities both disrupted oppressive discourses and the power relations that reproduce them, thereby transforming both ‘dominant knowledge’ and the power relations that produce and benefit from it (Hempel-Jørgensen, 2015: 539).

Figure 2: Story entitled My journey in becoming a designer
8.2 Ontology
Coupled with an interrogation of the relationship between the written and the visual, the case study investigates the ontological and agentic role of drawing. In this regard, I draw from both Bolt, who advocates a materialist ontology of the work of art that is not simply enacted discursively, but rather "as material and somatic processes that implicate the life of matter" (2004: 173) and Barad who conceptualises the material-discursive as neither "articulated/articulable in the absence of the other", in other words, she argues that matter and meaning are mutually articulated (2003: 822).

Figure 3: Story entitled Expect the unexpected in life

8.3 Response-ability
Leavy (2015) argues that arts-based methodologies generate embodied engagements through which students are able to think-make with the complexities of lived experience. These encounters not only encourage us "to see and think differently" but offer affective ethical possibilities that build empathy and resonance (2015: 21). However, in her writings about pedagogies of discomfort, Boler (1999) interrogates the limitations arising out of the practice of resonance and empathy and cautions that individual passive empathy alone is neither transformative of existing power relations, nor does it bring about justice. Of particular relevance is her proposition of "collective witnessing" that is premised on relationality between others as well as "to personal and cultural histories and material conditions" (1999: 178).

Returning to Ettinger’s matrixial theory, in which she proposes artworking as an aesthetic and “ethical working-through that occurs when subjective emergence is woven within a trans-subjective borderspace" (2005: 708) an opportunity is opened up for “a compassionate
encounter-event of prolonged generosity”. In other words, she puts forward “artworking” as a space and process that offers the potential to generate co-affective trans-subjective ethico-ontological encounters between the artist, artwork and viewer. Concerned with establishing co-poetic aesthetic relationships, Ettinger proposes the neologism wit(h)nessing, as a ‘being with’ and bearing witness to the trauma of the other, that offers compassionate response-ability that risks vulnerability yet does not give way to assimilation with the other (Ettinger, 2009; 2005); (Pollock, 2010). Given South Africa’s traumatic past, and the current crisis within the university, this offers helpful insights for pedagogical praxis in which response-ability becomes key to building trust and solidarity within the learning environment.

In her reflections on Ettinger’s praxis, de Zegher (2010: 118–9) conceptualises the process of drawing out and sharing of stories as a core moral responsibility to the world in which art is “congruent with our acting in the world: art draws from life as much as life draws from art. It enables attention to what surrounds us and for some understanding of our life” (de Zegher, 2010: 118–9). In other words, art is part of, rather than separate from, the unfolding of life in which we, as makers and viewers not only participate, but are ethically implicated.

Figure 4: Untitled story about gender-based violence.
9. Conclusion

The inquiry has underlined the important roles that students and educators play in co-transforming curricula, pedagogies (and wider social) relationships and practices (Hempel-Jorgensen, 2015). By utilising diffractive methodology, the research has shown how the intra-actions between the ancient makers, students, their vases and myself have generated mutually-transformative ontological and epistemological encounters that reconceptualise the ethical relationship between the past and present that in turn produce affective outcomes for the future.

As visual and written narratives, not only do the vases showcase histories that have traditionally been excluded from design history, but they become bodies of evidence of the ontological effects of thinking-through-making. Applying the analogy of the body to both humans and their vases, the project seeks to make visible what is held or carried internally as well as what is externalised and made visible. In other words, the students’ vases carry both the weight of the past and make visible possible futures that are not prescribed or dominated by western Eurocentric values. On the grounds of this, in addition to becoming markers of their subjectivity within the academy, the students' vases challenge Eurocentric cultural hegemony and the predominant culture of whiteness within the academy.

In drawing attention to the performative affects of the vases, as narratives, as containers, as markers of subjectivity, students perceive themselves as generators of knowledge as they disrupt mimetic practice and become-with their entanglements with the ancient vases and their own narratives. At the same time, the research prioritises the need for educators to practice response-ability (Ettinger, 2006) by developing curriculum strategies that support students becoming within the university.

Finally, by sharing what matters most to them, students add to the pot of complexity that characterises contemporary design. In so doing, they contribute to finding new ways of connections within difference and responding to Thiele’s provocation of “how to live in a world of difference(s), a world in/as ongoing differentiation, in such ways that the outcome is not ever more separation and antagonism, exclusion and the fear of others, but so that new senses of commonality are envisioned?” (2014: 202).

References


About the Author:

*Nike Romano* is a visual artist and lecturer in design theory. Romano is interested in the transformative role of design pedagogical practices in building social justice. Her research explores the ethico-onto-epistemological affects that are generated through critical arts-based educational encounters.

Acknowledgements: Thanks to my supervisors Professors Vivienne Bozalek and Kathrin Thiele for their ongoing support, generosity and encouragement of my PhD project. I also thank the Design ECP students of who generously participated in this project and who taught me much more than I could ever teach them. This work is based on the research supported by the National Research Foundation of South Africa (Grant Number: 120845).

---

1 These mainstream disciplines include fashion design, product design, jewellery design and visual communication design.
Culture and Relationality. Moving towards ‘post-rational’ modes of design.

Tom Ainsworth*a, Sally Sutherland*b,

*aUniversity of Brighton, UK
*bUniversity of Brighton, UK
*s.c.sutherland@brighton.ac.uk

Abstract | This paper argues that practices of design, both in education and in professional practice, are becoming increasingly conservative and risk averse. They are perpetuating ‘normative’ and ‘affirmative’ practices that prioritise functionality and economic viability over higher values of ‘responsibility’, ‘ethical practice’, and the broader concepts of ‘prosperity’. The paper proposes ‘post-rational modes of design’ as a purposeful realignment of design research practices towards more complex and contestational expressions of possibility as a counterpoint to normative practices of a given design situation. Design is never neutral (Papanek, 1974). Instead, it is a social, cultural, and material force (Adams, Keshavarz, & Traganou 2019) that embodies entangled assemblages of ideas, customs and social behaviour. Design is fundamental to culture(s), politics and the socio-material practices of everyday life. A two-minute film accompanies this paper as a co-expression of the described concept. The film was a way of developing, illustrating and articulating this argument through design.

KEYWORDS | RELATIONALITY, SOCIO-MATERIAL, PRACTICE, POST-RATIONAL, SYSTEMIC
1. Introduction

This paper argues that a shift towards ‘post-rational’ modes of design will help push new insights and new practices that benefit economic, ecological, political and social systems. Post-Rational modes of design embrace plurality, multiple relationalities, and multi-sensoriality as fundamental components of future-focused design practice.

The text is a purposeful shift away from the often-banal predictability of reductive, problem limited, concepts of design. Instead, we seek to prioritise agonism as a purposeful process of productive negotiation and expression.

The structure of this paper presents three examples of contemporary design research practice that provide insight into what we consider to be examples of ‘post-rational’ modes of design. The projects are Mathilda Tham, Åsa Ståhl and Sara Hyltén-Cavallius’s BOOST Metadesign; Unknown Fields The Breastmilk of the Volcano; and Lise Amy Hansen’s The InnArbeid Project. In each case, the use of design differs from traditional [rational] approaches to the discipline, that present new forms of practice that offer new opportunities for the future of design.

By producing the film and analysing each of the case study examples, we present three fundamental characteristics that offer insights into post-rational modes of design. These are ‘complexity & plurality’; design ‘beyond outcome’; and design ‘beyond-solutionism’. The paper discusses design practice as part of ‘socio-material assemblages’, before critiquing what we consider to be problematic within dominant and populist approaches to design.

The paper is written for an academic audience and discusses design in the theoretical and cultural contexts of the discipline. The text is a proposition and invitation for others to consider and critique the prospect of post-rational modes of design.

1.1 The film

Accompanying this paper is a short film (see vimeo.com/495553583 and figures 1,2,3,4). The footage presents an abstract visual landscape of flickering colour fields accompanied by a transient, familiar but unknown soundscape. The piece is representative of the complex and unpredictable elements that constitute the contexts that we are designing within. The true value of this process, to the development of our ideas, cannot be authentically summarised in paragraphs of text. Our thinking about post-rationalities in design developed, in part, through the act of making and collaborating. The exercise was context-specific, interpersonal, and performative.

The film was co-composed through the physical act of moving light sources and reflective materials. The process was an unchoreographed dialogue performed through sound and light. Postproduction editing was limited to selecting ‘scenes’ that we considered to be suitable for our purposes. Terminology relevant to both the film and our thoughts about post rationalities in design includes transitions, complexity, texture, relationality, exploration...
and uncertainty. The film is a record of our conversations (audible and non-audible), thinking, editing, describing, and presenting.

This process of incorporating practice-based enquiry to explore non-tangible ideas enabled us to embrace purposeful and open playfulness. It was an act of 'letting go' (Tham, 2020) that helped us to foreground intuition by stepping into a situation of complexity and uncertainty. As researchers, this process was, at times, unsettling. Nevertheless, for us, this 'letting go' led to more explicit understandings of our interests and questions when considering modes of design that take place beyond purely rational frameworks.

Figures 1, 2, 3, 4. Still images taken from the post-rational modes of design film that accompanies this paper.

2. Examples

2.1 Example 1 - BOOST metadesign

Our first example is BOOST metadesign, a design-research project within a larger three-year body of research titled BOOST (Tham, 2019, p.19). The project seeks to mediate the complexities of building and homemaking through metadesign and co-creation. Metadesign, defined by John Wood as “an emerging framework that will enable designers to change or to create behavioural paradigms” (Wood, 2017, p.503), was used in this study to address concepts of building and homemaking by positioning sustainability as a central theme of the work. Tham defines sustainability as “the health of all species on Earth today and in the
The project works with the needs of migrants, students and the ageing population, to support a diversity of perspectives and narratives that examine ideas of home. The project utilises multiplicity to intersect specific contextual understandings and create new insights of homemaking. Complexity and relational thinking are embedded throughout this project and are used to examine intersubjectivities at multiple scales - from products to systems, to paradigms (Tham, 2019, 30-31).

One result of the project is the consideration of 'design cruxes' - questions, itches and dilemmas considered necessary to negotiate through design but, importantly, not framed as problems to solve (Tham, 2019, p.47). The concept of 'design cruxes' presents a useful theory for design researchers as a reminder of what Haraway describes as 'staying with the trouble' (Haraway, 2016). Haraway introduces 'staying with the trouble' as a way of learning to be present as mortal earthly creatures, entwined in “unfinished configurations of places, times, matters and meanings” (Haraway, 2016, p.1). Tham uses 'staying with the trouble’ to honour complexities such as, in this case, diversity, accessibility, and staying within the planetary limits (Tham, 2019, p.47).

Design(ing) is practiced within BOOST, in various ways, through creative methods of engagement, collaborative workshopping and making. The work is disseminated as "a slideshow-performance-talk show-exhibition-film-book." (Tham, et al., 2019, p.175). Part of this dissemination is a book containing recipes and practical design scores, provocations and examples. The book is a resource for people (personal or professional) who are engaged in making homes (Tham, 2019a, p.9). As a portfolio of disseminated works, this project reaches outwards beyond the traditional realms of design scholarship and dissemination. It challenges the legacy ideas that design activities should lead to objects and solutions (Tham et al., 2019, p.177).

In the context of post-rational modes of design, BOOST metadesign, is characterised by its acceptance of unknowability and its commitment to maintaining complexity. The project prioritises ideas of responsibility and ethics while working with frustrations, doubts and differences of opinion. While tensions and frictions present themselves throughout the project, the centring of sustainability and focused ethical responsibility towards those who had co-created with the research team (Tham et al., 2019, p.174) remain the prevailing themes of the project.

The diversity of dissemination activities, which actively seek to engage multiple networks through counter conventional media and communications, further expresses how this research engages design beyond the traditional transactional model of problems and solutions. Arguably, this approach enables this work to present more honest, sensitive, and responsible outcomes than they may otherwise have been had the project sought to superficially reduce this reality's intrinsic complexities into efficiently 'knowable' problems to solve.
2.2 Example 2 - The Breast Milk of the Volcano

'The Breastmilk of the Volcano' is the second example of work that we consider to offer insight into post-rational uses of design. The project, developed in 2016, by the nomadic design studio Unknown Fields. Kate Davies and Liam Young, the Architectural Association School of Architecture's joint programme heads are directors of the studio. The project tells stories of the global and local implications of new technologies in the context of the Salar de Uyuni, the largest salt flat in the world, which until recently remained an untouched landscape of salt lakes and volcanoes.

Unknown Fields investigate uncertain worlds by embedding relationalities, intersubjectivities and pluralities through design research. Their exploratory approaches engage with the subject matter through undefinable scales including landscapes, systems and people. An incredibly diverse range of elements features in this work. Including stories of materials; everyday objects - lithium batteries, telephones and electric cars; places and landscapes; Bolivian politics, an indigenous activist group and ancient mythology.

The project integrates Indigenous cosmologies into the work, providing the project with its title ‘The Breast Milk of the Volcano.’ This title comes from the Incan mythology of Turana the Incan giant and how the Salar de Uyuni came to be. Turana’s story features volcanos, betrayal, loss, and motherhood, which lead to the creation of the salt flats through a combination of her breast milk and tears (Unknown Fields, 2016). Language, photography, film, drawings, embodied objects, and performance are brought together to tell these tales of ‘breastmilk’ and ‘lithium.’

Together these narratives transverse times and spaces, histories, and futures, and promises of technological utopias. The work does not seek to separate or conclude relational understandings but instead explores these relationships as complex 'entanglements' i.e., interwoven, and interdependent relationalities.

"...we can start to imagine redesigning our gadgets not based on how they slide into our pockets, or feel in our hand, but perhaps for the networks that they set in motion, or the economic resources they might distribute. What could the alternative design criteria be for supply chain design if it weren’t engineered around cheap labour cost and material availability.” (Young, 2018)

For post-rational design, one of the most significant aspects of this work is the questions generated about the role of design and the act of designing. The work makes explicit the relevance of uncertainty, complexity, and shifting positionalities through its formulation of assemblages.

This mode of practice creates the means to engage more complex challenges than those comprehensible by any individual or single point of view. The possibility of multiple, potentially contradictory, readings of the same situation allow for plurality in meaning and relational, context-specific, ways of understanding.
2.3 Example 3 - The InnArbeid Project
The design research within ‘InnArbeid’ forms the third example in this paper. The InnArbeid project is an ongoing three-year Norwegian innovation study which aims to promote improved work participation for individuals with developmental and intellectual disabilities (ID) (Hansen, 2019, p.170). This research is situated in a networked context and with participants who are vulnerable and labelled ‘hard to reach.’ The project examines the complex systemic challenges faced by people with reduced cognitive abilities. As such, the study embraces a holistic approach to the enquiry to engage with complexity and fundamentally incomplete situation (Hansen, 2019). The study design adopts an unusually long timeframe for a design research project - working with participants from school age to finding work and remaining in work. The study also engages with multiple key informants and stakeholder participants.

Significantly, the project also utilises a ‘forstyrregruppe’ - disruptive expert group (Hansen, 2019, p.179). The forstyrregruppe, made up of designers and researchers, is tasked with critiquing the work as a way of protecting the study from its own good intentions – a form of constructive agonism.

The InnArbeid project uses explorative and adaptive design processes. The research team prioritise language that asserts the moral position of 'working with' its research participants, rather than 'doing to' (Hansen, 2019, p.174. Ingold, 2011. Sanders & Stappers, 2008). Within the study, design methods were used to visually present the voices of the people with intellectual disabilities, while also seeking to avoid stigmatising clichés (Hansen, 2019, p.174). The team utilised video, visual materials and physical prototypes to support alternative ways of communicating. Hansen highlights tensions in this work that relate to how we recognise design.

"...the propositional nature of design [vs] that of a deductive, rational, progression towards innovations [vs] the diverse insights from such hard-to-reach people." (Hansen, 2019, p.181)

This project highlights the value of design research as a cultural and performative endeavour (Hansen, 2019, p.181). It is an example of design research that seeks to benefit people who are often marginalised in society by including the lived experience and personal motivations of those that the work seeks to benefit. The study embraces the complex social and cultural realities and applies principles and practices of design to support systemic change.

Importantly, the project presents a distinctly different mode of practice than the typical short term design challenge narrative of ‘problematis’ then ‘solve’. Instead, the study seeks to engage in a sustained process of not knowing by utilising a diversity of critical feedback to maintain a balance between action and understanding.
3. Discussion

The summary review of the case study examples outlined has enabled us to identify three characteristics that offer ways of considering design that are not constrained by normative and operational practices of design. These are 'complexity & plurality'; design 'beyond outcome'; and 'beyond-solutionism'. The following section expands on these ideas further before providing a brief overview of what we mean by 'Design' in the context of post-rationalities.

3.1 Design complexity and plurality

In this paper, we argue that designers and design scholars are increasingly concerned with ever more complex ecological, political and societal challenges. The evolution towards practices that are socially engaged, research-driven, and aligned with 'wicked problems', is now widely accepted as being within the remit of design (Sweeting et al., 2020).

Unfortunately, populist discourses in design, tend to over-simplify the discipline and focus purely on design outcomes. This emphasis on interventionistic solutionism serves to perpetuate the narrative of design heroism – placing the value of design primarily on the individual rather than the broader benefits of its application, or the progress of the discipline.

At their worst, designers are guilty of designing ever more elaborate solutions to the wrong part of the problem - the symptom rather than the cause. To put this another way, answers are irrelevant if the questions are wrong. While there is undoubtedly both value and need for practical solution-focused design, there is also a need to evolve the discipline so that it can continue to engage with the increasingly complex and uncertain challenges that are faced globally.

“Design theory, practice-based design research and critical design practices increasingly contribute to critical accounts of design as an instrument of power, discipline and oppression.” (Mazé, 2019, p.34)

Furthermore, it is increasingly recognised that knowledge and insights are generated because of the doing (process) rather than the done (outcome) (Lambert & Speed, 2017, p.105). This possibility rather than problem-driven approach to design will now be discussed further.

3.2 Design beyond outcome

Since the 1800s, Design has been dominated by technological and commercial forces and modernist ideals popularised by organisations such as Bauhaus. However, the discipline has always operated beyond these rational and reductive modes of practice. And, increasingly, as the limitations of reductive solutionism become more apparent, there is a renewed need to adopt modes of design that are more flexible and inclusive of social, cultural and political aspects of society.
“In creative exploration, ideas tend to emerge and develop on the move—sometimes impulsively, sometimes reflectively—rather than arising from the investigation of a hypothesis in controlled conditions.” (Lambert & Speed, 2017, p.104)

Design theorist Anne Light argues that within this recent social turn in design, the materials are no longer material (Light, 2019). Furthermore, John Wood argues for a move from products to relations.

“In seeking an alternative to consumption-based systems of production and disposal I advocate a profound conceptual shift from products to relations” (Wood, 2017, p.512).

While we consider this a positive evolution of the discipline, we must not disregard the fact that relations and practices are mediated in the material world, as such design has material implications and offers access to multi-sensory situations. Practices of design now have access to the politics and cultures of the everyday. Design can be used as a socio-material tool for research to illuminate, interrogate and influence the invisible rules within socialities and across cultures.

The evolution of Design towards something more responsive and transcendental raises new possibilities for how we conceive of the outcomes of design practices. We will now discuss ideas about design beyond solutions.

3.3 Design beyond solutions
The paper adopts the position that for the discipline of Design to maintain relevance and purpose, it needs to continually seek novel modes of practice that are purposely diverse and responsive to emergent normative practices. It is the agonistic tension, adaptability and breadth of approaches that characterise the discipline of Design. They enable it to be agile, adaptive, and capable of engaging with the complex and rapidly changing challenges facing societies, cultures, and species globally. Mazé argues the qualities of designed visions of the future in ‘opening up’ and ‘thinking otherwise’.

“As designers, we may not only put forward shallow claims of ‘solving problems’ or making a difference’, or even important critical reflections on the question of “What difference does it make?”’, we may use designed visions of the future to open up for thinking and doing otherwise, including handing over the question to others (as a political act).” (Mazé, 2019, p.34)

Post-rational design modes seek to promote further discourses that celebrate intersubjectivities, pluralities and relationalities in design theory and practice. It is a celebration of playfulness and uncertainty as central features of the discipline. This position is, in many ways, a counterpoint to norms within the design discipline that uphold the dominance of reductive, problem-focussed, approaches that characterise much of design
education and research under the guise of ‘progress' and 'efficiency'. Tony Fry argues for the need for relational thinking in design (2009, p.32).

“Transposed into a theory of knowledge, relationality contrasts directly with the linear notion of cause and effect which has been such a dominant feature of Western rationality. In that the ability to sustain depends absolutely on relational interactions its development and deployment as a theory of knowledge able to direct design will become increasingly critical.” (Fry, 2009, p.31)

Building on the ideas of relationality, complexity and plurality, we will now elaborate on the idea of design as a form of ‘socio-material assemblage’ and discuss the relationship of this framing to post-rational modes of design.

3.4 Socio-Material Assemblages
Post-rational design modes positions design practices within ‘socio-material assemblages’. This positioning provides design research with a framework for discussion situating design as part of the complexities, and how design research engages beyond outcomes and solutions. The three examples in this paper highlight very different ways that design research transcends traditional disciplinary classifications. The explorations in these works converge across materialities and socialities.

Design of all kinds intervenes in material and non-material configurations that make up everyday life. As such, Design mediates our interactions; and is 'entangled' with the socio-material assemblages (Muller, 2015) -these include politics, norms and cultural identities of time and place (Delanda, 2016, p.9).

Drawing on the theory of Karan Barad, we argue that the social and material elements (which form all design research contexts) are inter-relating and inseparable (Barad, 2007); that matter and meaning are entangled and cannot be disassociated (Barad, 2007, p.3). These assemblages are relational (Muller, 2015, p.28), constantly in flux, forming, mutating and transforming (Muller, 2015, p.29). Acknowledging that Design is within socio-material assemblages and that these are uncertain states, allows us to discuss design as both part-of and working-within the living systems that surround us. Humans (together with non-human species) shape our environments, and these environments, in turn, shape us (Tham, 2019a, p.8).

Some may argue that working with complexity, including relationalities and pluralities in this way is not possible; that it is impossible to understand the networks that are designed within fully. We argue that separating and not attending to these socio-material complexities can lead to ineffective design, or lead to harm (Tham, 2019, p.25). The examples used in this paper illustrate the way that Design can be paying attention within these networks, which we argue is particularly relevant when Design is engaging with contexts of sustainability including wicked challenges of social and environmental justice.
3.5 Rational Design

The ideas of post-rational presented here do not seek to undermine or undervalue the need for rationality - or using reason and logic in design. However, we seek to highlight the limitations of narrow concepts of design, arbitrarily formulaic design processes, and an overenthusiastic acceptance of measurability.

Increasingly, it is that which is measured that is valued. This axiom gives priority to that which is easily measurable, to the expense of that which is not. However, measurability is not neutral. The tools used to provide measurement and politics used to guide decision-making profoundly affect what is valued and prioritised.

As design becomes increasingly engaged in environmental, societal, and cultural situations that are ever more complex and wicked, measurability’s limitations become increasingly problematic. Within many western commercial practices of design, it is the functional approach that has come to characterise the discipline’s value. This de-contextualised rationality has come to dominate design culture; consequently, there is little space for modes of practice that push beyond these superficially robust frameworks. We seek to emphasise the importance of promoting a diversity of design cultures to support new, more capable, ways of knowing.

One common oversimplification is the alluring definition of design as a discrete practice. For example, when communicated as a specific method or approach - "I have designed 'x'". While helpful in some circumstances, these definitions only capture design as an action in response to a challenge, i.e. ‘designing’ - applied to accomplish assigned targets. While incremental improvements are favourable when compared to non-action or selective ignorance – they only really engage with the symptoms of the problem. More significant reforms are required if we are to achieve meaningful, lasting change.

Here, we argue that the value of design is situated within its ability to mediate multi-sensory experiences, materiality and the everyday. It is presented as a way of knowing and understanding personal experience that is distinct and which prioritises sociality and shared togetherness. While this definition may be familiar to many design practitioners, the full scope of design practices remain restrained and restricted - side-lined by unhelpful outdated models of problem-solving and reductive research protocols.

4. Conclusion

We presented a short film and three example design projects that, through critique, illustrate ways of working that we consider to be examples of post-rational modes of design. We argue that each of these works engages design in novel ways and lead to unique insights that reach beyond the ‘problem-solving’ stereotype that is often given to design. Instead, in each case, significant complexities, including context and circumstance, are embraced and celebrated. The works foreground relationality, the practice of designing (rather than design
as outcome), and, although not described explicitly, attend to the more significant challenges of responsibility, morality and ethics.

Interest in post-rational modes of design has come from observations that the academic discipline of Design is often misrepresented and oversimplified. Catch-all framings such as 'design thinking' and 'human-centred design', while appropriate in some circumstances, create monoculture understandings that stifle the evolution of the discipline. Post-rational is an attempt to acknowledge the value of practices that stimulate action beyond the predictability of the (purely rational) design and to seek alternatives to the, primarily western/colonial, design cultures that currently dominate the discipline. In doing so, we are arguing for more diverse and alternative conceptions of rationalities within design.

By analysing each of the case study examples, we present three fundamental characteristics that offer what could become foundations for discourses that examine ideas of ‘post-rational’ modes of design. These are 'complexity & plurality'; design 'beyond outcome'; and design 'beyond-solutionism'. Further work is needed to elaborate and develop the ideas presented here fully. We believe this is a useful starting point and an invitation for others to critique, respond to, and develop further.

References


Culture and Relationality. Moving towards ‘post-rational’ modes of design.

About the Authors:

**Dr Tom Ainsworth** is Academic Programme Leader for Design, Course Leader for MA Sustainable Design, and Doctoral Supervisor, at the University of Brighton. He is Co-Founder of the Centre for Arts and Wellbeing and RaMREG (Radical Methodologies Research and Enterprise Group).

**Sally Sutherland** is a practice based AHRC funded doctoral candidate at the University of Brighton, UK. She is a Co-Founder of RaMREG (Radical Methodologies Research and Enterprise Group). Sally’s doctoral research uses design to observe, engage and intervene in contemporary UK public breastfeeding discourses.

**Acknowledgements**: We would like to give our thanks to Charlie Kew, a key collaborator in the making of the film. Thanks also to the AHRC Design Star DTP, Radical Methodologies Research and Enterprise Group (RaMREG) and the Design Research for Change strand of the Centre for Arts and Wellbeing at the University of Brighton for their ongoing conversations and support.
Abstract | A study published by Benjamin Schmidt in 2018 has shown that history majors have been declining over the past decade in U.S. colleges. According to Schmidt’s study, after the economic crisis of 2008, history majors, among American Colleges, are the ones whose numbers have seen a more dramatic and consistent decay. This matter arises the question about the role of history in strongly project-based disciplines in which, the field of history was recently established. Unlike architecture, the history of design is a discipline relatively new, especially in the context of Latin America where most design majors were established during the second half of the twentieth century. Such short history, represents a challenge for both researching and teaching, especially because it was under the scope of an art history driven approach. This proposal presents an overview on the way the design history curriculum at Universidad de los Andes has faced these challenges and the strategies developed to tackle them using both, information technology and a pedagogical approach that concedes more agency to students, while broadening the traditional scope of design history to design studies for its redefinition in a historical moment when historical thinking seems to be on decline.
1. Introduction

A study published by Benjamin Schmidt in 2018 has shown that history majors have been declining over the past decade in U.S. colleges. According to Schmidt, the number of bachelor degrees awarded reduced approximately 28% between 2008 and 2017 (Schmidt, 2018). Alterman (2019) picked up from Schmidt’s study and further asserted that this has led to some authors to conclude about the declining process historical thinking have gone through over the last years.

This conclusion arises the question about the role of history in strongly project-based disciplines such as design. In 2009, there was an intense discussion about the future of design history and its role in the formation of future designers. Thinkers such as Dilnot (2009) and Lichtman (2009), adamantly posited the question on how to further develop the area and presented a critical approach as well as some opportunities in design history as part of design practitioners curricula. Banu (2009), also raised the idea about the role of design history within a post-colonial framework and its possible role in the development of regional identities in addition to the necessity of decolonizing its narratives.

Around the same time, the first comprehensive work to try and understand the history of design in Latin America was made by Fernández and Bonsiepe (2008). A decade later, Lara (2016) presented her findings on the development of the discipline in the region, stating that it was still emerging and trying to find a balance between the quest for modernization and globalization while struggling to preserve local identities. Colombia has taken part of these reflections and has undoubtedly been part of the global reach design history has acquired over the past years, according to Lara.

One of the challenges implied in teaching the history of design, is to keep up with the teaching duties and balancing it while also furthering the production of knowledge in the field of studies. Another set of challenges is represented by issues common to this era, related to the access to information; the use of technology in the classroom; the changing boundaries in the professional exercise of design; the crisis and change of paradigm in production, infrastructure and labor; the relevance of design history for present-day practitioners; and new methodological approaches related to class, gender and race. In this proposal, I offer an overview on the way the design history curriculum at Universidad de los Andes has faced these challenges and the strategies developed to tackle them using both, information technology and a pedagogical approach that concedes more agency to the students while broadening the traditional scope of design history to design studies or design culture for its redefinition in a historical moment when historical thinking seems to be on decline.
2. The Art History Legacy

Taking as a starting point the legacy of art history to understand the teaching processes of design history, seems obvious and even almost naive. However, from that naivete, essential questions arise about the profession of the historian, researcher and professor. For example, how is it possible to historicize something as popular as design from the perspective of art history, especially when most of its intellectual tradition, at least up until the sixties, is based on the analysis of high culture? What could have been the implications for the history of design, both in Europe and the United States and in Latin America, to build curricula based on this premise?

In the nineteen eighties, Dilnot (1984) wondered about the relationship between design and other areas of study, particularly confronted with art history. According to the author, before 1939, apart from the history of architecture there were some approaches to what we would call today the history of design, in the decorative arts as a branch of the history of architecture, this particularly pointed out in the pioneering work of Nikolaus Pevsner of 1936, Pioneers of modern design (Pevsner, 1968). But beyond trying to identify the exact origin of the discipline, what matters the most in this section, is to identify the legacy and influence of art history in the construction of design history curricula. This situation was emphasized by Margolin (1988) regarding his initial reflections on the relationship between art history and decorative arts. While Margolin recognizes the importance of the guidelines drawn from art history to the history of design, he also quickly identifies the limitations of this approach whose parameters were established by Pevsner and then continued by the Museum of Modern Art in New York (1988, p. 57). That is, a formalistic and iconic line of great movements and schools, which also aligned with key authors of the first half of the twentieth century such as Warburg, Panofsky and Wölfflin, among others. According to Margolin, most of the doctoral theses in the eighties focused on styles, schools and movements such as Art Nouveau and Bauhaus that could somehow establish a closer dialogue with traditional art history school. Works such as D. Bush's on popular culture and consumer products had a poor reception within the community of art historians (1988, p. 58).

In Latin America, the recognition of the area of studies in design history is even scarcer and still moves within the margins of academic recognition. In this sense, it is important to recognize the belated industrialization process of the region thanks to the ISI program implemented through ECLAC and which remained active between 1930-1980 (Fernández, 2006). According to the research and the map presented by Silvia Fernández, the first design programs were established in the region from the sixties. This despite the existence of evidence on some background of courses and specific talks given in some universities by former students of North American and European universities or even by the same teachers of schools such as the Bauhaus and the hfg Ülm as is the case of Josef Albers, Walter Gropius and Paul Linder, among others.
Ten years after the publication of Silvia Fernández and Gui Bonsiepe’s research on the origins of design education in Latin America, Lara-Betancourt (2016) presented a balance sheet on the state of design history teaching in the region. Among the points highlighted, the author stresses the incipience of the process of industrialization in Latin America. She also stresses the scarcity of studies on manufacturing and design processes associated with industry. In Colombia, and despite having been officially recognized as one of the central components of design education (Colombia - Ministry of National Education, 2003), history and theory, is still a declaration of good intentions that still, allow at least a reflection on the role of history in the teaching of design.

Personally, during my formative years as an industrial designer in the 1990s, I witnessed the prevention with which art historians faced the teaching of design history, making a great effort to identify the communicating vessels between one and another area, but always giving prevalence to an approach similar to the one pointed out by Margolin, based on formalistic approaches and through the study of personalities, schools, and movements.

However, the legacy of art history for the history of design –beyond its strangeness towards the industrial, commercial and, consumer aspects of design– lies in the chronological and stylistic structure of the curricula, as well as in teaching formats such as lectures and methods of analysis.

3. The Cultural Studies Approach

Without a doubt, the most important contribution of cultural studies to the understanding of society through its cultural manifestations was the identification and redemption of popular expressions of culture. In addition to the work of authors such as Gombrich and Baxandall, both of whom introduced elements of cultural history, the popular and everyday life in the understanding of the work of art, work from cultural studies from the seventies, was fundamental to broaden the spectrum that, from the academy, allowed to validate the study of expressions of the consumer society without having to go through the legitimizing filter of high culture.

The role of cultural studies theorists such as Raymond Williams and Stuart Hall, was paramount in defining the basis for generating the theoretical framework that bring the popular as topic of academic discussion. Williams, on the other hand, insisted in showing the ever-changing role of culture and coined the terms residual culture and emerging culture to refer to the historical dynamics of transition between cycles of acceptance and rejection of

---


cultural phenomena. In the field of the arts and the relationship with society, Williams assured that the relationship is not of simple domination but dialectic and interactive between art and society in a process in which they mutually shape each other (Leitch, 2010, p. 1423). In this sense and within the framework of an industrialized society, the cultural productions of the consumer society represent the ecosystem that by nature defines both its cultural productions and the individual and society. Stuart Hall on the other hand, and for the particular case of the look from marginal societies to great industrialization processes, provides a look from the difference that does not necessarily deny the dominant culture but understands it as a fundamental part of the equation through which power negotiations are held (Leitch, 2010, p. 1779).

In the framework of understanding design as an essential cultural manifestation to twentieth-century society, Guy Julier (2006) contributed in his widely cited article From Visual Culture to Design Culture, the elements that were largely derived from cultural studies, which they served as a framework for the consolidation of design studies. Guy establishes the traceability of areas of study such as material culture and visual culture from a mix between cultural anthropology, cultural studies, and art history. Both material culture and visual culture must provide, according to Guy, the basis for the consolidation of what he calls design culture. Its definition of design culture, aims to go beyond the scope of visual and material culture to the extent that the experience of contemporary design encompasses the entire sensory spectrum and understands it as the system that structures and is situated at the intersection between the visual and the material (2006, p. 67).

The challenge that it has represented and still represents for Latin American scholarly production in the area of design studies in Latin America, lies in: 1) To keep up with European and North American academic production in Latin American Design Studies, and, 2) To produce a body of knowledge to consolidate master’s and doctoral programs in the area, just as consistently proposed by Margolin (Margolin, 1995, 2002, 2010). The challenge also consists in decolonizing the narratives around the history of design, which poses challenges, starting from the definition of what design means within the region, through the recognition of its scope, ethos, pathos and logos for Latin American societies. From my perspective, this search should focus on acknowledging design as an omnipresent manifestation, which acts as intermediary in everyday negotiations in a region with complex inheritances, linked to its colonial past and countless unsolved complex problems. Posited this way, this proposal seems to leave behind many thematic scenarios that have traditionally been explored in the region by design history. Particularly, I refer to the epistemic discourses about the object and culture, heritage, local artisanal production and economic movements of the region at the mercy of hegemonic macropolitics. However, the interest is not to leave them out but to frame or complement them based on the inclusion of these variables determined by geography and historical processes. Lara-Betancourt’s (2016) approach, seems to head in the same direction since is based on the connection between Latin America and the consumption of goods and technology from both, Europe and the United States. This is a phenomenon that has been taking place in the region since the
nineteenth century, and it also had an impact in terms of the construction of local identities but also in terms of race, class, and gender. Taking into consideration all these variables, are paramount in order to be able to understand the complexities of the region.

4. Design and History at University of los Andes

The history of design programs of study in Colombia, date back to the 1970s when most of the programs were created in Universities, mostly in Bogotá and Medellín (Peña, 2009, p. 125). The creation of these programs, coincides with the period of deindustrialization indicated by Bejarano et al., (Bejarano, Tirado Mejía, & Melo, 1989) and with the final phase of implementation of the Import Substitution Industrialization (ISI) program. Compared to the early creation of design departments at Universidad Nacional de Colombia, and those of two private universities, the Javeriana and the UJTL, the creation of the undergrad program at Universidad de los Andes, belated, in 1994. Back then, de-industrialization in the region was no secret but in spite of that, the program was still formulated to serve the industry.

In spite of having been created in 1994, the program was not completely created from scratch and some of its antecedents are worth to mention: 1) The feminine section; 2) The architecture department 3) The art and textile department. In the essence of these three instances, the genetic code of design in the Andes is inscribed. The women's section, emerges as an initiative of the founder of the University, Mario Laserna, for basic study of the arts and humanities. The arts section of the women's section was in charge of the sculptor Hena Rodríguez and later when the Faculty of Philosophy and Letters was created, Marta Traba was in charge of teaching art history classes (Peña, 2009, p. 140 ).

On one hand, architecture was responsible for summoning the concept of design based on the adoption and circulation of central ideas of modernity. The School of Architecture was part of the founding project of the University in 1948 and many of the professors arrived with clear influences derived from CIAM (International Congress of Modern Architecture) and from study abroad experiences. Architects such as Álvaro Ortega, were responsible for introducing concepts such as modularity and serialization as well as having contributed at some time to manage Josef Albers' visit to the newly created university campus. In the First Colombian seminar on the teaching of architecture, the postulates of Walter Gropius were the central topic of study, which in turn contributed to the definition of architecture curricular plans in the country. Gropius’ and the Bauhaus’ influence can be seen reflected in the prevalence of basic courses of design that were effective in most design programs since the 1970s.

---

3 “In 1984, 762 companies were created compared to the barely 57 companies, created in 2001[...].” (Peña, 2009, p. 125).
Finally, the department of arts and textiles allowed the university to establish a direct connection with modern design education. Marlene Hoffman, Olga de Amaral, and Stella Bernal, Cranbrook Academy alumni, directly brought the methods and pedagogical influence from the Scandinavian design tradition of the Saarinen, Eliel and Loja.

Additionally, design practice naturally took place in spite of academia. Consumer society, although incipient, naturally forced the emergence of commercial artists that, most of the time, had a background in arts. The modernization process naturally required, but by leaps and bounds, the product of the intersection between art and industry. Most of the so-called vernacular design, was produced outside the academic circuits. Paradoxically, it took a while time for both vernacular and academic design, to acknowledge each other’s importance as part of the modernizing agenda. Since the 1970s, both, the Bauhaus and the hfg Ulm, have shaped many of design curricula, not only in Colombia but in Latin America. In particular, the influence of hfg Ulm that had a great impact bringing forth a scientific approach to industrial design curricula.

5. A case study: DISE1204 Design History

After theoretical framework, let’s discuss some of the aspects pointed out through the case study and challenges implied in teaching history of design at the Universidad de los Andes. Initially, the undergrad program has changed from Industrial Design in the most classical sense of the term, to merge with textiles, through simply being called “Design”, without epithets. To make a long story short, the succession of names, summarizes to a great extent, a different and more comprehensive understanding of the context in which the process of de-industrialization was a major consideration.

Regardless of its name, the program has always offered at least one design history course. Until Fall semester 2019, the undergrad program offered just DISE1204 History of Design, as the only history-based course. Since its creation, this survey course, has had different versions depending on the lecturer. Overall, the course followed a fairly classical structure based on a chronological structure. In 2015, with the advice of two experts, one in technology and the other in pedagogy, and as part of the CONECTATE (Information and Communication Technologies) program, a major reform was introduced. In order to synthesize and facilitate its understanding, I will divide it into three: Pedagogy, technology and findings.

The pedagogical reflection is mediated by the concern that this article establishes as a starting point and has to do with the relevance of historical thinking in design teaching. This issue is particularly sensitive in a discipline that is characterized by its pragmatism and production of aesthetic experiences through sensory-experience manifestations. In the age of information society, when everything a designer needs to know about history and its aesthetic references seems to be within reach of a couple clicks and glances, the question remains about the sense and meaning of design history curricula. Similarly, many questions
arise from the teaching practice: from generational gap kind of issues, related to learning processes and information management, to the same pedagogical model of design teaching, which has been traditionally based on a long tradition of Art History lecturing. To tackle this problem, the first iterations of DISE1204 focused on provide the students with an opportunity to conduct outdoor activities that would allow them to generate connections between concepts –not events– and urban everyday life. In order to implement this idea, eight topics were defined as the course structure that revolves less around the great events, movements, characters or icons on the history of design, but more around problems related to contemporary design practice. Therefore, the criteria to define the themes or topics, were based on studio practice and their expectations as designers in formation, rather than focusing on canonical structures that make sense for art historians but that do not necessarily resonate with contemporary design practice.

On the other hand, there was a curatorial process to create contents through which a great deal of the regular topics, images, and content, was significantly trimmed. Rather than focusing on the content, a crucial part of the exercise, was to articulate pieces of information to bring about concepts from history under the guise of contemporary design practice problems. In order to accomplish this goal, short videos were carefully but also amateurishly crafted. The script writing was exceptionally useful in the sense that contributed to make me conscious about the structure and articulation of my own historical narrative in order to get a streamlined version of it. The videos were lined up around eight topics, namely as follows: 1) The Power of Images, 2) The Quest for Order, 3) Everyday Life, Experience, and Ideology, 4) Gaze and Performativity, 5) Progress and Cities, 6) Transitional Aesthetics, 7) Domestication of Modernity, 8) Innovation, Serialization, Consumption.

CONECTATE played a fundamental role in the implementation of technological innovation in the classroom. Their guidance was especially useful in identifying the technology to be incorporated in the different activities for students that, at the same time, would help them to produce and contribute contents to bring for discussion during sessions. Another mechanism to stimulate student participation, had to do with the use of clickers and platforms such as Kahoot (Sánchez & Barreto, 2018). City tours were accompanied by augmented reality tools such as Blippar or through the use of QR codes. Most of these implementations were available on Blackboard which constituted the virtual environment thought which most of the contents but also tests, surveys, communications, and readings, were delivered. The platform was central in securing reliable communication between students, professor and teaching assistants.

Lastly, we were able to evaluate the innovation in three moments during the implementation phase, that took part mostly in 2017. Forty two out of seventy five students took part of the last survey about the course (Sánchez & Barreto, 2018). The balance was satisfactory insofar as they effectively identified an opportunity to exercise their autonomy through the performance of activities that most of them described as interesting. The Blackboard platform also contributed to strengthening the impression of transparency in the
management of the course and valued the videos produced by the teacher to deliver the contents.

6. Conclusion

The demystification of design as a cultural expression and a living art, is essential to consolidate learning processes. While the role that art history has played in teaching design history is important, it is necessary to understand the particularities of local epistemes in order to generate new frameworks for understanding its own dynamics. In the same vein, the exercise of understanding the history of design from the perspective of the contemporary practitioner allows us to navigate the past with clear questions about a more empathic historical investigation. The approach to historical problems through the lens of critical theory and cultural studies, contributes to bring to the history of design and the arts in general, discussions that at least in the Latin American context, are perceived as uncomfortable as are those about race, class, and gender. Especially in the field of arts, discussion on this topics has been marginalized and deemed uncomfortable to say the least, in order to preserve the asepsis of the study of arts. However, I deem this tendency as part of systemic inequalities deep rooted in the history of the region that are usually disguised as high culture and supposedly intellectual rigor. The history of art, architecture, and design in Latin America, largely corresponds to what Antonio Gramsci characterized as power systems backed by the notion of cultural hegemony that are legitimized at the same time, through the authority of the intelligentsia.

In the case of the history of design, there are still not known statistics to let us make an assertion about its decline. Based on just impressions coming from social media and overheard conversations from my students, I could even argue that there is a renewed interest in history based on the increasing interest aroused by social media and digital platforms such as Netflix, Pinterest, and others. History seems to be very appealing for aesthetic capitalist purposes but that same phenomenon can also represent its decline. Not because is going to lose importance, but because it runs the risk of ending up turning into pure entertainment and senseless sensory stimuli either for creation or consumption. Design history and history scholars can run the risk of keep talking to each other while consciously or not, ending up legitimizing the prevailing system of power which is highly problematic in postcolonial societies. Keeping up with the inertia of design history teaching, not only translates into a type of intellectual and cultural inequality but is also harmless in terms of promoting agency to individuals and fostering meaningful changes in society.

References


Designers-Thinkers and the Critical Conscience of Design

Sanna Simola
Aalto University, School of Art, Design and Architecture
sanna.simola@aalto.fi

Abstract | The tension between artistic expression, the ideal product, and the inevitable compromising that is required through mass production has been powerfully verbalised and illustrated by two world famous designers from geographically distant design cultures: Kaj Franck (1911–1989) and Enzo Mari (1932–2020). Both designers speak about design priorities and essential functional forms with a purpose. Both ‘moralist designers’ have been named ‘the conscience of design’ by their colleagues for their critical voices on design practice expressed towards a professional environment, which had become too superficial. What does conscience mean in design cultures today? Is a superb moral backbone sign of a ‘design inquisitor’ as Alessandro Mendini wrote on his Domus editorial “Dear Enzo Mari” 40 years ago, when he defined him as the conscience of the professional community?
This study on two critical ‘thinking designers’ (considered important for their moral messages on design ethics, a responsible way of working and communicating in design) is a part of a comparative study on design approaches in two different design cultures.

KEYWORDS | DESIGN PHILOSOPHIES, THINKING DESIGNERS, DESIGN APPROACH, DESIGN PRINCIPLES, DESIGN ETHICS
1. Introduction

What do we know about the world map of design philosophers, theorists, and writers who are not active in the anglophone research context? In non-anglophone European countries (such as Italy and the Nordic countries), a strong design culture and identity is bound to local language and visual grammar. Design is a system of communication beyond boundaries, but many central figures in design history have not been able or willing to speak foreign languages. The question of Design Cultures is very much a question of approach: whom you relate with, how ideas travel and are subsequently transformed when adapted to a new context.

The history of theorising design discipline and its moral foundations goes far back to politically active practitioners, such as William Morris (1834-1896) and internationally active ‘transnational’ figures like Tomás Maldonado (1922-2018) developing definitions of industrial design and curricula for Industrial Design education in the US, Germany and Italy. The timeless design theories and philosophies developed by practicing designers – such as Dieter Rams’ 10 Principles of Good Design or Bruno Munari’s cooking metaphor and mind-blowing thoughts by Ettore Sottsass – are important food for thought for design students as examples of coherence between ideals and practice, research and implementation.

This paper compares two central ‘thinking designers’ considered important for their moral messages on design ethics, a responsible way of working and communicating design. This way of developing theories through practice and teaching work is different from the design critic’s or the art historian’s approach. The tension between artistic expression and mass production, the ideal product and a compromising marketing proposal have been powerfully verbalised and illustrated by world famous designers Kaj Franck (1911–1989) and Enzo Mari (1932–2020), both belonging to geographically distant design cultures, but expressing similar design ideals. Both of them have been called the ‘conscience of design’ by their colleagues for the reasons of critical view of design practice in the professional community which they consider had become too oriented towards a superficial market-driven design practice, or towards a system obsessed with celebrity. The products by both designers are about design priorities; essential functional forms with purpose. These two masters of design are effectively spiritual guides in design philosophy.

I compare the ideas of these ‘moralist designers’ and their timeless thinking in two apparently different design cultures of the second half of the XXth century.

The criticism of kitsch and irresponsible products has been a topic for over 50 years. While Victor Papanek spoke about the “most harmful profession in the world” (Papanek 1971, 1985, 1997), these designers were busy with their utopias and their (design) activism: social justice and design projects which respected the labour force in the factory that manufactured them, and design principles that took into account consider economy, ecology, ethics, aesthetics, and ergonomics.
1.1 The Context

This article is a part of a broader comparative study of design cultures and relative thinking in two ‘design nations’, Italy and Finland. The theoretical framework on a rich amount of data regarding design philosophy and design communication (literature, interviews, experiments and empirical data) in different cultural contexts, is based on Grounded Theory (GT), the method adopted from the social sciences, that allows one to build a theory on discovered data by coding and comparing one’s findings (Glaser, 1998).

The reason to compare the design philosophies of these two protagonists is their unique role as nationally recognised ethical designers calling on the professional community to respect moral values and good design principles, almost like design priests.

This year is a perfect moment to reflect on Enzo Mari, whose retrospective exhibition will be finally open at the Triennale in Milan. This is the last occasion to see Mari’s extensive work before it will be locked in the CASVA archive for forty years. When donating his archive of 2,000 art and design projects, Mari set a condition to the City of Milan: “it will take forty years before a new generation would be able to make good use of it, and understand the profound meaning of things”.

2. Cultural differences in design: Italy and Finland

The reason I have studied different design approaches and theories developed by practitioners is because of academic curiosity: the diversity in approach related to international design students, and the surrounding institutional way to communicating design matters.

Some clichés related to our cultural mindset and psychology as consumers and producers can be questioned or approved, but everyone working with design has an idea of what constitutes “Italian design” (sport cars, plastics, Castiglioni, Sottsass, Olivetti) or “Finnish design” (wood, glassware, Aalto, Marimekko, Iittala, Nokia).

The national design branding influenced by architectural & design magazines, institutional design promotion and design industries may remain apparently unchanged for decades, while educational institutions and researchers are approaching a completely different reality. Thus, communicating design (“what design can do”) and its possibilities in a post-industrial society depends on our ability to explain it to a broader audience of those who can implement good practices e.g. in the public sector and politically important strategies.

We know Italians for the artistic genius and superb manufacturing skills, the elegance of every detail. Many designers all over the world would love to work with Italian design companies, so unconventional in experimenting with new technologies and radical innovation (Verganti, 2009).
This reputation in the field of industrial design and fashion is unfortunately disappearing owing to globalisation taking away manufacturing from Italy. Some kind of chaos (albeit of a typically Italian creative kind) has become a serious problem with the downturn in the Italian economy following the prosperous eighties. While the surrounding world is reacting to serious environmental problems by adopting new clean-tech industries and ambitious carbon-free solutions, Italy, with all its creative manpower seems more like an eternal talk-shop. The gap between politics and research, education and industry, is alarming when a new EU Green Deal is considered to be an annoying imposition. The call for equality and democracy through design is a design ideal in the Nordic countries – and as such, better implemented in public sector design challenges of Northern Europe.

2.1 National design heritage

In talkative Italy (with the deep roots in architecture, arts & poetry) there has been an open debate for design criticism on the pages of several architectural magazines discussing the concept of "cultura del progetto" (design culture or culture of design).

It is easy to name influential design theorists writing in Italian and architect-writers such as Mendini or Branzi, and philosophical designers such as Sottsass, Castiglioni or Munari – reflecting the state of design on magazines and books. The ‘design discourse’ works in some ways like politics: the art of research, writing and teaching is done by practicing designers, art historians or researchers who develop a design theory through their design work and communicate it while at the same time explaining its purposes.

The idea of Finland and Finnish design is almost the opposite to the loud, hot, eye-catching, speed and life loving Italy: pure, clean, calm, silent and humble, simple and natural, introverted and honest, reliable and resilient. According to Pekka Harni (2010), Finnish design at its best is as least designed as possible, with an essential design grammar developed from traditional objects with their natural bond to the material and function. This has been a mainstream modernist Form Follows Function approach. Alberto Alessi called it the “orthodox design legacy of Finland”, talking to Eero Aarnio (b.1932), one of his master designers, “a kind of ‘ludic Finn’, very far from the austere professionality prevailing in North European design” (Svenskberg, 2016).

The Scandinavian social democratic idea of functional, beautiful everyday objects, affordable for everyone, has filled almost all the Finnish homes with quality design objects and furniture since the sixties. (MoMA, 1992; Aav, 2011; Korvenmaa, 2009) The homes with Marimekko textiles, Arabia ceramics and Iittala glassware might have wooden furniture designed by Tapiovaara or Aalto. The Finnish taste for natural simplicity and extremely functional objects can be seen as practical given the climate conditions (a luxury car is worthless if it does not start in temperatures below zero).

So, frequently a Finnish design object can appear as a bit clumsy given that it must have durability, strength, safety and unbreakability attributes. In Finland and Scandinavia, the
etymology of the word *design* (*muotoilu*: form-giving as in the sense of shaping) does not refer to drawing or planning and thus the term itself shapes the local understanding of design culture. The tradition of craft schools has been stronger than the influence of architecture, despite the great heritage of Alvar Aalto, the most well known master of Finnish design and one of the major verbalisers of the poetry of natural materials and human scale in architecture and design. Aalto was one of the first modernists to speak about democratic design and human scale in every project.

Aalto had a very close relationship with Italy and admired places like Siena. His design philosophy was influenced by Italy and is a perfect interpretation of international ideas adapted to a local context. His natural design philosophy can be seen as the main identity builder of postwar Finnish design along with the most appreciated design teacher Kaj Franck (head of design course since 1960 in the Institute of Arts and Crafts). Franck developed new inter-trans-departmental teaching methods and the basic course of design foundations. He developed into a manifesto his criticism of an industrial products celebrity culture proposing a return to anonymity in the late sixties. (Korvenmaa, 2009; Aaltonen, 2008)

Another Finnish friend of Italians – especially with Gio Ponti (1891–1979), architect and director of Domus magazine – was Tapio Wirkkala (1915–1985), one of the most versatile designers who spent a lot of time in the Venini glass factory in Venice. Also Timo Sarpaneva (1926–2006) had his art glass team in Venice. Today the same factories are an experimental playground for younger generation designers such as Harri Koskinen and Ilkka Suppanen. Italy has been a source for inspiration for many Finnish artists and designers, and the role of Milan Triennials was determinant in the national export success and design reputation of the ‘Golden Age’, when designers received international media attention. (Korvenmaa, 2009; Pigliafreddo, 2012)

**3. Conscience of designers**

The ethical design discourse covers themes from social and inclusive design to sustainable design and design activism. In many cases the right strategies could be adopted in the public sector, while in others, only legislation can push for the optimal design strategies. For the new generations of designers civic consciousness is mandatory.

The ethos of Good Design (Valtonen, 2006) has been replaced by other design priorities. Design prizes challenge the companies and designers to be ambitious and to do their best instead of competing with lower prices. Can a designer refuse commitments with producers who do not share the same values? Does one aim at optimal solutions as doctors do? The problem of an unprotected profession is the lack of real rules. The professionals who have agreed on a code of conduct usually belong to trade associations and respect the ethics that protect good conduct in design practice. Beyond the code of conduct and fair play in the workplace, we respect certain values that may be bound up with our local (design) culture, aesthetics and ethics.
Fig 1. Enzo Mari (1999): Barcelona Manifesto: The ethics is the goal of every project.

“The utopizing tension of the origins of design must be recovered. If this is the allegory of a possible transformation, then it should reach as many people as possible. Those people who build our environment in a state of alienation and thus remain partially responsible of its transformation.

The mechanisms led by the IT revolution are presently devouring all ideas in order to spew out sellable goods. To begin with, in the coming decades we must find the right ways to isolate from this redundancy the ideas of transformation. In order to achieve that, we must separate them from all those ideas generated by irresponsible anarchies that deny and trivialise the drive towards utopia, thus making it impossible to get people involved. In the meantime, it might be worth generalizing the idea that every project works towards ethics (which can be compared to the Hippocratic Oath.)” (Enzo Mari, 1999: The Barcelona Manifesto)

The idea of becoming famous in fashionable, creative professions has generated the phenomena of new bad design and irresponsible design education.
3.1 Critical vision on design expressed to the community

The designers I chose to study for their role of conscience of the professional community have been extremely coherent with their views – working as product designers with different manufacturers and doing part-time teaching and generating an impressive amount of publications regarding their design philosophies. Moreover, the both were active in their national design associations, the Finnish Ornamo and the Italian ADI, the context of professional debates and shared code of conduct.

Kaj Franck and Enzo Mari, the two famous purist designers and poets of timeless beauty, come from completely different family backgrounds. They may appear as opposites with their personality traits and still have many similar interests, such as gardening and traditional craft objects.

Franck was born in a wealthy and well-instructed family of Swedish-speaking Finns. His grandfather was an architect and his mother, with whom he lived until Sixties, was drawing for furniture manufacturers. Franck could read such texts as the Swedish Crafts Association’s first propaganda publication, Gregor Paulsson’s “Better things for everyday life” (1919), marking the foundations of the modern Scandinavian design culture of equality. Franck graduated from furniture design department of the Central School of Craft and Design in 1932. (Designmuseo Helsinki, 2011; Aav, 2011)

Mari had a proletarian childhood with a very poorly educated family migrated from Southern Italy to the North, where he was born in 1932. He had to leave the school at 15 to help his family doing all kinds of jobs. Fortunately, the high-school diploma was not requested at the Brera Academy of Fine Arts, where he studied in 1952-1956. His career-path is quite unique compared to his colleagues coming from architectural schools. Hard working, obsessed with knowledge and research in every single project to find the essence of it like a hidden truth, Mari became a self-taught designer with a special eye on the psychology of perception and manufacturing skills. A political approach is evident already in his early artist career (Fransoni, 2019), when Giulio Carlo Argan was the most influential art historian and art critic in Italy.
3.2 KAJ FRANCK: ”necessary, functional, justified, right”

Finnish designer Kaj Franck (1911–1989) was trained as furniture designer, but became one of the most famous glass and ceramic designers working with the most important Finnish manufacturers. Every Finnish family has Franck’s beautiful utility-ware objects, but his legacy as design educator is even stronger than the presence of his minimalistic functional tableware or colourful glass objects.

Franck, an excellent story-teller, verbalised topics of basic design principles and good design solutions in so fascinating a way that his students and readers understood the variety of possibilities in solving a design problem (and not creating new ones by solving one). The goal of a designer is to solve the problem, not the object itself. He wrote about the surrounding material culture, praising the beautiful vernacular archetypes of everyday objects and recommended smashing the porcelain dinner service – those objects we do not use every day. (Aav, 2011; Kalin & Wynnes, 1992)

The work as art director of the Arabia ceramic factory gave him the opportunity to rethink tableware for post-war Finland. His ‘optimal objects’; Scandia knives and forks (1952–1989, 1996–1998, re-released in different measures in 2016 to the present), Kilta ceramic ware (1953, since 1981 Teema stoneware), and Kartio drinking glasses (1958) express the peaceful simplicity of basic geometric forms, that fit any socio-economic context. The natural formal
grammar of bowls and pots recalls Japanese inspiration and the harmony of tea tables.

Franck did not want any decoration on his industrial objects. A very strange commercial decision by the Iittala Glass factory producing Kartio glasses, was to add the name of Kaj Franck on the glass bottom in 1990s. One of the most famous protests or criticisms by Franck in 1965, concerned the marketing of the industrial objects with the names of designers who had been award winners at the Milan Triennials. He wrote in the magazine of Glass and Ceramics that industrial products should remain anonymous. (Korvenmaa, 2009; Aav, 2011; MoMA, 1992)

Franck, who was called a ‘social designer’, advocated the designer’s responsibility as well as the equality of workers in any position in the factory. In this 1960’s–70’s discourse he is very close to his Italian colleague Mari, although Franck did not express such politicised opinions as Mari. Internationally active Franck took part in the Italian Compasso d’Oro juries after his
own award *Gran Premio Internazionale* in 1957 (ADI, 1979, 57–59). After another important design award of those years, the *Lunning Prize* in 1955, Franck could travel and visit several universities and art schools in the USA. He wanted to understand how so called industrial design was taught. He adopted some Bauhaus principles from his American colleague John Arnold to experiment with his basic design course in Helsinki, such as an open-minded attitude in design process.

### 3.3 ENZO MARI: “Design is only design if it communicates knowledge.”

Enzo Mari (1932–2020), one of the last Italian design maestros, is best known for his collaboration with Danese since the fifties, on playthings like the 16 Animals puzzle and iconic sixties posters (silk-screen prints *Serie della natura, The Nature Series*). He started his artistic research with programmed art, and ever since as a self-taught designer with fine art studies, he prefers defining himself an artist. Art and design critics have defined Mari as a philosopher-designer (Grassi & Pansera, 1980, 284).

The first time Enzo Mari was defined ‘*the conscience of all of us designers*’ was in the editorial of *Domus* (607/1980) by Alessandro Mendini (1931–2019), the most influential figure in Italian design culture since Gio Ponti appointed him his successor to edit the famous *Domus*.
Domus magazine. This ‘public letter to his colleague’ is my preferred quotation, as Mendini sees clearly what makes Mari so unusual a figure in the Italian design landscape. Mendini represents an ideologically opposite approach to Mari’s Marxist vision on design, launching Italian Post-modernism widely on the pages of his Domus – the style that Mari considers redundant, object-sculptures, and ‘Luigi-style furniture’ (referring to the Louis XIV style) as the worst cases of kitsch creations.

Mendini describes how he should respond to the international public who is asking, who is Enzo Mari? “Mari is not a designer; if his objects did not exist I wouldn’t particularly mind. Mari, instead, is the conscience of us all.” and continues:

“Now I am not a moralist and a demagogue like you. I cannot and I don’t want to distinguish the good form from the bad, as you do. […] You’re not interested in the drawn project, except as an arrow to be shot at the illogical logic of the productive mechanism, as a theorem to demonstrate the incongruities of the system. What you are interested in is the design for the design, or rather the design for the design for the design. In other words, you seek, propose and meditate only on the ‘project of man’. And this means occupying yourself with morality, maybe even through the objects you do for Danese.” (Mendini, 1980, p.1)

In her article “Il Savonarola del design” (1988) the Italian design journalist Cristina Morozzi describes Mari as a figure like the famous monk Girolamo Savonarola (1452–1498), the Italian Dominican friar and preacher active in Renaissance Florence. Those who know Mari’s attitude in preaching for the causes he adopted in his early career can understand this. For Mari’s design students his approach may seem unbearable heavy when he opens with the declaration: I am a Marxist. His criticism of design schools mass-producing ‘designers’ who cannot design, but want to become famous, was one of his pet topics; another was “the internet is rendering us stupid”.

His design philosophy starts with Greek philosophers and finds a culmination in the French Revolution 1789 with Liberté, Égalité, Fraternité – before the importance of Marx and Lenin – changing society for the better with human rights and equal opportunities. Substantially it is the same idea of the Nordics with social democratic principles of equality through design. A kind of ‘Lutheran’ or protestant aesthetic and rigour in problem solving, is notable in Mari’s work, every time re-inventing the way an object can be designed without a banal re-styling.

The search for an essential form and the essence of a typology or archetype (like the Panther) can be interpreted in his design motto: “Il progetto si attua individuando progressivamente ciò che è prioritario nell’ambito di tutto ciò che interferisce”. One of his central thoughts is about the ‘proper or improper project’. Mari’s teaching method is well described in the exhibition catalogue “Enzo Mari. Arte del design” (2008, 156-157):

“The features of ‘improper’ design (the knowing repetition of an existing design) and those of ‘proper’ design (derived from the refusal of existing designs because of their technical, expressive or social inadequacy. Where the form of the design cannot be
predefined but is discovered unexpectedly based on multiple hypotheses of research) are all listed.

Teaching improper design is relatively easy, but must an architectural school produce designers or copiers?”

Fig. 5. Top: La Pantera, 1965. The Nature Series prints for Danese (8 different images between 1961–1967) had very accessible prices in 1967: 10 000 lire (Trini, 1968, 31-40). Left: 16 animals puzzle in its original packaging, Danese 1957. Right: “Panettone”, a traffic pollard which can be removed only by municipal vehicles, an eighties project for the City of Milan.
4. Conclusions

Both Franck and Mari have pursued a similar design philosophy concerning a kind of purity of projects with responsibility: the ideal or optimal form in using materials with the right properties, the idea of democracy with good design available for everyone. The awareness of environmental problems due to a careless overconsumption is a topic they carried out 50 years ago and which Mari has continued ever since to the new Millennium.

Mari highlights the importance of communicating knowledge and culture through design. Some of his provoking designs are statement projects, like the DIY toolkit for Autoprogettazione (Simon International, 1974). The rough wooden furniture looked like a Finnish normality already in 70s – and became an Artek product some decades later. Ecolo plastic vases project for Alessi was a similar DIY design project: one can create his own design item with instructions and a ‘design label’.

Franck was an anti materialist and advocated recycling and immaterial solutions. In Finland the critical voice of Franck became a design ethos for new generations. The theme of designers’ ‘E’s (Aesthetics, Ethics, Ecology, Ergonomics, Economy and why not Equality?) has been the backbone of Finnish design education for decades. The close relationship with nature (the woods) and a very craft-based curriculum in design schools and universities (with workshops permitting a close contact with machinery and materials) have been a key for hands-on designers producing their own prototypes. Practical and functional, timeless modernism is still the mainstream design grammar in Finland and matches perfectly to consumers’ preference for easy-to-care-of objects. Funny, playful or elegant design does not come naturally – the rare exceptions in this genre might be Eero Aarnio with his photogenic plastic objects such as Ball Chair and Oiva Toikka (who took care of Kaj Franck’s legacy in the Arabia factory).

However, an intellectually honest, strong design philosophy is a great legacy to those students who are trying to understand how to design a better world. The thinking behind every design choice is the core activity of our profession.

The critical voice within the professional community may sound uncomfortable, and make one feel guilty and less free in creative choices. The ‘the village idiot’ role results in a reputation as an angry business spoiler and hearing the truth of the stupid things one does is not nice.

“So I tell people who ask me about you that you don’t seem to be the usual designer, that you are like a ‘design inquisitor’ who launches ecumenical and laconic appeals to us architects, prodigal sons: “Empty everything, change everything, reinvent everything!”’. Although I am not sensitive to the rhetoric of calls to order and to the seriousness of the man who never contradicts himself, I want you to know that your periodic messages reach the depths of my conscience.” (Mendini, 1980)
Fig 6. Enzo Mari in a video interview: “Because I was an artist”. “Art is desperation, it means a life totally dedicated to developing hypotheses, tests, attempts, which cannot be resolved in terms of project making.” Mari’s work has been analysed by several art critics and journalists mainly in Italian language. Listening to his long monologues is the best way to understand his philosophical approach and mission.

References

Bosoni, G. (1994). La forma possibile è una sola / There is only one form possible. Ottagono, 111, 27-36.


About the Authors:

Author 1 Sanna Simola is a Helsinki based industrial designer and doctoral candidate interested in design culture & design for all & the international design community. She studied industrial design in Florence, graduating with a thesis supervised by Enzo Mari.

Acknowledgements: Thank you Patrick Richmond Nicholas for proofreading, Marco Petrus per la fotografia, and all the friends sharing your memories of important design teachers. Photo courtesy of Danese, Designmuseo, iittala & Kaj Franck. Grazie Enzo Mari.
De-signing Ambiguity

James Dyer\textsuperscript{a}, Christian S. Petersen\textsuperscript{b}

The University of Huddersfield, Department of Art & Communication
\textsuperscript{a}J.Dyer@hud.ac.uk
\textsuperscript{b}C.Petersen@hud.ac.uk

Abstract | The present paper challenges the way ambiguity is made understandable in William W. Gaver, Jacob Beaver, and Steve Benford’s disambiguation of ambiguity (2003). Rather than assuming ambiguity to be an epiphenomenal relation between designed artefacts and their users, which seems to be the argument presented in Ambiguity as a Resource for Design (2003), the present paper finds ambiguity to exist firstly, and at a higher intensity, in the primordial stages of design practices. As such, this paper proposes that ambiguity is primarily a condition of the not-yet-designed artefact. In this way, whilst celebrating their innovative work, the present paper differs from Gaver, Beaver and Benford on two accounts. Firstly, by claiming that all things in the world are inherently ambiguous, and secondly by prioritising the role of ambiguity in the process of designing.

KEYWORDS | DESIGN ONTOLOGY, AMBIGUITY, GLASS FRIGGERS, BRICOLAGE
1. The purposeful noise of ambiguity

In Ambiguity as a Resource for Design (2003), ambiguity is presented an effect that happens between networked entities. Gaver, Beaver and Benford’s world view proposes that designed artefacts exist in a cultural world-space, and that people — as audiences and users — are social in that world-space with those artefacts and each other. From this quasi-atomist perspective, ambiguity is framed in three broad classes. Firstly, “ambiguity of information” concerns the designed artefact. Secondly, “ambiguity of context” concerns the cultural world-space. Thirdly, “ambiguity of relationships” concerns people’s relationships to the artefacts in that space (2003, p. 233). Surprisingly, considering they are arguing for the resourcefulness of ambiguity in design, with each of these broad classes, the role of the designer and the process of designing have been largely under-acknowledged.

As such, this notion of ambiguity resonates closely with the now much derided Shannon-Weaver mathematical model of communication (1948). In that model, a form of information (the artefact) is distorted by a source of noise (ambiguity) before reaching its destination (audiences and users). At a cosmetic level, if using ambiguity as a resource for design, the designer would ostensibly intensify the “noisy” qualities of communication. Gaver, Beaver, and Benford give an example of Desert Rain, a virtual reality game installation that features “rain curtains” which are “screens made of water through which performers and players physically pass” (2003, p. 234). The shimmering spray of water interferes with displayed images. As such, in an attempt to make sense of the images, a participant must “decode” the ambiguous “messages” displayed and distorted by the “noisy” screens.

Whilst on the surface there is something primitive in this metaphor of disturbed linear communication, their paper also proposes something more complex. They daringly concede that designs are not closed units, which for a long time has been the modernist designer’s ideal illusion. Instead, they claim, designs are open and multistable, and may exist beyond the designer’s intent. Consequently, when they undermine the apotheosis of artefacts confined to exist within designer-given determinate possibilities, they are in the same motion also emphasising the indeterminate kinetic pluralism of designed artefacts. They give an example of Projected Realities, which is a project designed to increase the awareness and presence of elderly residence in Bijlmer, a Dutch housing estate. Projected Realities is made up of “Sloganbenches” and “Imagebanks”, which are installed in the Bijlmer area. A scroll of fabric with handwritten slogans from the elderly residents is inserted into the back support of the benches, each slogan is associated with a set of images which are displayed on the Imagebank’s five monitors. These two elements were also wirelessly connected so that “the slogans on local Sloganbenches could be summarised by the images showing on a single roadside Imagebank” (2003, p. 234). In this way, the designers have intentionally made an ambiguous open system that insists on an audience’s interpretation.

However, it is curious that Gaver, Beaver, and Benford do not consider the presence of ambiguity before the more determinate production of a system of benches and monitors.
For example, the ambiguity of the brief, “to help increase the presence of older people in a large Dutch housing estate” (2003, p. 234), or the necessary material ambiguity of a bench to afford both sitting and displaying, and so on. As such, because it is not considered how these uniquely ambiguous artefacts came into being, their paper appears to be taking artefacts for granted. It is surprising that Gaver, Beaver, and Benford do not review the consequences of this dynamic open ambiguity for designers specifically. Instead, they generally focus on how audiences and users are now charged with a sense of agency when needing to interpret uniquely ambiguous artefacts. The authors almost exclusively consider the audiences role as the interpretative “decoder” of ambiguous designs, such as “rain curtains” or “Imagebanks” and “Sloganbenches”. They propose that “the work of making an ambiguous situation comprehensible belongs to the person” (2003, p. 236). Whilst this undermines the ambiguous world as it is encountered by designers, it does emphasise the pluralism of designed artefacts and the responsibility of audiences as independent sense-makers (2003, p. 233).

The limit of their study is becoming apparent, it focuses on people interpreting purposively open, and therefore ambiguous, designs. Characteristically, these are designs that — in Shannon and Weaver’s terms — are intentionally “noisy”. Speculatively, however, what happens when closed designs are considered to be open? In other words, from a designer’s perspective, what happens when interpretation does not meet intention? The present paper emphasises an overlooked aspect of the ambiguous world for designers. This is done by considering the creative encounter between a designer’s interpretation and an inherently ambiguous world of potential. This notion is contextualised in the work of Estonian bricoler and model maker Fyodor Šantsõn.

2. The world as a collection of oddments

Fyodor Šantsõn is a designer that subverts the closed intentions of everyday designs. Since 1992 Šantsõn has been constructing an enormous model of Narva, a city on the European-Russian border, which was levelled during World War II. The Narva model is laid out in his workshop, which is housed in a now mostly empty town hall — one of the few buildings reconstructed after the war. Šantsõn is a bricoler twice over, first in the original sense as a tinkering handyman, and secondly in Anthropologist Claude Levi-Strauss’ definition as someone who finds a constructive usefulness in seemingly unusable and unrelated artefacts (1966, pp. 16-36). The objects Šantsõn collects, which litter his workshop (Figure 1), are defined by their unforeseen “potential” rather than their determined “given” properties. This is a result of Šantsõn’s designer-interpretation encountering a world of ambiguous potential. By selecting choice elements, and holding them in his studio, he is cutting back the vast surplus of potential resources and is defining his own set of unique materials (Figure 2).
Šantsõn’s models are carefully made up of these choice indeterminate bits of stuff, it is what is readily available and easily sourced in Narva, such as Styrofoam, corrugated cardboard, twine, and aluminium foil. Levi-Strauss may have called these ambiguous materials “a collection of oddments” (1966, p. 16). For example, a plastic wallet for holding papers has the potential use, for Šantsõn, to be a windowpane on one of his models, and off-cuts of lace give an effect of chiselled stone filigree. As Levi-Strauss claims, in the tongue of the bricoler, this collection of oddments “may always come in handy” (1966, p. 16). As a designer making sense of his imminent world, Šantsõn is working out of phase with other designer’s intentions and adrift from semiotic convention. Even in his construction process, Šantsõn uses medical syringes to clamp and pin parts of his models down whilst he glues them (Figure 3).

Šantsõn also uses archival photographs and architectural drawings, as well as witness testimonies with elder residents (Nikitina, 2013), to lever the ambiguous bric-à-brac into even more determinate and comprehensive forms. To an extent, once the materials have been applied to the model their fluid indeterminacy starts to harden and their newly determined purpose begins to make more sense; twine as window lead, Styrofoam as landscape and brick, cardboard as walls, and so on.
It is only after the model gains an apparent totality, after it has shifted from a collection of oddments to a seemingly unified artefact, that Gaver, Beaver, and Benford’s classes of ambiguity — as information, context, and relationship — have a foothold. As such, due to their delimiting focus on people’s interactions with actual designed entities — in this case, what would be Šantsõn’s finished model — the primordial intensities of ambiguity in the design process are misplaced. For example, the word of mouth testimonies, drawings, photographs, written histories of Narva, and Šantsõn’s ad hoc practices, are under-acknowledged as a “resource for design” (Gaver, Beaver & Benford, 2003).

The present paper argues that Šantsõn’s primary materials are inherently ambiguous. They then become more determinate once they are arrested in a scheme of meaning, in other words: once they are “de-signed”. The loss of ambiguity in that design process is the gain of a set of increasingly determinate properties, such as a 1:100 scale model of Narva. However, the model is not in a state of permanent fixity, rather, it is loose and contingent.

For example, on close inspection, the familiar materials that makeup the model are still clearly recognisable (Figure 4). Such as, the characteristic fluffy edges of cut Styrofoam, the creased aluminium foil laid across an uneven surface, and the ripples of corrugated card, which have absorbed the moisture of acrylic paint.
Figure 3. Close-up of model in Fyodor Šantsön’s workshop.
The dynamic difference between ambiguously open materials, on one hand, and their more closed de-signed forms, on the other hand, establishes a contrast between the present paper and Gaver, Beaver, and Benford’s focus of ambiguity. This can be framed as an ontological disparity, and is reviewed in the following sections, with a specific case study of 19th century British glassblowing. Firstly, a further ontological framing of ambiguity is developed.

Figure 4. Close-up of Fyodor Šantsõn’s model in Narva Art Gallery
3. From complexity to simplicity to plurality

Gaver, Beaver, and Benford claim “things themselves are not inherently ambiguous” (2003, p. 235), they make a distinction between “ambiguity” and notions of “fuzziness or inconsistency”. They claim the latter are “attributes of things” and the former is “an attribute of our interpretation of them” (2003, p. 235). Arguably, they are positioning ambiguity to be more or less an epiphenomenal quality, as if it were a characteristic that arises exclusively from the interaction between an audience and a discrete artefact. They clearly distinguish this from “fuzziness or inconsistency” to mean something more or less ontological, therefore, they seem to be disregarding the actual makeup of a thing’s being. This distinction is justifiable, however, because of their inherently user-oriented focus at a quasi-consumerist cultural level. After all, they are writing from the perspective of the Interaction Design Research Studio and The Mixed Reality Lab. If we take seriously the idea that the process of designing products is about de-signing and therefore about reducing the indeterminate surplus of a sign — as they claim, “product designers work to eliminate ambiguity” (2003, p. 236) — then the authors are effectively “de-signing” ambiguity and consequently compromising the key tenet of their enterprise.

From a more designer-centric perspective, a fault line can be exaggerated between intentionally designing ambiguous things and interpretively designing with ambiguous materials and methods. The present paper finds the dynamic complexity of the world to be ambiguous and defines the design process as a practice of abstracting that complexity towards a point of relative simplicity and stability. Alternatively, Gaver, Beaver, and Benford are more concerned with the social plurality of those already designed artefacts. For example, it is clear that the authors are concerned with the possibilities of ambiguous cultural artefacts for users. When describing ambiguous information, they claim “ambiguity arises in the way that information is presented” (2003, p. 236). As such, they are asking what the possible interpretations of information are, but not how the information came to being. Similarly, when defining the ambiguity of context, they think of it as the “reconceptualisations of existing technologies” (2003, p. 237), which sounds as if those “reconceptualisations” will always in some way be tethered to the original design’s scheme of meaning. Evidently, the more dynamic radical contingency of these designs is being overshadowed by their relatively stable status as already “existing technologies”. Finally, they claim that ambiguous relationships “push us to imagine how we might personally use such [ambiguous] products” (2003, p. 237) and that these relationships create the “condition for a deeply personal projection of imagination and values onto a design” (2003, p. 239). Again, their definitions of ambiguity rely on an audience’s “projection” onto, and user interaction with, already pre-existing designed artefacts.

Alternatively, from a more theoretically charged perspective of design, is it possible to consider ambiguity as an equally rich potential quality in actual practices of designing? That is to ask, can ambiguity not also exist in the primitive stages of design before the possibilities of informational, contextual, and relational ambiguities even manifest? If this is feasible,
then the authority of a designer — traditionally, as someone that casts objects into the world charged with their unique designerly intentions — is diffused into something more situated. Before expanding on this further, a more detailed distinction between the possible and potential is necessary to further understand what is at stake.

Process philosopher Brian Massumi distinguishes what is “potential” and what is “possible”. He characterises “potential” as “the conditions of emergence” (2002, p. 10) and the “possible” as the “reconditioning of the emerged” in such a way that it will “define normative or regulatory operations that set the parameters of history” (2002, p. 10). Considering what is “possible” is the dominant treatment of artefacts in Ambiguity as a Resource for Design (2003). Gaver, Beaver, and Benford seem most concerned with ambiguity being mysteriously “evoked” by “the possible interactions of determinate individuals and groups” (2002, p. 10) rather than ambiguity being the “potential” from which designs “emerge”. As such, for these authors, ambiguity only happens when we already have cultural artefacts as rigid things that exist in the world, such as slogans, image banks, and benches, for example, in the Projected Realities exhibition (2003, p. 234). Therefore, ambiguity is limited to be a thing that can only be “evoked” when the expectations and anticipations of audiences are not met. For example, in their illustration of Anthony Dunne’s “unusual” The Pillow (2003, pp. 234-235), or when audience’s experiences are disturbed and “disoriented” such as in Desert Rain (2003, p. 234). In this way, things must have already existed in a “usual” or pre-determined capacity. That is to say, audiences must already know of a “normal” bench, screen, or pillow, for them to later be considered disorienting, noisy, or ambiguous. Arguably, a kind of “and-also” additive quality emerges in this treatment of ambiguity, which promotes the open pluralism of cultural artefacts, but only on a superficial level.

For example, from their interpretation of ambiguity, the artefacts of a pillow, chair, and urinal take on a multiplicity of possibilities when they are “reconditioned” (Massumi, 2002, p. 10) to be display ports, message boards, and sculptures. However, this pluralist ambiguity still relies on a more essential referent for them to be considered “unusual” and “disorienting” in their ambiguity. From Gaver, Beaver, and Benford’s perspective, it seems that to be considered culturally “ambiguous”, the display port must still essentially be a pillow, and a message board must essentially be a bench, also the fountain sculpture must still essentially be a urinal. It is conceivable that this is what Massumi means by the “reconditioning” of the “emerged”. The authors prioritise the ambiguous possibilities of the artefacts external form whilst protecting an essential (non-ambiguous) inner core-like matter of the artefact. This starts to sound like Bruno Latour’s, self-admittedly naïve, formulaic definition of design as being “not only ... but also” (2008). For example, “not only” is this a pillow “but also” an “unusual” display port.

Whilst the present paper is in admiration of Gaver, Beaver, and Benford’s work in foregrounding the virtues of ambiguity, and presenting this ubiquitous quality of nature as a positive resource for design, rather than a malignant characteristic, it differs specifically on
one particular aspect. It is claimed that things in themselves are inherently ambiguous at an ontological level. It should be made clear at this point that the present paper is not defining an ontologically foisted impasse in this argument for ambiguity in design. Rather, by drawing focus to the process of making designs, rather than the effects of interpreting designs, the role of ambiguity in the pre-production of designs is emphasised. The notion of ambiguity as a primordial design resource that comes from surplus, as is argued in the present paper, as well as a material effect of interpretation that comes from finite cultural abstractions, as Gaver, Beaver, and Benford appear to propose (2003), is best illustrated by 19th century glass “Friggers”, which are ambiguous materials of design that also come from ambiguous design practices.

4. In the Glasshouse out of hours

In the 19th century, industrial glass production was not mechanised. Instead, glass products were made by skilled workers manually manipulating molten glass from furnaces. During breaks, and after hours, glassworkers were free to use the surplus of molten glass. In Britain, the artefacts the glassworker created from that surplus are known as “Friggers”, “Nailsea glass” or “end-of-day” glass, but the term “whimsies” is also used in North America (for an account of Friggers in contemporary contexts see: Zetterlund, 2019). Other than being made of glass, there is no definitive characteristic of a Frigger. As such, the glass artefacts are only classified as Friggers based on their circumstance of production. Glass manufacturer Harry J. Powell bitterly recounts the popularity of Friggers in 1923:

“The great Nailsea works were famous for the fine quality of their crown window-glass, but are unworthily commemorated in museums and private collections by the rude vases, flasks, jugs, candlesticks and rolling-pins originally made by the glass-blowers in their spare time. They are colourless or coloured, and many are marked, spotted, streaked or roughly threaded with opaque white enamel or crude-coloured glasses.” (Powell, 1923)

The indeterminate molten glass that the Friggers are made from, the surplus of the day, is an ambiguous glowing lump. As if through a process of reductive abstraction, by cooling, shaping, rolling, and hardening into more familiar shapes, such as “vases, flasks, jugs, candlesticks” (Powell, 1923) the more definitive Frigger is educed out of ambiguity. A type of Frigger glass that Powell mentions are typically unusable cultural items, such as glass canes, gavels, and hats. These explicitly useless novelties were the glassmakers’ offhand exercises, allowing them to show off and hone skills. With Friggers, we can see how ambiguity is a resource for designers in terms of the use of ambiguous (molten-like) materials. The Frigger is a design that arises from ambiguity with no provision, practicality, or use beyond a process of actualising surplus potential into something finite and more recognisable, much in the same way as Šantsõn’s practice.
In practical terms, Friggers demonstrate how the ostensibly formless and surplus qualities of ambiguous molten glass can come to actuality as graspable designed artefacts — pipes, flasks, vases, etc. — through a process of abstraction. There is, however, an inevitable loss in the reductive process of abstraction. In Ambiguity as A Resource for Design (2003) the more kinetic characteristics of artefacts are lost. As such, the way that the supposedly ambiguous artefacts they cite — such as the pillow, urinal, and bench — come to thought, as an entity in discourse, is by dismissing their primordial "potential", in Massumi’s terms (2002). However, with the Frigger, the possibility of informational, contextual, and relational ambiguity is dependent on the primordial condition of molten excess.

For example, because Friggers have no explicit utility, historically they became loaded with an implicit superstitious aura. There are several examples of Frigger glass being ascribed “apotropaic” properties. Frigger walking sticks (Figure 5) would be hung by the front door of Victorian homes and cleaned daily to supposedly ward off evil spirits. Similarly, Frigger “Witch balls” (Montani, 2019) would be hung in chimneys to protect the houses occupants from the supernatural. Breaking these Friggers was considered bad luck. Gaver, Beaver, and Benford may define this as “informational ambiguity”, whereby the “imprecision” of the artefact requires the audience to draw a unique “conceptual focus” and determine their own independent meanings. Furthermore, as an example of “contextually” ambiguous things, which are defined as “products that implicate several interpretations at once” as a sort of “mingling of discourses” (2003, p. 237), the Friggers are not only ornaments, experiments, and superstitious instruments, but they are also props and costumes. Glassworkers from the North Somerset town Nailsea, and Stourbridge in the Midlands, would parade their Friggers. The prominence of the event is apparent in an 1823 advertisement. It details, each participant will parade with “Glass Feathers in his Hat, Glass Stars suspended by Chains and [...] some kind of Glass Ornament in his Hand” (1823). In this context, the Friggers were a proud celebration of the glassworker’s creative talents. Extending from this, into the ambiguity of “relationships”, defined as designs which provoke their audiences and users to “form intellectual, aesthetic, emotional, and moral judgements” (2003, p. 237), Unionised North American glassworkers would also parade with their Frigger canes. After their Labour Day parading, they traded the canes for drink at local pubs. As a result, many pubs had back-bar displays of glass canes (Magrath, 2018). In fact, most Friggers produced by the glassmakers are presumed to have been sold at the end of the day in pubs to other punters that would use the Friggers as doorstops, paper weights, and ornaments. In this way, the Friggers, which clearly had an emotional value for the glassworkers, were also being judged for their trade value with bar workers, as well as their negotiable utility value with other punters.
5. Conclusion

Šantsõn’s model making illustrates how seemingly rigid substances can be made indeterminate by exploring their ambiguous potential as an infinite resource of design. In this way, by being a designer that works close to the buzzing confusion of the world, he demonstrates the constructive capacity of the design process to materially transform seemingly “given” entities into alternative unintended designs. Friggers, on the other hand, demonstrate that already ambiguous formless things can be made more comprehensible and still have a cultural plurality — as established by Gaver, Beaver, and Benford in terms of contextual, relational, and informational ambiguity — without needing to exist in a hermetically definitive way, or hylomorphically with an essential referent.

Notably, both of these examples come out of a kind of playful and ad hoc resourcefulness. Šantsõn’s curiosity to collect seemingly trivial materials allows him to playfully make sense of a seemingly lost history of Narva. Also, glass Friggers, as a culture of exploration with ostensible waste, have etymological ties to the verb friggle, meaning to muck about, or to masturbate. Despite the seeming disorderly playfulness and lack of formality or structure to these practices, both Šantsõn’s work and the craft of Frigger making have been recognised as having genuine cultural and commercial value. Šantsõn’s project has earned him the Valgetähe teenetemärk (Order of the White Star) (Martínez, 2018), Estonia’s highest decoration. Friggers, as end-of-day glass, eventually became a term for commercial glass products with marbling or splatter pattern effects, which has notably been carried over into glasshouses adopting Frigger designs into their commercial product lines.

As such, it has been demonstrated that designers are always already working with ambiguity in varying capacities, such as de-signing ambiguity from complexity to simplicity, and designing for ambiguity by complexifying simplicity into plurality. Furthermore, both of these transformative practices have concrete socio-economic consequences. One aspect of ambiguity that has not been addressed in the present paper, however, is the ambiguity of the designer. Accepting their now diffused authority, designers seem to be themselves increasingly ambiguous figures. In the examples used here, they appear to be archivists, researchers, historians, eccentric performers, trade negotiators, and so on. This confused
identity emerges in line with the recent conceptual reframing of contemporary design, such as being makers of connected ecologies and conditional systems (Maurer, et al., 2013) as well as ontologists designing processes (Kim, 2017).

Gaver, Beaver and Benford have admirably established a constructive connotation to the often-considered odious notion of ambiguity in design. They have critically interrogated and undermined the — surprisingly still popular — notion of hermetically closed designed artefacts. However, as the present paper has argued, it is the preliminary ontological conditions of ambiguity that must now be foregrounded as inspiringly problematic, as Henry Hongmin Kim proposes in Graphic Design Discourse, for the sake of innovation and sophistication, designers must become ontologists (Kim, 2017).

References


Zetterlund, C. (2019). *During the lunch break: Conversations on triggers and conditions of making*. Publit

**About the Authors:**

**James Dyer** writes about graphic design. He has a Bachelors in Multimedia Design (UK), a Masters in New Media and Digital Culture (NL), and a PhD from the department of Art and Communication (UK). Dyer’s recent (generally cynical) projects focus on realist accounts of everyday graphic designs.

**Christian Skovgaard Petersen** is a practiced-based PhD student (UK), his research interests are design ethnography, prototyping and visual communication. He has a Bachelors in Graphic Design (UK), and a MFA in Graphic Design and Illustration (SE). He is a practising graphic novelist; these projects tend have a darkly optimistic tone.
Disruptive Thinking in Design Education

Riccardo Balbo\textsuperscript{a}, Elda Scaramella\textsuperscript{b}, Serena Selva\textsuperscript{c}

\textsuperscript{a}IED – Istituto Europeo di Design
\textsuperscript{b}IED – Istituto Europeo di Design
\textsuperscript{c}IED – Istituto Europeo di Design
*s.selva@ied.it

Abstract | This paper aims to discuss the future of design education and the role of designers discussing the rationale and the pedagogic paradigm shift toward a “disruption based design education”, the definition of transdisciplinary methodology compared to other methodologies, the framework of a MA in Transdisciplinary Design and its interactions with the UN SDGs agenda, and finally the way to implement it within a Private Design Institution

KEYWORDS | DISRUPTIVE, TRANSDISCIPLINARITY, SDGS, DESIGN EDUCATION, DESIGN DRIVEN INNOVATION
1. Introduction

1.1 A new role for design?
The role of design as language and mind-set (apparently beyond its disciplinary boundaries) has become central in the contemporary cultural debate, with an exposure to more and more fields and industries, demonstrating a high plasticity in the possible extension to a wide range of applications redefining itself as a new approach to introduce disruptive solutions to highly complex scenarios, typical of the today’s global planet issues.
The transition from an industrial society to a digital society of information and creativity, confronts future generations with difficult and exciting challenges at the same time. Technology progresses exponentially and radically transforms entire parts of society and markets.
Artificial intelligence and automation replace repetitive, low-creativity jobs, while creativity and innovation are at the heart of the contemporary world, combined with the fact that internationally the economic and cultural models of industrial society are outdated, obsolete, ineffective to address the uncertainty of the present and the challenges of the future.
This has allowed us to reflect and to understand that the majority of schools and academic institutions are still linked to a past conception of knowledge and work.
The new market demands different skills from those required by industrial society, it requires flexibility, autonomy, divergent thinking, creativity, capacity for innovation: these are the skills of the twenty-first century that the traditional school is not prepared for and struggling to teach.

1.2 Spreading the design mindset
To value, share and progress on this change, it is useful to reflect on a set of paradigms to frame academic portfolios of institutions, mapping the grey areas that sound weak for disciplines and strong for global problem settings.
It is foreseen that design can be the effective mindset and should take the responsibility to address global issues, outlined by a shared agenda; this is the SDGs agenda.
Historically, change has been viewed as something that can be “managed” through centralized, top-down design processes that produce clear, predictable outcomes. This type of linear, cause-and effect thinking has influenced the design and development of societal infrastructures and policies in the developed world and has contributed to many of the global wicked problems previously mentioned (Irwin, Tonkinwise, Kossoff, 2016).
Design deals nowadays with different aspects related to sustainability and global change and is considered as a primary engine for innovation in our society on industry, local communities, and government.

1.3 Sustainability and design: evolution of a relation
Ceschin and Gaziulusoy (Ceschin, Gaziulusoy, 2016) describe the evolution of the design for sustainability: from product innovation to product-service system innovation to spatial–social innovation and socio–technical system innovation.
Design has culturally embedded the value of sustainability in its methodology: if we accept that design is a key differentiator introducing or addressing innovation, it is a matter of fact that communities and society at large deal with innovation in non-predictable yet sustainable
way. In other terms, not sustainable innovation is always rejected by communities. The process can last many years, and the effect might be worse than the rejected solution: nevertheless, there is an embedded need of balance in large communities.

Design has evolved towards dematerialization and is approaching more closely to solutions for complex social, environmental, and even political problems, as suggested by Papanek (Papanek, Fuller 1972).

At the same time, design activities are by nature complex, where multi-dimensional level of constraints, limited resources, layers of subsystems intertwined must be considered at the same time: designers’ ability refers in somehow to spot emerging phenomena – the creative act – able to convert constraints into resources.

1.4 Complexity: a trigger to change perspective

There is a heightened awareness of a myriad of wicked problems challenging us in the twenty-first century and an increasing acknowledgment that if they are seen as interconnected and interdependent, the scenario for possible interpretations becomes richer.

In this light, global issues cannot be addressed or solved from within a single discipline perspective, and multiple interventions over time are not likely to result in a clear solution (Irwin, Tonkinwise, Kossoff, 2016).

In order to face this complex issue, a circular, iterative, disruptive and error-friendly process could be used to envision radically new ideas that serve to change and inform the future mind sets and lifestyles: the solution is a transdisciplinary approach.

1.5 SDGs: the designer’s agenda

Transition and Transdisciplinary Design proposes that in order for designers to act as agents for change, new approaches to design and problem solving must be based upon a deep understanding of the dynamics of change within complex social and natural systems (Irwin, Tonkinwise, Kossoff, 2016). SDGs intent is to outline axis for an interpretation and understanding of our contemporary condition.

The disruptive approach introduced by transdisciplinary as a paradigm, improves design methodologies in the first phase of problem definition and research, makes the holistic view a relevant tool for designers to address problems and framing complex scenarios within an innovative and transdisciplinary approach, thereby promotes a horizontal dialogue among all involved components – shareholders; ultimately, fosters synergies between disciplines or bodies of knowledge like design, technology, economics, and sociology, which are fundamental for finding innovative and anticipatory solutions for holistic and complex changes.

The major change introduced with the shift of the design paradigm from being a body of knowledge to propose solutions and applications becoming an interpretative tool to act as a disruptive but effective problem setter. It is in fact recognised as a fruitful way to foster solutions where the implications of impacts on a global scale are more relevant than the finalized and defined applications: variables’ interaction analysis becomes central for the correct setting of questions and briefs, recognized as the key point in the design process facing sustainable goals.
2. Methods

2.1 A paradigm shift for design disciplines?
In the light of such a disciplinary expansion, the role of design is moving from its disciplinary and professional comfort zone, and designers take the role of facilitators rather than solvers: design language becomes an arbiter – interpreter among different systems of knowledge, decoding and recoding the chaos of intertwined global issues clustered by the Sustainable Development Goals (SDGs). Products, services, processes and business models as outcome of briefs outlined with a disruptive perspective can trigger real cultural change; nevertheless, it requires an attitude open to interpretation rather than solutions, and the potential counter-effect is that design disciplines overwhelm other bodies of knowledge misleading to unilateral perspectives.

During this transition, designers have expanded their field of action from a single user to communities as users, thereby becoming a more participatory discipline and delivering sustainable services and systems. Thinking in systems means looking at the whole, analysing single components and focusing attention on relationships and connections.

The discovery of the interdependence between each part of a system and between the system and its environment also allowed us to define the system’s boundaries, thus creating an identity and no isolation. Systemic thinking, in practical terms, means zooming out from a single part and considering that part’s relationship to its surroundings and other ecosystems and mapping the situation more than measuring it, by using a multidisciplinary approach (Battistoni, Giraldo, Barbero, 2019).

Design has changed from an activity often undertaken by an individual professional designer to a highly collaborative, co-design activity that involves a variety of actors, including professional designers, experts from other fields and disciplines and users/co-creators (Manzini, 2015).

Successful and highly impacting outcomes of such an approach are already populating everyone’s life. But is it still possible to define a discipline or body of knowledge as the relevant area to start with? Which methodology should be put in place to educate future professionals to a disruptive problem setting? Which impacts on the curricula, on the design educators and on the profession? Are we looking for an evolution of a methodology or an integration of the body of knowledge?

If sustainability is accepted to be the key differentiator for successful processes of global issues problem setting, design education should consider reviewing curricula where core topics and disciplines still can be considered necessary and fundamental yet not sufficient. The academic curricula review process cannot be limited to the introduction of new topics: the paradigm shift requires subjects, methods and organization variations. Visibly, the Institutions’ organizational models are required to shift from a vertical disciplinary vision based on domain/profession based model to a cross cutting issue/impact based approach, which programs and delivery units should refer to.
2.2 a new role for designers, not the end of design

Such an awareness stimulated our institution to question the role of design and designers (and thus curricula) when dealing with complex problems and when shifting from a design centred disciplinary approach to transdisciplinary design translated approach: design becomes one among other disciplines, a facilitating subject that uses techniques and a body of knowledge in a cross fertilized mode. Such a role requires an attitude open to interpretation rather than solutions; on the other side this may introduce a threat, when design disciplines might overwhelm other bodies of knowledge misleading to unilateral perspectives and solutions (Moreno, Rogel Villalba, 2018).

The definition of a program able to test a transdisciplinary methodology has been considered a milestone: a program, generated from a specific design school, to be compared with other analogue programs delivered in non-design focus educational environment.

To train visionary and future leaders capable of facing complex problems and to provoke positive social, cultural, environmental and economic changes is born the need to develop a MA in Transdisciplinary Design with the goal to enhances the knowledge acquired in the first university cycle, measuring it with the complex dimension of contemporaneity and global instances (SDG’s).

2.3 Transdisciplinarity: a program for design driven innovation

The MA in Transdisciplinary Design aims to use design mind set as a filter of interpretation among different cultural mind-sets to tackle global issues, codified by the SDGs challenges and seen through the light of a multi-dimensional paradigm: technology, people and economy, is the multiple observatory set to students to start with.

With their different backgrounds and from different domains, students are gathered in a non-disciplinary pastoral environment, to reflect on problem settings, experimenting in a participatory connective and collaborative practice studio like and involving actors who are also external to the disciplines (incorporation of non-systematized knowledge): institutions, universities, laboratories, governments, social groups and individuals. This should allow to search for solutions from a wider perspective, capable of integrating diverse bodies of knowledge in a series of results that may ultimately not be the best solution possible, but an initial solutions improvement (Bliemel, Van der Bijl-Brouwer, 2018).

The ability to understand and anticipate the demands of contemporaneity and to apply the acquired technical and technological skills are central elements to face the phase of project problematization (problem setting).

The knowledge of project and research methodologies and how to apply them in an original and innovative way in the different design sectors gets stronger, in particular attention to innovation in areas such as project culture, applied research (design research), techniques and technologies, interactive processes and transformation and cultural and social change. The types of project outcomes are products (material or intangible), strategies, services and multimedia communication projects.

To understand the methodology and how it is providing an operative interpretation to the rationale and the aim previously described, it can be useful to refer to the program structure as a loose fabric where only threads are defined. Compared to a more traditional program (we might say finished woven fabric), where all the topics are pretended to be covered, in order
to provide a solid body of knowledge, the Transdisciplinary Design program aims to fix and cover only several areas identified as crucial in the exploration of contemporaneity; through different lenses – society, technology and economy – students are expected to fill the gaps of topics they need to fill during the design studios. While the modules are defined to bring disruptive point of view on global topics (impacts of innovation, cultural economy, ethic of communication), the studios are defined as eco systems where the knowledge co-creation process (either for individuals and cohort) follows the rules of implicit and explicit knowledge (Nonaka, Takeuchi, 2018)

2.4 The program structure for “problem lovers”
At the centre of this programme is an evolved model of delivery and engagement with teaching and learning based around the idea of a living lab for future mobility allied to a network of ‘crucible cities’ (challenges). The programme aims to train future professionals in transdisciplinary tools, methods and approaches (mindsets). It seeks to equip students with sophisticated approaches to addressing complex challenges and prepare them for a wide scope of potential positions of employment and self-employment.

An underpinning assumption is that everyone engaged in the endeavour at hand is, and can be, an expert. Each individual has their own unique contribution to make. The didactic delivery of knowledge from teacher to student is at times necessary, but no longer sufficient to future needs. Addressing complexity demands a systemic approach not only to problem solving, but also to articulating the nature of the problems to be confronted in the first place whilst also embracing diversity of response and considered risk-taking.

For this reason, the program wants to expand its horizon of enquiry outwards from the school towards the dynamic crucible of the living city environment.
A design-led, transdisciplinary approach harnessing business, people and technology on a focused project basis –where the project definition unfolds under the scrutiny and ingenuity of the team engaging with multiple stakeholders -will ignite discourse, deliver insights, provoke and evolve collective new approaches to scoping problems and uncovering solution pathways.

Transdisciplinary design teams move through live challenges sourced through the cities and city stakeholders (environments) to act as a conduit to inspiring problems for student and faculty teams alike. Students will be encouraged to root their enquiry in solid research whilst ‘staying in the unknowing’ – that is flexible and comfortable with unpredictable outcomes. Process management and openness will therefore be critical on the design journey, as will highly developed collaborative working skills, continuous evaluation and the flexibility to adapt quickly to changing circumstances whilst staying true to design values.

Each project cohort behave akin to a living lab for future offering a rich mix of people, talents and ideas to identify and confront complex challenges that can respond to transdisciplinary design approaches.
Disruptive Thinking in Design Education

The rich field of exploration and development will be made available through many different areas of interest, offering inspiration and access to a diverse range of students who will benefit from an open culture of participation, exchange and debate. Projects will attract and inspire small international ‘network-hubs’ of digitally connected teams comprising students and faculty alike, together with expert contributors from relevant stakeholders operating on a day-to-day basis in the host context.

In year one, emphasis therefore will be placed not only on transdisciplinary design methods and models but also on team working, the nature of complex problems and on the dynamics of change in organisations. Students will also be encouraged to ‘horizon scan’ for future projects and to synthesise research into credible propositions - designing problems to be solved.

Students will be encouraged to scope and assess sustainability agendas, referencing the SDGs, as sources of future challenges and to scan start-ups to cast light onto the leading edge. Year two will seek to consolidate and amplify the learning from Year one. This will be galvanised by the identification and pursuit of a living crucible challenge that will be multi-layered, resistant to solving and demanding of a transdisciplinary approach.

Engaging as an international team of faculty and students the living lab approach will generate new avenues for exploration; new ways of framing existing challenges and proposals for change. Shaping the right questions, facilitating client groups and continually challenging the status quo rooted in strong research will be facets of successful outcomes.

Throughout the programme students will be encouraged to develop their own skills as designers and design thinkers. They will learn resilience in the face of seemingly intractable problems and evolve through practice, the necessary skills and mindset to work in transdisciplinary teams.

A core attribute of the programme is its flexible, collaborative, open and dynamic approach to gaining access to talent and expertise to unlock students’ talents and intelligence through a more democratized and evolved approach to where and how multiple intelligences are empowered and where ideas come from.

3. Conclusions

The research around these questions has brought as a pedagogic outcome the idea of a program that combines a methodology based on a transdisciplinary “loose” eco-system, along with a redefinition of topics and syllabus mainly focusing on reinterpretation of contexts and phenomena rather than super skillling. The idea laying under a Master of Art in Transdisciplinary Design recently defined in fact meets the intention aiming to use design paradigm as a bridge among different knowledge, and cultural mind-sets to face wicked global problems.

These are read through the paradigm of the economic–society–technology relationship to build an innovative and transdisciplinary designer profile able to anticipate the needs of the community in terms of unexpected design outcomes. In parallel, since the course transfers interdisciplinary methodologies and project autonomy, the aim is to build continuity towards
the fields of research and experimentation, elements that structure the formation of the third university cycle.

Students acquire cross-disciplinary and cross-cutting knowledge and skills necessary to trigger processes of innovation and change through interaction and hybridisation of knowledge in the humanistic and social areas, in the technological and digital area and in the economic and entrepreneurial area.

The course in Transdisciplinary Design develops critical reading skills of elements, instances and phenomena not systematized and at times incomplete, typical of the contemporaneity and the digital channels that— even if belonging to different domains of knowledge— constitute complex networks, messy but rich and unpredictable: the student is constantly exposed during the two years to a daily comparison with such complexity that is central in the development of innovative solutions.

The general philosophy describes a profession characterized by some main skills:

- Complexity management: analysis and vision capacity to systematically address large and complex project scales, anticipating problems, opportunities and solutions, not only by solving specific isolated problems;
- Sharing: ability to work in a group;
- Integration of multidisciplinary skills (humanities, techniques, financial economics, managerial and organizational) to enable an organic and systemic view of problems;
- Responsible results: search for sustainable solutions.

The program structure aims to provide answer to the signals that come from the field of the creative industries and the productive fields to high planning content (design driven industries) as well as public and social organisations which are increasingly calling for professional profiles which are often not codified: professionals able to adapt quickly to change and at the same time be promoters of change in a perspective of sustainability and responsibility, who can read contemporary phenomena in a perspective of complexity and who are agents of innovation, not only through projects and processes where design is a language before being an outcome, but also through the ability to design visionary scenarios and to imagine the future.

The areas of application can be many, among them: design for smart media and technologies, design for social impact, design for cultural complexity, design for new business models, design for sustainable development. Professional goals can be (for example, but not exhaustive): business strategist, strategist design, design thinker, design manager, envisioneer, user researcher, service designer.

**References**


Disruptive Thinking in Design Education


**About the Authors:**

R. Balbo - Academic Director at IED global, previously SOBE-Salford (UK) and Politecnico of Turin (Italy); Architect, PhD in AI, Complexity and Architectural design; research areas are design driven innovation, knowledge representation, vernacular and informal architecture, complexity and creativity
E. Scaramella - Academic Manager at IED - has a long experience in design education, designing and developing academic and didactic programs. She worked as coordinator and project manager of international strategic design and educational projects at IED Research Centre.

S. Selva – Academic Development Manager at IED - has a background in Industrial Design and a PhD in Design Education with a decennial experience developing and managing didactic programs and strategic academic projects across Latin America, Europe and Asia.

Acknowledgements: many thanks to Michael Thompson (Design Connect), Lorenzo Foffani (AKQA) and Sigurdur Thorsteinsson (Design Group Italia).
Diversified Orientation and Design Value in Safeguarding of Intangible Cultural Heritage

Tie Ji\textsuperscript{a}, Yinman Guo\textsuperscript{b}, Xiaolei Min\textsuperscript{c}

\textsuperscript{abc}School of Design, Hunan University

*Correspondence: yguo@hnu.edu.cn

Abstract | Increasing the awareness of Intangible Cultural Heritage (ICH) safeguarding is significantly important for the development of social sustainability. Design discipline has participated deeply in it, because design plays a key role in creating tangible objects and intangible lifestyles. However, the role of design in safeguarding ICH seems vague. To clarify the role and value of design, we reflect on a ten-year practical research and use case studies as the main research methods. By adopting the perspective of cultural ecology, we combed through the theory and practice of safeguarding from the 1970s onwards and concluded that ICH safeguarding has different value propositions, pathways, and challenges in the manual production stage, industrial production stage, and digital intelligence stage. These three stages are progressive, and also parallel each other, which together forms the current ecosystem of ICH. Design was found to have different roles in digital ICH platforms, and we concluded that ICH would evolve into new cultural forms with publicity and vitality due to the participation of design.

KEYWORDS | INTANGIBLE CULTURAL HERITAGE, ICH ECOSYSTEM, DIGITIZATION, CULTURAL CREATIVITY
1. Introduction

According to the *Convention for the Safeguarding of Intangible Cultural Heritage*, Intangible cultural heritage (ICH) is defined as the practices, representation, expressions, knowledge and skills that are recognized as part of communities, groups and individuals’ cultural heritage, and ICH is critically important in maintaining cultural diversity and sustainable development (UNESCO, 2003). Culture is a necessary agency in the transformation towards a more sustainability society (Soini & Dessein, 2016), and cultural vitality is a major dimension which points at the inherent value of cultural diversity and of a vibrant cultural life of human communities (Hawkes, 2001). As parts of the whole social life, ICH is urgently in need of safeguarding measures since it is quickly abandoned and now endangered in modern society. The question of how to make ICH subjects maintain their own cultural roots while also integrating with society as a whole is a major challenge facing social sustainability and social cohesion. According to Stren and Polèse, to achieve social sustainability, we need to foster an environment conducive to the compatible cohabitation of culturally and socially diverse groups while at the same time encouraging social integration, with improvements in the equality of life for all segments of the population (Stren & Mario, 2000). Scholars, researchers and governors in different countries developed various safeguarding models with their own characteristics, for example, it is tied with cultural tourism in Italy and associated with community development in Japan. Until now, there are 549 elements corresponding to 127 countries enlisted into the *Representative List of the Intangible Cultural Heritage of Humanity* since it was firstly issued by United Nations Educational, Scientific and Cultural Organization (UNESCO) in 2009. Manifesting the diversity of the world’s culture, ICH safeguarding has received a high degree of participation from various disciplines, including Anthropology, Sociology, Economics, and Design. Among all participants, designers have their natural advantages since they see themselves as the creator of the ‘ways of life’ which is in consistence with ICH bearer’s role. Both designers and ICH holders share the responsibility of producing varieties and novelties (Comineli & Greffee, 2012). Modern design involves ICH safeguarding in different aspects, including the construction of eco-museums, participation in developing creative industry, adopting gamification in developing cultural and educational Apps and environments (Yang, Zhang, Ji, et al., 2018; Weng, Shen, Chen, et al., 2019), applying WebGIS technology in intangible cultural digital management (Lai, Luo & Zhang, 2012), using Augmented Reality or Virtual Reality to enhance user experience in cultural heritage presentation. Different design measures for ICH safeguarding bring in a series of disputes and discussions, especially concerning terms like ‘authentic’ and ‘evolution’. In this paper, we aimed to clarify the role and value of design participation in ICH safeguarding.
2. ICH Safeguarding in Ecological Perspective

2.1 The connotation of ICH safeguarding

Since the 1970s, the intangible part of ‘cultural heritage’ has gradually attracted people’s attention. Through a series of protection measures from UNESCO, such as the *Living Human Treasures* program launched in 1994, the report published by *World Cultural and Development Commission on Our Creative Diversity* in 1996, the *Proclamation of the Masterpieces of the Oral and ICH of Humanity* made in 2001, and the *Convention for the Safeguarding of Intangible Cultural Heritage* was finally adopted in 2003. Since then, ‘safeguarding’ is usually used to refer to protection and preservation of intangible cultural heritage, and the convention clearly defines that it includes ‘identification, documentation, research, preservation, protection, promotion, enhancement, transmission, particularly through formal and non-formal education, as well as the revitalization of the various aspects of such heritage’. It can be seen that ‘safeguarding’ is not a static concept, it implies the goals of ‘booming development’ and ‘sustainable development’ (Alivizatou, 2016). The object of safeguarding includes not only physical products and spaces, but also processes and people.

2.2 The ICH ecology

The term ‘Cultural Ecology’ originated from the discipline of Cultural Anthropology, which systematically reveals the formation and changes of human culture from the coupling relationship between the human cultural system and the natural ecological environment. The interpretation of the term can be divided into three levels. From a macro-level, ecological studies explain culture change through researching the relationship between culture and natural ecosystems during evolution (Steward, 1955). From the meso-level, ecological studies use the ecosystem as an analogy to culture. From the micro-level, ecological studies explore the internal microstructure of a certain culture. For this paper, we adopted the above meso-level understanding, which applies the thinking of natural ecology into cultural study by comparing cultural systems to ecosystems and by trying to use descriptive approaches for natural ecology to explain the similarities and differences in culture. This approach considers that cultural phenomena, like natural phenomena, also have their own conditions, context, structure, order, and laws for survival and development (Ji, 2004).

Corresponding to the above definition, when discussing a specific ICH, the reflection on it needs to be connected with another culture form because different types of culture gather and finally form a cultural chain (Fang, 2001) and an interactive whole (Sun, 2003). The interrelationship and mutual influence among them need to be considered within a certain historical period and a certain social and cultural system (Sun, 2004). Also, the interactions generate the internal renewal mechanism including assimilation and alienation, as well as heredity and variation (Li & Sun, 2003). Focusing on the social structure, Sima points out the
following elements that influence the culture’s dynamic: the natural environment, science and technology, economic system, social organization and values (Sima, 2011).

In considering these points, when we talk about ICH, the following questions need to be addressed under the mindset of Cultural Ecology: (1) Since the concept of ICH originated from the end of the last century, how has the whole cultural chain changed through the past 50 years around ICH? (2) How does ICH interact with other cultures in this process? What part is stable and what part is erratic in ICH? (3) What are the fundamental factors during this process and where will ICH go next? Only through figuring out these questions can the role of design can be clarified.

3. The Evolution of ICH Ecology

In this section, we talk about our understanding of the above questions based on our research carried out in China since 2009. In the past eleven years, we have worked on the continuous design project New Channel in many ethnic minority communities (including Dong, Yao, Tibetan, Mongolian, etc.) in China, where there are abundant intangible cultural resources. We have proposed and implemented various design methods and processes, from ‘Cultural Intermediaries Paradigm’ to ‘Product-Service System Paradigm’ to ‘Community Engagement Paradigm’ (Wang, Bryan-Kinns & Ji, 2016). During the long period of field study, we have seen that modern design and traditional intangible cultural heritage have undergone a variety of mutual learning and interweaving in the community, and different levels of impact have been generated in and out of the ICH community. Based on these real field practices and observations, in the face of different evaluations and voices towards this project, we have summarized the following three ICH Ecology to discuss ICH and design participation. Looking at the evolving socio-technical system, the origins of these different approaches arise from different social, cultural, and scientific and technological situations.

3.1. ICH 1.0: The manual production stage regards human rights and authenticity as the core

When discussing ICH in the early days of cultural understanding, terms like ‘traditional culture’ and ‘folk custom’ were often used. Some experts and scholars believe that the problem with these terms is that they come from the early colonial ideology (Seitel, 2001), which reflects an external viewpoint with which to evaluate ICH; therefore, regarding the bearer as the core subject, the Convention especially emphasizes the ‘human rights’ when talking about safeguarding. As a kind of culture, ICH can be sustained only when locals enjoy production and re-creation (Van Zanten, 2004). Communities, Groups, and Individuals (CGIs) dominate the creation, maintenance, and dissemination. The host communities and institutions need to decide their ICH’s content and protecting methods in the social process. At this stage, as a ‘living culture’ of the community, ICH is culture practiced in people’s daily
lives, which clarifies the inseparable and interdependent relationship between ICH and the bearer. From this perspective, ICH safeguarding is focused on enhancing its visibility, maintaining the culture and natural ecology in the community, and supporting the rights of communities and inheritors. In response to these goals, following the principle of ‘rescue first, protect first’, and under the chairmanship of Wang Wenzhang, the then-deputy minister of culture, China’s early work on safeguarding includes the completion of the first national census work and the establishment of the four-level directory system of the country, province, city, and county, and the approval of the Law of the People's Republic of China on Intangible Cultural Heritage in 2011. These measures have promoted the standardization and legalization in ICH safeguarding.

The practice of ICH in this stage is intricately connected with the original production methods and social environment. For example, local weavers use traditional looms to weave Dong brocade. The progress of production technology or the change of the practical environment has reduced the vitality of broad public participation, as the practice of ICH, in this case, is dependent on now-unpopular technology. The emphasis on the ‘authenticity’ of ICH keeps people quite alert to ‘over-exploitation’. In this case, the involvement of design in ICH is quite limited. At this stage, the greatest degree that design can achieve is to have breakthroughs in scenarios and functions by micro-innovation while maintaining the original productivity, relation of producing, and mode of production. For example, to protect Dong Brocade in Tongdao Dong Autonomous County of Hunan Province, while ensuring that the creation process is still guided by the local opinion leader Su Tianmei who is the national inheritor of Dong Brocade weaving skills, and adhering to traditional craftsmanship, the designers in the New Channel team can only propose opinions on new materials, user needs, and functions, and gradually create new products and revive traditional craftsmanship. This is the designer’s best efforts under the original cultural ecology and technical conditions.

Figure 1. (a) The new product of manual Dong brocade co-created by local weaver and designer from the New Channel project; (b) animation of the weaving craft process made by New Channel project
3.2 ICH 2.0: Industrial production stage driven by output value and popularization

In the West, as early as the 19th century, the Industrial Revolution brought about fundamental changes to the overall ‘making’ system and human lifestyle. There have been multiple confrontations and separations between traditional art and machine production. The most typical historical event includes The Great Exhibition in 1851 and The Arts and Crafts Movement led by Morris and others. Modern production tries to imitate and replace tradition, whereas traditional handicrafts strongly oppose mechanized production; however, gradually, we have seen the possible fusion of the two, such as the design works done by Memphis Group, which represents Postmodernism. Although the rise of the ICH concept has come after this, the interweaving relationship with industrialization can be traced from the history.

Part of ICH inevitably flows and merges within the modern and industrial culture, which people intentionally keep distant from under the manual production stage. For example, considering craft, there exist two types now—the industrial crafts and the handicrafts (Chartrand, 1989). The industrial crafts are mass-produced and for the broad masses, whereas handicrafts still maintain individual and hand-made characteristics. UNESCO counselor Federico Lenzerini proposed the need for a dual protection strategy that states that ICH should not be viewed as a monumental heritage in a glass box, instead, it should be promoted and kept adapted to the needs of its creators and inheritors (Lenzerini, 2011). Facing the requirements of ‘sustainability’, the question of how to integrate the rich and diverse heritage into modern life so as to realize the activation and utilization of the heritage while respecting the will of people and not misunderstanding the cultural connotations of ICH is the focus of safeguarding ICH in the industrial production stage.

In China, since former Deputy Culture Minister Xiang Zhaolun was put in charge of the ICH safeguarding work, safeguarding has further shifted to the direction of ‘creative transformation and innovative development’, exploring ways to combine ICH with design and daily life, and starting a series of revitalization measures, such as launching the Inheritance Group Study and Training Program, establishing inheritance bases in universities, and releasing The Plan on Revitalizing China’s Traditional Crafts, etc. These measures encourage ICH to step out of the local community and discuss and cooperate across regions and organizations in a way that cultivates the inheritors to continuously enhance their innovative ability in the exchanges with designers, artists, and the general public. Besides the educational part, China also devoted a great deal of effort in developing cultural industries on ICH. Industrial Parks were built in Chengdu, Lijiang and other places, which imported inheritors and shops to promote ‘Inheritance +’ by integrating ICH with film and TV, fashion, entertainment, tourism, and other industries. The top-down force at the government level has driven the rapid development of China’s ICH safeguarding. Since the promulgation of the Law, China has spent more than 7 billion on it (XINHUASHE, 2019). This
led to a fever of ICH among the people, and the public’s cultural self-confidence and cultural awareness have continued to rise.

Most approaches in this stage break down the concept of ICH and keep two aspects of it—pattern and technique. For example, design extracts the pattern and applies it into a new cultural and creative product; directors use figures and stories to make up new performances; engineers mechanize the traditional technique and make software to enhance the production efficiency (Figure 2). Through these processes, ICH gains wider dissemination and higher output through a certain degree of mass production, becoming a ‘cultural intermediary’ (Dennington, 2017), gaining recognized value in interculturality.

![Figure 2](image)

*Figure 2. (a) The new industrialized product based on Wu Long craft; (b) the computer-aided textile design software*

As it drastically progressed, cultural appropriation occurred during this period, which made experts and scholars concerned about the authenticity value of ICH. Walker mentioned that it is the polar opposites of the values in traditional societies, which leads to unemployment, decreasing the local identity, and less connections between people (Walker, 2017). The consumer can quickly get a first impression of ICH through the final product; however, the experience is not complete. People gain a broader, more comprehensive perspective through traditional ‘thinking-doing’ (Walker, 2017). Thus, when the goal is directed to goods and businesses, ICH is relatively easy to be imitated, but it is difficult to implement and inherit cultural models and lifestyles on a larger scale. Nonetheless, reviewing the history of cultural practice, it is impossible to avoid the hybridity and impurity of culture, because culture is a constantly changing network of relationships (Rogers, 2006). Thus, to answer the question of how to protect ICH and keep the local people’s cultural rights as much as possible, we investigated the essence of ‘authentic’ for the answer. Paul Philippot, former director of The International Centre for the Study of the Preservation and Restoration of Cultural Property, explained: “the authenticity of a work of art is in the internal unity of the mental process and of the material realization of the work” (Jokilehto, 2006). Xiang Zhaolun
also pointed out in his speech that ‘materials and tools’ are not the core of ICH, and ‘the intervention of the exquisite skills representing craftsman’s wisdom, talent, and experience into the production process’ is the essence. Drawing on this view, the subject of authenticity has shifted from the static result of the work to the creative process of the work. The authenticity of the process emphasizes that in the process of product development in the industrial production stage, the social relations and history of ICH should be respected, the local context of culture should be emphasized, and the participation of inheritor’s wisdom in the creative process should be noted, and a deep understanding of ICH itself should be maintained.

3.3 ICH 3.0: Digital intelligence stage targeting personality and technology integration

Walsh et al. (2014) pointed out that ‘the historical separation rooted in art and technology has caused the wrong binary opposition between ‘culture’ and ‘digital’.‘ Faced with the new generation of ‘digital natives’ and digital society, what will happen to the core value of ICH as a traditional culture? As more and more social interactions occur in digital experiences, the innovation of ICH will also digitally appear. Zhan investigated the Yangtze River Delta and concluded that trans-sector collaboration between traditional crafts and digital and material technologies might be good for crafts’ sustainable future (Zhan, Walker, Hernandez-Pardo, et al., 2017). Although the evolutionary impasse is happening, where automation replaces traditional art and design, digital technology is showing the possibility of integrating rich and personal design capabilities into the new production process through digital design (Zoran, Valjakka, Chan, et al., 2015). Instead of using technology to expand the output, it is becoming the tool and ‘palate’ that people can play with. In the digital cultural interaction, the masses co-produce the digital culture of ICH, switching people from the consumption of ‘cultural content’ to the participation and creation of ‘cultural experience’. People acquire the value of ICH on ‘body memory’ in a shifted way through a new hybrid medium, blending traditional and contemporary, digital and non-digital. In this transformation, the value of ICH is reflected in the happiness and participation in producing and sharing processes, virtual community construction, people’s reflection on identity and society, and cultural shaping of digital public spaces. In the 3.0 era, ICH changed not only with the mode of production, but the focus is on revealing its spontaneous creativity as a ‘living entity’. ICH will demonstrate its ability to continuously adapt to the social evolution of creators and holders (Lenzerini, 2011) and become the inherent creativity of the cultural generation system of society; therefore, the involvement of digital technology is no longer product-oriented but process-oriented, such as the use of artificial intelligence, collective intelligence, generative design, parametric design, etc., to enable each individual to participate in cultural creation. The main body of production is no longer a few professional designers and centralized enterprises, but a series of more diverse and flexible ‘human–machine–biology’ organic networks supported by brain-computer fusion technology and interactive collaboration platforms. The use of materials will become smarter and with more biological properties.
Along with the application of distributed technology and under the influence of technology democratization thinking, ICH production will realize the advanced decentralization, create a technological path that serves society and culture, and enable ICH to obtain continuous participation and creation of local groups and the public to reshapes the significance of ICH in social relations and local wisdom, so that it can be reconstructed and reborn in the ecological sense.

Stage 1.0, 2.0, and 3.0 of ICH represent the evolutionary changing process of ICH safeguarding under different socio-technical systems. The three are not mutually exclusive, but together, they form the intangible cultural heritage ecosystem. More and more people find their roles and position in this ecosystem. The skills and wisdom of ICH are also continuously democratized in this process. The ability of ICH to adapt and evolve as the excellence of world culture is fully reflected (Figure 4).

Figure 3. The artwork “The Shape of Time-Peking Opera”, which is made by Fei Jun with four other artists. The team captured the dynamic data of the performances of four Peking Opera actors and transformed a dynamic time and texture co-existing posture time sculpture.

Figure 4. The changing connotation of Intangible Cultural Heritage (ICH) under the evolution of the socio-technical system.
4. The Digital Platform of ICH under the Diversified Orientation

Digital means are the technical condition for the development of ICH 3.0; however, many of the current ICH digital platforms belong to different stages in terms of the core value of the practice. By searching through major databases and search engines, the data of ninety platforms were collected. ICH digital platforms can be divided into five categories:

- Archive Platform: it digitally collects and shows ICH’s physical materials, making processes, and practical situations and tools;
- Trading Platform: it supports the display and sale of ICH related products;
- Learning Platform: it provides interactive ways for users to experience ICH content;
- Social Platform: it promotes users to share and communicate ICH topics;
- Creation Platform: it provides technologies, tools, and resources that support the creative development of digital ICH.

<table>
<thead>
<tr>
<th>Representaive examples</th>
<th>Archive Platform</th>
<th>Trading Platform</th>
<th>Learning Platform</th>
<th>Social Platform</th>
<th>Creation Platform</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europeana Memory of the World</td>
<td>Europeana (ICH)</td>
<td>i-Treasures</td>
<td>Google Arts and Culture</td>
<td>Promoter REACH</td>
<td>Europeana Labs Culture Moves</td>
</tr>
<tr>
<td>Stages</td>
<td>ICH 1.0</td>
<td>ICH 2.0</td>
<td>ICH 2.0</td>
<td>ICH 3.0</td>
<td>ICH 3.0</td>
</tr>
<tr>
<td>Object user interacts with</td>
<td>Cultural data</td>
<td>Final product</td>
<td>Participatory process</td>
<td>Inheritor, amateur</td>
<td>Creative tools</td>
</tr>
<tr>
<td>Experience user gets</td>
<td>Passive, imported</td>
<td>Joyous, impulsive</td>
<td>Active, immersing</td>
<td>Interpersonal, involving</td>
<td>Exploratory, embodied</td>
</tr>
<tr>
<td>Technology applied</td>
<td>Data storage, semantic analysis, knowledge Graph...</td>
<td>Blockchain, recommendations algorithm...</td>
<td>Machine learning, computer vision, AR/VR...</td>
<td>Intelligent editing, face recognition, beauty algorithm, recommendations algorithm...</td>
<td>Computational creativity, AI, 3D printing, motion capture...</td>
</tr>
</tbody>
</table>

Firstly, the ‘Archive Platform’ has promoted the work of ICH 1.0. For example, the European Union’s first digital resource integration system, Europeana, which integrates the artworks of different European institutions; the Asian Cultural Centre for UNESCO (ACCU) has
established the Asia-Pacific ICH Database, etc. They all emphasize the recording and preservation of the original state of the ICH. Secondly, both the ‘Trading Platform’ and the ‘Learning Platform’ have promoted the work of the ICH 2.0 stage, aiming to facilitate a wider range of inheritance and productive development. Thirdly, for the ICH 3.0 stage, ‘social platforms’ and ‘creation platforms’ are gradually emerging. With the democratization of technology, simply operated design tools such as Shapr3D and uMake have been born in the field of 3D modeling, and this creative platform will realize the transformation from professionals to the collective creation of the public. Current social platforms are usually embedded inside other platforms, but as ICH practitioners and enthusiasts increasingly gather online, more niche online communities will gain more space for sustainable development.

The role of design in the three phases of ICH 1.0, 2.0, and 3.0 will also change accordingly, and it will gradually play an increasingly important role. In the 1.0 stage, the design mainly participated in the visual, interaction, and experience of the digital interface, and did not have any involvement in the ICH itself. In the 2.0 stage, design mainly participates in product development, brand building, and storytelling. This has a great impact on the skills and processes of the ICH and will promote some new forms of intangible cultural heritage. In the 3.0 stage, on the one hand, design will play a role of imagination and association with innovative thinking, on the other hand, design will guide more public participation in a wider range of cultural innovations as the role of ‘facilitator’.

5. New Trends in ICH Innovation with Design Participation in the Digital Age

Since the design’s participation in ICH innovation is getting deeper, the classification of traditional ICH will present a new trend. The Convention for the Safeguarding of the Intangible Cultural Heritage identifies five categories of ICH: (a) oral traditions and expressions; (b) performing arts; (c) social practices, rituals, and festive events; (d) knowledge and practices concerning nature and the universe; (e) traditional craftsmanship. The basis of this convention is the protection and rescue of cultural diversity, and its classification is based on the manual production brought by ICH and relatively isolated social systems; therefore, in the new industrialized and digital society, the fate and situation of most of the ICH has been very different. The art form that was popularized in the past has now become a rare resource of ‘collection’. What will intelligent technology and tools do to change this classification? In what form will the ‘New ICH’ become a cultural pattern with publicity and vitality in the process of globalization? Based on the digital representation of ICH, machine learning, artificial intelligence, and other future cultural production methods, we tried to explore the ‘New ICH’ intelligent creative direction from three directions (see Figure 5).
5.1 Digital artisan and machine participation based on traditional craftsmanship experience

The artisanal skills in ICH are strongly dependent on factors such as traditional experience, physical memory and materials, and digital technology that will facilitate the ‘artificial’ process to become more convenient, intelligent, and hybrid. The traditional handicraft production process will incorporate more digital processes, such as industrial production, machine production, and robot participation (Masterton, 2007). Using Mocap, Armines, Forth, and other motion capture tools, digital humanities and semantic technology can generate new linked data, international digital book search standards, and even data for machine production. The process of combining digital content and crafts will produce different results from the original craftsmanship, thus more theoretical research and practical deduction are required to adhere to the core concept of process value on the dual track of ‘protection’ and ‘innovation’, shaping the post-industrial pluralism digital craft culture. Unlike the ‘dual-track system’ often mentioned in the foregone process of productive protection, the involvement of digital technology will gradually blur the boundaries between craftsmanship, art and design, and digitization may lead to the disappearance of irregularities and subtle changes in the crafts; therefore, to find a way of ‘designing through making’ and ‘designer way of knowing’, to carefully adapt and deal with technology, would enable the preservation of ICH creativity during the period of production (Nimkulrat, Walton & Kane, 2016). When crafts are understood as ‘a way of thinking through various practices’ (Adamson, 2007) and as ‘a dynamic process of learning and understanding through material experience’ (Gray & Burnett, 2009), digital tools can be seen as part of the crafts. Based on the above, a new artificial process is created, gradually forming a global communication, collaboration, and market mechanism, thus achieving a new ‘digital artisan’ and ‘cultural maker’.

Figure 5. New trends in ICH innovation

New Classification of ICH with design participation

1. Digital artisan and machine participation based on traditional craftsmanship experience
2. The art of body language, sound innovation, and perception fusion
3. Platformized and stereoscopic construction of livelihood wisdom and cultural identity

Digital process, Industrial production, Motion capture tool, Making by machine, Digital Craft Culture, Culture Maker, Robot participation, Global communication, collaboration and market mechanisms

Digital process: Industrial production, Motion capture tool, Cross-media storytelling, International expression

Body media: 3D design, Virtual reality, Mobile application

PLCC: Daily participation, Ubiquitous existing, Geographic information system, Human computer interaction, Everyone involved, Verne’s creativity, Hybrid brain+Computer
5.2 The art of body language, scene innovation, and perception fusion

The expressions and performances of verbal and limbs in ICH are based on human perception, especially in some performing arts. The expressions and artistic rituals presented by performers using their own bodies as a medium (Carlson, 2013) can often span the barriers of language and culture. With the development of digital technology, humans have gradually entered the ‘technical simulation of consciousness’ stage, and the senses and nerves have been extended by various media (McLuhan, 1964). The application of a series of digital technologies, such as graphics, 3D design, dynamic capture, virtual and mixed reality, mobile applications, and cross-media storytelling, can extend and expand people's perception paths, creating more novel, physical immersive, and transformative performing art production processes and works. In the creation process, the relationship between digital technology and the performing art's creators should be more a partner than a tool (Bulut, 2018). Across the dichotomy between numbers and art, design creates an ecological environment that can promote cooperation, and thus allows the traditional performing arts to continue the history. Besides that, design can also enhance the aesthetic effect and scene sense of visual art, create the deep impact of emotion and sense, build the connection between meaning and symbol, and deepen inner wisdom (Dixon, 2007), transforming traditional performances into international expressions with empathy.

At the Asian Digital Art Exhibition held during the Conference on Dialogue of Asian Civilizations, the works of Shape of Time · Peking Opera created by Fei Jun and others captured the performances of Peking Opera masters, they then conducted a dynamic and materialized solidification of posture data generated by the performers in two dimensions — time and space. Using 3D printing to form sculptures, they integrated ‘people’ and ‘fields’, while also translating the culture of Peking Opera, which also changed the way of artistic production. Moreover, there are various kinds of digital and cultural performances, such as the ‘Original Changsha’ media art show and the light and fireworks art performance at SCO Summit Friends Come from afar. They all use elements from a variety of traditional cultures (such as fireworks, folk music, etc.) as the theme throughout, and use rich new media technology methods (such as large-scale drone fireworks matrix, holographic projection, numerical control technology, etc.) to construct an artistic perception and cultural innovation cognition that transcends language both visually and audibly.

5.3 Platformized and stereoscopic construction of livelihood wisdom and cultural identity

Social practices, rituals, festivals, and other activities of ICH, as well as local knowledge and practices, are important parts that run through the life of the non-heritage community, and deeply affect the establishment of community interpersonal relationships and the shaping of community identity. Driven by advanced technologies such as advanced manufacturing, the Internet, artificial intelligence and 3D printing, the production and consumption of ICH is a new mechanism and system for production, organization, sharing, and dissemination.
Everyone can be a part of creating new things more easily, and also be an important part to assist, guide and share the creation of others. The ubiquitous survival, everyone’s participation, PUGC (Professional User Generated Content), and the enabling design of brain–computer integration co-exist, thus building a three-dimensional ‘ICH community or platform’ with different values.

The EU’s cultural work plan suggested that new technologies offer huge potential for marginalized groups to integrate into society (EU, 2017). In the interactive network of ‘human–community–nature’, through the development of key technologies such as human–computer interaction, mixed reality and geographic information systems, it is possible to realize the reconstruction of resources and relationships, generate new art and cultural projects, and renew the vitality of cultural activities. In accordance with the concept of ‘vernacular creativity’ (Edensor, Leslie, Millington, et al., 2009), transforming traditional cultural activities into expressions that can be associated with the interests of ‘everyday participation’, creating the value of ‘sharing’, ‘participation’ and ‘perception’ in an immersive and inclusive atmosphere, can strengthen the sense of local belonging, thus making digital cultural activities a ‘catalyst’ for cross-border resonance and understanding, and promote community building. In 2014, the Milan Makers Association (MIMA) organized the exhibition *When 3D Meets the 10D World*, emphasizing the diversified ‘dimensions’ and ‘social needs’ in the social structure, which inspired a group of designers and artists to think deeply about the responsibilities and mechanisms of cultural, technological, and social innovation. In the process of using digitalization to promote the construction from culture to community, Coventry, as the experimental site of the 2021 ‘UK City of Culture’ plan, stimulated the revival and regeneration of the region by developing programming concepts, including the immersive creative application of technology and exploring how to capture data more effectively. At the *Asian Digital Art Exhibition*, artists focused on the theme of ‘Asian civilization exchange, mutual learning, and community of destiny’. Xu Bing’s ‘Chinese Characters’, Qiu Zhijie and He Xiaodong’s *Jingdong AI Generation Map*, Wu Junyong’s *Thousand Moons, PomPom Mirror* by Israeli artist Danny Rockin, *Calligraphy Movement Vision* by German artist Tobias Glemir, etc., these works use digital art to creatively explain and interpret traditional Chinese culture, showing the inclusiveness of Asia in the local and global context, and reflecting the impact of the Chinese civilization gene on Asia and even the world’s art trends.

6. Conclusion, Limitation and Future Research

In order to maintain social sustainability, society is paying more and more attention to inheritance of minority cultures in globalization. Discussion on the protection of ICH has become a matter of general participation in the academic community, and the public can experience and understand ICH through various channels. But in this process, as to how to maintain a balance and sustainable development between cultural protection and social participation, different disciplines put forward different opinions on the participation and
role of design from their own disciplines. The interpretation of this issue is of great significance for clarifying the direction of participation in future ICH safeguarding. From the perspective of Cultural Ecology, this article describes three ICH safeguarding ecology under different socio—technological systems, and explains the role and work of design in them through design practice and case analysis. The three ecology are named as ICH 1.0 (manual production stage), ICH 2.0 (industrial production stage) and ICH 3.0 (digital intelligence stage). These three parts constitute the current intangible cultural heritage ecosystem. In the future-oriented ICH safeguarding, we can see that digital intelligence provides a new way to enable the design and participation of ICH safeguarding to go beyond the industrial stage, which is focused on objects and commerce, but return to the focus on the demands of ICH as a kind of culture, which is public creation and group interaction. Combined with smart technology, design can provide new ways for the public to participate. Therefore, this article also collects and analyzes data on the current digital platforms in this field. Through the clustering of the functional characteristics of 90 platforms, five platform types are obtained, namely Archive Platform, Trading Platform, Learning Platform, Social Platform and Creation Platform. Design also plays a different role in it. In the experience design for the interaction between users and ICH, the design object has also changed from the interaction between people and things to the interaction between people in the making process. Under this general trend, traditional intangible cultural heritage will be cross-integrated. This article proposes three new ICH categories: (1) digital artisan and machine participation based on traditional craftsmanship experience; (2) the art of body language, scene innovation, and perception fusion; (3) platformized and stereoscopic construction of livelihood wisdom and cultural identity. The values and concepts contained in ICH show the new era spirit under the integration of culture and technology, promoting the two-dimensional integration between ‘tradition’ and ‘contemporary’, and ‘regional’ and ‘global’.

The research is subject to two main limitations. First, we proposed the macroscopical views which provided the overview of design’s evolvement in ICH safeguarding; however, concrete and detailed working framework need to be deeply clarified. In the future, developing working framework of design process in the ecosystem and for developing new ICH will be useful. Second, since ICH and design intelligence is such polarized area, the question of how design can be the bridge to integrate each other is significant. In the future, it would be valuable to explore the mechanism of new technology as the driving force to foster ICH’s evolution.

References


About the Authors:

Tie Ji is the dean of school of design in Hunan University. His research interests include design for cultural revitalization, digital culture innovation, and design for community.

Yinman Guo is the postdoctoral fellow in Hunan University. She is interested in craft and design, design thinking, and social design.

Xiaolei Min is the doctoral student in Hunan University. Her main research areas are social innovation and cultural creative industry.

Acknowledgements: this research was funded by National Social Science Key Program of China (20AG011), Social Science Youth Program of Hunan Province (19YBQ037), and National Key Research and Development Program of China (2019YFB1405702).
Domesticity and digital eugenics: design cultures of Silicon Valley

Luis Hernan\textsuperscript{a}, Carolina Ramirez-Figueroa\textsuperscript{b}

\textsuperscript{a}Sheffield School of Architecture
\textsuperscript{b}Royal College of Art
\textsuperscript{a}luis.hernan@sheffield.ac.uk

Abstract | The paper attempts to make sense of the two more recent areas of interest of Silicon Valley’s ‘gang of four’: Amazon, Alphabet, Apple, Facebook. The last few years have seen this group of four turning their attention to the development of ‘smart’ ecologies with a focus on automation and the development of a ‘house of tomorrow’. More recently, reports have emerged of increasing interest in biotechnologies and Synthetic Biology start-ups. Interest in these two areas are commonly interpreted as the logical consequence of the need to find new profitable markets. We suggest, instead, that modification of the human body is central to understanding these corporate actions. We use the notion of eugenics as an interpretative framework to understand these new areas of expansion, suggesting the creation of a hegemonic culture gestated by digital technologies.

KEYWORDS | INTERNET OF THINGS, SMART HOME, SILICON VALLEY, ARCHITECTURE, EUGENICS
1. Introduction

In September 2018, Plant Prefab issued a small press release announcing their new collaboration with Amazon. The company would receive resources from the Alexa’s fund, created in 2015 by Amazon as a pot of capital fund investment designed to promote development of Artificial Intelligence research and application as well as Internet of Things and robotics. One use of the Alexa fund is in the form of small grants to groups of graduate students, often in applied sciences and engineering, who develop small applications or devices integrated to Amazon’s vision of a ‘connected’ future. Plant Prefab was an unusual candidate for the Alexa fund. Paul Bernard, a spokesperson for the Alexa’s Fund, announced that the partnership would be intended to develop prefabricated units which would leave the assembly line with Alexa-ready IoT devices — a seamless mesh of devices ready to be connected to Amazon’s emerging line of Echo units (Gibson, 2018).

Echo was unveiled to the American market in November 2014 and released to the market in the summer of the following year. The device is a plastic cylinder featuring a small array of buttons on its top and a ring of LED lights at its upper rim which make up one of the main interaction strategies with a human user: feedback is represented by the light ring changing colours and dimming patterns in a way that looks suspiciously similar to the interaction of HAL-9000 in 2001 Space Odyssey. The outer appearance of Echo is the pinnacle of minimal design — there are little cues in its exterior to tell us what it can do. It is also the result of the design culture of Silicon Valley — the product is never finished, it is constantly upgraded. Echo was initially marketed primarily as a speaker, with other functionalities added in through software updates and newer generations of hardware. The one outer feature suggesting its function is the grilled pattern that allows the soundwaves to travel outwards from its speaker arrangement. It also allows the array of seven directional microphones to pick up sounds happening around Echo (Crawford and Joler, 2018).

In the English language, speaker has a few meanings. In the context of Alexa and similar devices, speaker means a piece of equipment used to reproduce sound through the vibration of an acoustic material. An older meaning of the word, however, describes an entity, often human, who is capable of speech. After its initial release, Amazon integrated Echo to Alexa, the Artificial Intelligence (AI) agent responsible for making Echo not only a device that reproduced sound but one that speaks with its human owner. A smart speaker. Shortly after its announcement of collaboration with Plant Prefab, Amazon started rolling out its Experience Centers, prototype homes installed across the United States to showcase the potential of a truly smart living. The architecture and interior design of these centres are unremarkable beyond the technological cornucopia of sensors and actuators. At the centre of this deep mesh of electronic convenience stands Echo, intended to become the operative system of domestic life.
The digital domesticity of Amazon and other members of the ‘Gang of Four’ — Alphabet, Apple, Facebook — is interwoven with tactics to subtly modify the human body to make it more adept at interfacing with machines (Hernan & Ramirez-Figueroa, n.d.). The Amazon Experience Centers produced by Plant Prefab are often presented with a series of placards, placed at strategic points of the tour and providing customers with instructions of how to interface with Echo. One of the cards reads ‘Just ask “Alexa, movie time”. Instructions continue further down in a smaller font: ‘With this command, Alexa will ... turn off the living room lights, turn off the music’. The cards can be seen as an atmospheric ‘user manual’: it instructs would-be users on the ‘right’ way to interface with the AI agent. There is a pragmatic dimension to this — at this point of development, Echo is capable of understanding these queries, so users are asked to shape their speech when operating their device.

A more sinister reading detects the emergence of an Alexa-speech, a whole new form of simplified English in which vocabulary and grammar are shaped to the capabilities and current constraints of the technology. Taken to its logical consequence, the Amazon-censored language would change with every new software and firmware upgrade, with new words coming in and out of use depending on the ability of AI agents to detect their patterns and transcribe them to text queries. While this 1984-esque vision can be dismissed as a critical conceit, studies on the effect of AI assistants on human speech invites a different interpretation. A survey by Science Centre Newcastle suggests the majority of users change their speech patterns, specially to ‘soften’ regional accents (Life, 2018). As argued by Erin Carrie (2018), personal assistants replicate the human biases of the people who design and programme them. The automated speech of these devices is ‘without culture, disembodied, hegemonic, and, in a word, white’ (Marino, 2006).

In this paper, we attempt to make sense of the two more recent areas of interest of Silicon Valley’s ‘gang of four’: Amazon, Alphabet, Apple, Facebook. Having dominated the development of digital technologies in the late twentieth century, the last two decades has seen them turning their attention to the development of ‘smart’ ecologies towards the ‘house of the future’ and, more recently, to biotechnologies start-ups (Chang, 2018; Gibson, 2018; Simonite, 2017; Strengers & Nicholls, 2018). Understood through a financial framework, these recent engagements can be read as a way of diversifying income streams from corporations under increasing pressure to grow. We believe, however, that there is a unifying logic that concerns directly with the human body at actual and metaphorical levels, an ethos to generate a better humankind.

We employ a methodology influenced by feminist studies to analyse the entanglements of these corporations and their development projects and financial interests in smart speakers, personal assistants and biotechnologies. We perform a close reading of promotional material and press releases of smart speakers and personal assistants, confronting it with recent interests in biotechnology start-ups such as Jeff Bezo’s engagement with Unity Biotechnology (Terry, 2018); Alphabet’s branch in the California Life Company (Tate, 2013);
and Facebook’s with AncestryDNA (Schwartz, 2019). We draw inspiration on the work of Christina Cogdell (2010; 2000) linking eugenic ideology with streamline design in twentieth century America. We write this paper within a critical tradition — we believe that the design cultures of Silicon Valley should be analysed beyond prevalent discourses of technocentrism and progress. But we do so as a cartographic exercise (Braidotti, 2011) — we propose instead that reading the tactics of the gang of four through the interpretative framework of the ethos to create a better humankind allows the design community to device their own tactics of resistance and destabilisation of a digital hegemony.

2. Digital Eugenics

Christina Cogdell has linked eugenic ideology with streamline design in twentieth century America, arguing a broad cultural pattern in which ideas and practices of modern design are inextricably linked to those about race and evolution. She performs a historical overview to detect the way that notions about efficiency, hygiene and progress shaped not only the views of scientists and medical professionals who self-identified with the ethos and principles of eugenics, but also in a group of industrial designers and architects loosely grouped around the aesthetics of streamlining: the development of form that follows principles or rationality, efficiency and progress. Eugenic thinking, she argues, operates as a ‘a guiding framework within a certain cultural psyche without which the streamlined style in industrial and architectural design would not have resonated with such force’ (Cogdell, 2000, p.194). These designers ‘approached products the same way that eugenicists approached bodies’ (Cogdell, 2004, p.4): both could be managed and manipulated to create a better form of humankind.

Although there are visible figures in Silicon Valley that can be somehow linked to eugenic ideals and discourses, such as Paypal founder Peter Thiel, we can also detect a broader design culture that favours ideals of efficiency and progress actualised in the human body. Claudia Dutson has argued that the architecture of Silicon Valley typifies the management practices of its corporations. Through a detailed study that draws on drawing and situated practices, Dutson has created a detailed documentation of the ways that technology companies have used tactics to colonise the geographies they are located in. trying to shape their immediate environment in their own image. The analysis extends to the architecture of campus themselves. Dutson argues that the way that activities are arranged, and the buildings laid out within a complex, respond not only to functional requirements but to a strategy to embody the corporate ethos and elicit affective states in their workers. Elsewhere Dutson analyses the entrepreneurial subjectivity of Silicon Valley, a form of management that arose after the Second World War within West Coast technology companies that shifted an emphasis on top-down hierarchies to self-management (Dutson, 2016). The new emphasis on individuality allowed corporations to stealthy align their objectives to those of their employees, phasing out traditional objectives explicitly formulated around making a profit towards hyperbolic statements of “making a difference”
and “changing the world” which, Dutson goes on to conclude, incorporate ‘an employer’s need for personal growth and desire to do meaningful work with a bigger shared goal’.

Dutson has argued how the architecture of building complexes from Apple, Amazon, Google and other incorporate strategies that enable them to surreptitiously influence the experiences, thoughts and feelings of their employees. The repertoire of spatial strategies of power include the use of open plan offices and extend to the more ‘innovative’ strategies that seem to invert the work/play: lavish interiors, free gourmet meals and ‘playful’ environments with arcades, bean bags and table football. The expectation is that by creating an environment in which all possible needs and desires are catered for, all distractions will disappear and liberate employees’ cognitive capacity to actualise their full potential. By constructing the architecture, Silicon Valley corporations hope to generate a better, more productive version of employee, one that has learnt to assert their personal values at work; to derive positive identification that produces an unlimited revenue to the company (Dutson, 2019).

Although Dutson doesn’t explicitly frame her discussion of Silicon Valley architecture through the notion of Eugenics, it is easy to detect the ethos in the will to produce a better sort of human-kind. More explicit evidence of this form of ‘digital eugenics’ can be found in Silicon Valley’s more recent entanglements with biotechnologies. Early in 2017 it was announced that Amazon’s CEO, Jeff Bezos, would be investing a significant amount into Unity Biotechnology, a biotechnology start-up poised on reducing the debilitating consequences of aging (Terry, 2018). The company concentrates on removing ‘senescent cells’ from the body: a specialised form of cell charged with preventing multiplication of cells into tumorous tissue. The cells have been linked to the development of age-related conditions, including arthritis and kidney diseases. Following some successful trials in rodents, the company hopes to develop products that target and eliminate senescent cells which, it is hoped, might slow down some conditions associated with ageing.

Association with the ideals and principles of eugenics is more overt in DNA services. AncestryDNA, one of Calico’s partners, which provides direct-to-customer genetic testing: a service in which costumers send a tube with their spit to get information about their ‘ethnic origins’ and ‘DNA’ tribe. In early 2019 23andMe announced a partnership with AirBnB to allow its customers to put together holidays based on their ‘ethnic’ origin and ancestry. Mahdawi (2019) describes the phenomenon as a form of DNAvertising reflecting on the way Silicon Valley companies seem to increasingly use genetic information, based on DNA, for gratuitous reasons. Spotify has also partnered with Ancestry to offer customers personalised music playlist based on their genetic makeup. Despite the overtly racial discourse behind this use of DNA to speculate on racial origin, Mahdawi reflects, the companies are careful to phrase their products in terms of genetic populations, DNA tribes, heritage and ancestry. This banalisation, Caulfield (2018) argues, legitimises race and the idea that biological differences are constitutive of personal identity.
3. Accelerationism

In addition of their material entanglements and design tactics, it could be argued that the foundational myth and ethos of Silicon Valley is deeply woven and explicitly informed by eugenics. The giant corporations making up the so-called gang of four have made their fortune by creating and optimising products based on the internet. Their ethos and cultures could be said to be the result of the financial, material and ideological conditions of the 1990s — a decade characterised by the collapse of the Soviet Union, the emergence of the American economic and political model as hegemony, the ‘end of history’ and a financial boom in the US and UK linked to the strengthening of neoliberal policies. The corporations often identified as the ‘gang of four’ are of the decade or closely related to its conditions: Google’s parent company Alphabet and Amazon, were founded in the 1990 and although the foundation of Apple predates the decade, it found one of its more financially profitable years in the same years. Facebook would only emerge in the market later but based on the conditions created by the technological revolution and mass internet culture that emerged in the same date.

The political and economic conditions of the 1990s not only created the possibility for the gang of four to emerge and flourish, they also gave way to accelerationism, a philosophical school of thought that has derived in contemporary aesthetic, political and ideological movements in the far right and left. Although the term means different things to the manifold of groups embracing it, Steven Shaviro (2015) proposes that the best way of defining accelerationism is through science fiction. In Pop Apocalypse, Lee Konstantinou (2009) describes a fictional movement of ‘Creative Destruction’ inspired by Maxism-Leninism. The followers consider Marx’s writers literally, considering its mission to accelerate the reach of capitalist markets ‘because that’s the necessary precondition for a truly socialist revolution’ (Konstantinou quoted by Shaviro, 2015, section 1). Shaviro points out the paradox of the creative destructionist ethos: in practice, its adherents are indistinguishable from the most ardent of capitalists, creating good value for investors and enviable business opportunities. A more succinct summary of the argument is that ‘the only way out is the way through’ (Idem) — accelerationists believe that Western governments, and more generally the capitalism is inherently corrupt. The solution is to accelerate the expansion of the economic system and taking it to its extreme, often through shock tactics of creating chaos and confusion.

The origins of accelerationism can be traced to Nick Land and the work of the Cybernetic Culture Research Unit (CCRU) at the University of Warwick in the United Kingdom (Beauchamp, 2019). Their work can be understood as a reinterpretation of the old analogy of technology as a prosthetic extension of the human body first proposed by philosopher Ernest Kapp (1877) and later popularised and extended by Buckminster Fuller (1938, 1971)—suggesting a merging of technology and the human. Land believed that the prevalence of capitalism and networking cultures were intertwined strands which, when combined, produced a profound change of everyday life and the human. Drawing on the writings of
Domesticity and digital eugenics: design cultures of Silicon Valley

Deleuze and Guattari and Jean-François Lyotard, Land (2018) proposed that as the speed of modern life inevitably accelerated, the individual dissolved and became a new entity merged to its technological limbs.

Although not explicitly related, the argument behind accelerationism can be equated by that of transhumanism, the belief that the advancement of digital technologies inevitably leads to a future beyond the human where consciousness can be uploaded into a machine to achieve eternal life. Although often associated with the work of Raymond Kurzweil, the notion of transhumanism has expanded to different aspects of Silicon Valley thinking and products, animating its entanglements with Amazon’s Unity Biotechnology and Google’s California Life Company among others.

4. [Atonic] Smart Living

Our use of eugenics in this paper doesn’t claim specific links between the people behind the big four and eugenics as a guiding ideology. We believe however that reading their tactics through the interpretative framework of the ethos to create a better humankind allows the design community to device their own tactics of resistance and destabilisation of a digital hegemony.

In his Being and Event and Logic of Worlds (2007, 2019), Alain Badiou proposes the term of atonic worlds: worlds homogeneous and simple which, in their sameness, make it difficult for new conditions to appear and any significant change to take place. Perhaps the best way to visualise atonic worlds and their damaging effect on those who inhabit them is the analogy that Ian Graham Ronald Shaw (2010) draws to the animated film Wall-E. The film reaches its climax when Wall-E, a robot designed to collect and compress rubbish, enters the Axiom, a spaceship designed to provide an artificial living environment to the human population that escaped earth. Shaw proposes that the Axiom is a perfect example of an atonic world: a bland place designed to keep humans entertained and sedate, growing to impossibly obese dimensions in flying chairs which cater to their needs. Wall-E however, tenses the world of the Axiom, bringing onboard a small plant that has grown on earth and that should change the directive of the Axiom to head back to Earth and repopulate. Despite the opposition of Auto, the computer controlling the Axiom, the tension generated by Wall-E ensues a series of events that end up with radical change coming about.

The eugenic tactics of the ‘gang of four’ can be said to generate an atonic world, a ‘smart’ future of automation and sedate happiness where little happens. Design has, however, the potential to ‘tense’ this world by interrogating the need and convenience of technologies and generate alternative narratives and visions of the future. Thinking in these terms suggest a new social role of design, central to the debate of how these technologies develop and the way corporations can be brought to account for their actions. Doing so, however, requires work of critical theory to examine the unifying themes and tactics. Understanding the design cultures of this influential group of corporations as digital eugenics provides a way forward
in creating the conditions to challenge and counteract — to tense a world where we speak to Alexa, one in which we are bodies are attuned to the vertiginous speed of capitalism.

References


Terry, M. (2018, September 14). Longevity Company Unity Biotechnology Stocks Soared After CEO Talks to CNBC. *Biospace*

---

**About the Authors:**

**Luis Hernan** is a researcher and designer. His work explores the interface of digital, physical and living computation with everyday life. His practice is based on the conviction that design is a form of doing philosophy, and that philosophical thought is crucial in reframing design in an ever-changing material realm.

**Carolina Ramirez-Figueroa** is interested in the cultures, practices, tools and economies of working and designing with living systems. Her research explores the challenges and opportunities found when living systems are understood as matter. She has collaborated with artists, designers and scientists and exhibited in art and design venues worldwide.
Exploring Asian Philosophies and Service Culture: the Notion of Dignity

Miso Kim

*Department of Art + Design, Northeastern University
*m.kim@northeastern.edu

Abstract | This paper studies Asian service culture with a focus on the notion of dignity in three major philosophies. In Confucianism, dignity is encapsulated in the social value of Ren, which has been influential in the Chinese service culture concepts of Miànzi and Guanxi, emphasizing private network. Buddhist dignity is centred in compassion, the attitude of serving everyone as a Buddha. This tradition is especially evident in the Japanese service culture of Omotenashi, or hospitality as moral obligation. The dignity of Taoism originates from spontaneity, an autonomous action unaffected by external forces. Spontaneity is related to the Korean culture of Jeong, referring to a broad body of emotional attachment over time. These philosophies are highly relational and community-oriented. Ethics in service is considered important, as service is bound by social relationships; however, its focus on community and blurred boundaries in relational dynamics can sometimes place moral pressure on service workers.

KEYWORDS | SERVICE DESIGN, SERVICE CULTURE, DIGNITY, ASIAN PHILOSOPHY
1. Introduction

Humans have designed the artificial world to elevate dignity in everyday life. Dignity is an especially important principle when designing services, as it has a direct influence on individuals who participate in a service system. Moreover, service is co-created by diverse stakeholders. Today, service refers to a commercial transaction involving labour goods; historically, however, service as a broader system of collective participation has been infused with sophisticated cultural connotations, such as political, moral or communal relationships. Therefore, it is important to focus on dignity in service, including that of customers, employees, managers and community members who are indirectly involved and affected.

One issue in the study of dignity is the cultural difference between service indignity incidents — service controversies that concern dignity — in the West and the East. In Western cultures, many service indignity incidents involve customer humiliation. For example, in the United Airlines Flight 3411 incident, a bleeding passenger was dragged off the plane because he refused to give up his seat. Other cases include passengers being expelled from flights for similarly controversial reasons, such as storing a baby carrier, wearing leggings or speaking Arabic. On the contrary, cases in Asia tend to concern the humiliation of service employees. For example, on Korean Air Flight 480, a customer assaulted several flight attendants and spat on their faces. Other incidents include passengers throwing a hot cup of ramen on a flight attendant, sexually harassing them, or attacking them for refusing to serve more alcohol.

Why is there such a difference in the way these service controversies manifest? The patterns of well-known service indignity incidents — or at least the rhetoric used to report these incidents — reveal certain cultural assumptions about service. In this paper, I review three major philosophies in Asia to better understand the characteristic of service culture in three Northeast Asian countries: Confucianism and the Chinese service culture of Miànzi (面子, ‘honour’), Taoism and the Korean service culture of Jeong (정, ‘intimacy’), and Buddhism and the Japanese service culture of Omotenashi (おもてなし, ‘care’).

2. Confucianism: Ren and Guanxi

Confucianism is considered the dominant philosophy influencing Northeast Asia. It is fundamentally humanistic in that it seeks the foundation of an ideal society by cultivating oneself to form a balanced relationship with others, instead of salvation via divinity. The central concept of Confucianism is Ren (仁), which is referred to as the substance of humanness. Ren, in a broader sense, includes a holistic virtue that includes intellect, kindness, justice and generosity. More simply, Ren means respecting and serving others, as explained by Confucius: ‘[h]aving others stand first and fulfilling others’ wish before self.’ Ren also indicates that fulfilling one’s role in society — such as a king properly behaving as a
Exploring Asian Philosophies and Service Culture: the Notion of Dignity

ruler—leads to social harmony. Ren is practised through Li (禮, ‘ritual’), a canon that guides religious rite, moral rules, custom and courtesy (Confucius, trans. 1999).

If we view dignity as the worth of a human being (Rosen, 2012; Debes, 2017), we can also see that Confucianism features dignity at its core. There are no deities in Confucianism; instead, Ren, a human value, is considered the highest good in everyday life and political interactions. As shown in the origin of the character仁 (Ren)—made of two components (人 仁, ‘two people’)—humans can prove their dignity only by continuously practising the benevolent virtue of Ren in relationship with others. The Saint, or the ideal practitioner of Ren, is described as serving others by fulfilling the responsibilities of their social position. The great Ren of a society is the collective outcome of many individuals practising Ren together (Confucius, trans. 1999).

If we focus on the notion of dignity in Confucianism, a characteristic connection can be found in the culture of Miànzi (面子, ‘face’) and Guanxi (關係, ‘relationship’) in China. Miànzi is an official and social image of a person as perceived by other people. Miànzi accompanies a sophisticated emotion of pride, honour, humiliation, morality and vanity altogether. For example, making a mistake in public leads to the unbearable loss of Miànzi. According to Hu (1944), if a person loses honour, they can no longer live in their community; however, if they lose their Miànzi, they also forfeit the meaning of life. Miànzi usually goes beyond the individual, influencing those who belong to the same group. For example, if someone regales another person for the sake of a third person whom they both are acquainted with, the Miànzi of all three people is saved. In other words, Miànzi is the public confirmation of dignity, especially in organizational settings.

Miànzi is inseparable from Guanxi, an essential private human network characterized by mutual interest. Guanxi, in a narrow sense, means utilizing private networks to achieve one’s practical benefit. In a broader sense, Guanxi can include any trustworthy human connections for mutual aid, including friends, colleagues or acquaintances. Miànzi plays an important role in this process, as Guanxi exists on the assumption that people will respect one another’s Miànzi and provide useful aid for anyone in their network. The exchange of social debt strengthens the bond of a private network (Buckley, Clegg, & Tan, 2010).

Guanxi itself is a social service. Researchers propose that Guanxi is a safety net originating in agricultural society, where people live their whole lives in connection to the land while protecting each other from large-scale political dynamics of Chinese regimes (Hsiung, 2013). Today, it is said that without Guanxi, no business can be done in China, and Guanxi still plays an essential role in every aspect of life, including commercial, public or even digital services. For example, Guanxi is explained as the main reason behind the rapid success of the WeChat service (Lin et al, 2019). WeChat started as a messenger but soon evolved into a social networking platform; now, it has become a vast system for all kinds of services in China. Service providers rely on WeChat to gain new customers through existing customers’ network, exchange credit currency as gifts, and individually manage customer relationships in 1:1 or group settings, all of which reflects the offline tradition of Guanxi.
3. Taoism: Spontaneity and Jeong

Another influential philosophy is Taoism, emerging during the Spring and Autumn period in China, amidst continued warring between 7 countries for over 550 years. Laozi founded a philosophy to bring peace to the world, proposing that oppositions such as possession and non-possession, difficulty and ease, and beauty and ugliness all originate from humanity’s artificial divisions. Tao (道, ‘the way’) describes the holistic relationship that brings these oppositions into a harmonious whole. This emphasis on relationship aligns with Confucianism, but Laozi argued that Tao is a path that cannot be described, named or walked on, meaning that Tao is different from the code of conduct which characterizes Confucianism. He criticized Ren as the artificial, exaggerated and calculated alternative to the Tao of the natural world (Lao, trans. 2011).

Instead, Laozi suggested that dignity is found in living spontaneously, such as through Wuwei (無為, ‘non-action’) of nature. He proposed that action without intention—that which comes naturally from inner Tao—does not feel like an action, and is thus of higher moral value than the artificial value proposed by Confucian rituals and codes. What Laozi meant by ‘nature’ does not necessarily refer to the natural environment, but the principle of nature (自然) as autonomous (自發) being (然). In other words, dignity in Taoism is the autonomy of following one’s free will, aligned with nature, instead of the external functions and regulations posed by society. The Sage, or the ideal human, serves other people autonomously without considering it to be a good deed, because they live in harmony with the natural world of Tao.

Laozi believed that spontaneous non-action and service to other people cannot be separated. He favoured water as a symbol of dignified service, stating: ‘The highest goodness resembles water; Water greatly benefits myriad things without contention; It stays in low places that people dislike.’ Water serves the world by changing its shape depending on different vessels and states, nurturing all beings and embracing all by filling any gaps. Serving others happens naturally, as there is no more distinction between self and other when desire and virtue becomes one in the wholeness of Tao (Lao, trans. 2011).

Taoism’s influence is especially evident in Korean service culture. For example, scholars voted on ‘spontaneity’ as the most prominent characteristic of Korean culture (Shin et al, 2014). Spontaneity is the driving principle behind another pillar of Korean culture, Jeong (정). Jeong is a sentiment that permeates Korean society as a bond of intimate community. Jean-Marie Gustave Le Clézio (2017), a Nobel laureate, described it as the feeling of ‘sharing the same destiny.’ Jeong is a broad body of emotional attachment, including love, hate, care, jealousy, vengefulness and forgiveness. Over time, these mixed emotions sublimate into an overarching affection. As an emotional totality of positive and negative feelings that naturally grow through long acquaintance and experience—just like the fermentation processes that characterize Korean food culture—Jeong is considered the substance of humanness. Koreans feel dignified as humans by sharing this sentiment, which makes each individual a special and meaningful being.
Another characteristic of Jeong is spontaneous expression. Action without words naturally emerge from true sincerity, which resonates the non-action of Taoism. In Korean culture, the genuineness of an act of service is suspect if the person or organization delivering the service boasts about the favour. In contrast, non-expression is believed to prove itself as genuine by breaking away from artificial words or courtesies. For example, one of the representative characters of Korean service is the ‘grandma with a potty mouth’. This character, the owner of a small local business, speaks to her customers using impolite words; however, her contrary actions, such as giving extra meat in a dish, spontaneously reveal her true Jeong. Understanding the sincerity of an action beyond words makes customers feel as though they have a special relationship with service providers, thus contributing to the dignity of those who are bound together in Jeong.

4. Buddhism: Compassion and Omotenashi

Another body of thought that has influenced everyday life in Northeast Asian culture is Buddhism. Originating from India, Buddhism was subsequently divided into the Mahāyāna and Hiñayāna branches. Its major flow into Northeast Asia was through Mahāyāna, meaning ‘the great vehicle’, an analogy of Buddha’s teaching with the aim of saving not only oneself but every human in this world through the practices of self-cultivation and compassion (Shizutani & Suguro, 2013). For example, Zen Buddhism in Japan is representative of the Mahāyāna branch, emphasizing enlightenment through meditation and community relations instead of studying scriptures.

The fundamental principle of Buddhism is ‘Śūnyatā (emptiness, शून्यता).’ Śūnyatā is the belief that there is no fixed substance in the world. It does not literally mean ‘emptiness’; rather, it proposes that there is no intrinsic, independent or unchanging nature in things. Substance is just a composition of our perception. Substance is only defined by one’s relations to other things and people via infinite cause and effect. Therefore, one can be divine or enslaved according to their relationships with others. Obsession with non-existing substances, especially the self, in this ever-changing world is considered the cause of all pain. The self is not the absolute origin of thought or action: it is just an empty space filled with the outcomes of conditional relationships surrounding the self (Lee, 2016).

Buddhism emphasizes the importance of breaking the barriers of the self to continuously overcome attachments. One has to constantly put effort into emptying the self in order to accept the ephemerality of matter, instead focusing on relationships. Emptying the self can be achieved through service to others with compassion (maitri, मैत्री). Compassion is different from sympathy: it is expressing emotion for others who are equal and treating all people as having the potential of becoming a Buddha—the enlightened human. Dignity is found in respecting everyone as a Buddha and serving them to become the ideal being. Compassion is expressed as dāna (दान, ‘charity’), or service to the community. Compared to Guanxi as a system of reciprocal aid, dāna refers to contributions without the expectation of recognition.
or return (Lee, 2016). Service itself is a cultivation of both giver and receiver by emptying the self and appreciating relationships.

Buddhist influence is especially evident in Omotenashi, which is known as the spirit of Japanese service culture. Originating from traditional tea ceremony (Hisamatsu, 2015), Omotenashi originated from the word motenasu (持て成す), meaning entertaining, offering and treating well (Iwata & Okada, 2018). Mote (持て) indicates intentional action and Nasu (成す) suggests completeness (Ohnishi & Nakamura, 2018). Omotenashi is an attitude that refines a service into ‘the ultimate spirit of hospitality’ with formality, personal touch and careful attention that exceeds customer expectations (Ikeda, 2013). Not only one’s actions but also state of mind should be cultivated to the degree of becoming art, with an active sensitiveness to other people’s needs. For example, offering a pre-heated dish and a warm hand towel before serving winter food—in a dish decorated with a season-appropriate theme—is an example of Omotenashi.

Omotenashi operates as a service philosophy that enhances the dignity of both the host and the guest. Masaru Watanabe, General Manager of the Palace Hotel Tokyo, states that good service requires emotional devotion, describing Omotenashi as service refined to ‘the utmost sincerity, grace and respect’ without expectation of reward (Strand, 2014). Because service is seen as the art of character building, hospitality to others also enhances the dignity of the host. For example, Chikaraishi (2001) argued that service represents the dignity of the giver; therefore, service workers must refine themselves into polite and distinguished hosts who serve polite and distinguished guests. In sum, Omotenashi refers to the dignified devotion of an individual to another person who are in equal relationship, which resonates with the Buddhist concept of compassion.

5. Discussion

Asian philosophies serve as moral principles that influence people’s thoughts, everyday lives and participation in services. At the core of these humanistic philosophies is dignity, which is manifested through serving other people in one’s community. The central idea of Confucianism is the dignity of Ren, a human virtue that is manifested by an individual fulfilling their function in society. Taoism focuses on the dignity of spontaneous non-action in harmony with the holistic principles of nature. Buddhist dignity involves emptying the self and recognizing the substance of relationships via compassionate service to others.

Confucianism, Taoism and Buddhism are characterized by the humanistic approach. They do not suppose a God or pure reason as the highest good, instead focusing on how to live harmoniously with other humans. Even the Buddha is just an enlightened human. Everybody has the potential of becoming an ideal being—such as the Saint of Confucianism, the Sage of Taoism, or the Buddha of Buddhism—through continuous self-cultivation. The humanism of acknowledging the highest good in humans positions dignity as the key principle of Asian philosophy.
These philosophies commonly interpret relationships as the substance of the world. Each philosophy features social connection, holistic principle or interpersonal approach as a focal point. In this sense, Asian philosophy implies a service-dominant logic (Vargo & Lusch, 2014), which brings attention to the value of relational assets and the intangible substance of products. The harmony of a community as a collective of relationships is proposed to represent the ultimate good. Therefore, serving others is often seen as the most meaningful connection.

Emphasis on self-cultivation through serving others creates a moral obligation to one’s community. Services in Asia have been historically delivered informally by a community, family or king, which represented the building of moral character among service providers as much as the benefit of recipients. This tradition remains today, which blurs the boundary between commercial service, public service, community service and informal care. Therefore, Asian views on service tend to emphasize ethical responsibility as a part of everyday life and community.

In the twentieth century, however, Asia has gone through rapid modernization, accompanied by countless revolutions, wars and regime changes. The transition is still in progress, leading to old cultures colliding with the new influences of industrialization and globalization. While the principle of dignity has been diluted, the methodological custom of community remains. The tradition of service as relational, moral and communal provision has been mixed up with the commercial notion of service as a labour good. Yet the boundary between public and private spheres remain indistinct, and cultural connotations remain informal. These contradicting views of service without a unifying principle often results in the abuse of weaknesses within a service system, as well as a double standard.

For example, a cultural assumption that views service as the provider’s moral obligation can lead to emotional labour (Hochschild, 1979). From a traditional perspective, monetary motivation is seen as a base desire; therefore, service organizations often attempt to cover it in the façade of moral entity. Pressure falls on individual workers operating in the frontline—who must provide additional communal care without compensation—in the name of educational opportunities or character building. Customer dissatisfaction is regarded as a service worker’s moral flaw. For example, a commonly observed problem in Korean service culture is that people misappropriate the sincerity of Jeong in business relationships. Lack of distance and a ‘family-like’ culture can cause unreasonable requests for the sake of Jeong, and when employees voice their concerns, they are seen as breaking the code.

This emphasis on relationships also creates a high-context society in which members must know implied meanings and conventions to be included. For example, Omotenashi is respect between equals; therefore, people are expected to know the proper etiquette and cultural conventions to fully participate in the art of service. The negative side, however, is that sometimes hospitality is given only to those who are considered deserving. Customers or workers who may not truly appreciate the service can be unwelcome, discriminated against or even expelled from the service. If a person with power determines that an
unconventional population (i.e. foreigners, women or children) is not qualified for a state-of-the-art service, they may be refused or even mocked in a way that only insiders would be aware of.

Another downside is that the community of service has the danger of deteriorating into a small, closed society. Outsiders are excluded from this union, and some members sacrifice for the community by providing free, informal services. Moreover, these outsiders or free labourers tend to be minorities who are at the bottom of the social hierarchy. For example, closedness is often pointed out as the problem of Guanxi; there is no buffer provided by the public sphere, and Guanxi supposes that social relationships are either ‘we’ or nothing. It is difficult to refuse requests from members who belong to the same group, because that leads to expulsion from the network. This private network also negatively affects the transparency of society when it becomes an expected reality that invisible personal connections influence key decisions.

Gapjil (갑질, ‘power tripping’) is a newly coined term that captures the service indignity problems in Asia. The word itself comes from the tradition of contract documentation: Gap (갑) is the employer or customer-king with the backing of a service organization. Eul (을) is the employee who provides the service. Conflicts arise when Gap asks for more than what is explicitly agreed upon and even bullies Eul. The media has reported on several harassment cases of this nature, such as when a Korean Air customer asked a flight attendant to re-cook ramen three times before hitting her (Noori, 2013), when Japanese convenience store customers forced an employee to prostrate on the floor to apologize (Kyodo, 2014), or when a Chinese company punished its workers by having them crawl around on their hands and knees on the street (Paton, 2019). Gapjil is more than misplaced emotional labour—it is an issue of dignity.

I propose that this problematic phenomenon is the outcome of method without principle. Customs without philosophy lead to the misinterpretation of dignity as a hierarchical and comparative merit-status. Service companies have designed policies and cultures that lower the status of service workers to enhance the dignity of customers. However, Asian philosophies would regard this principle differently. Generally speaking, Asian philosophies emphasize the mutual relationships that bind people together in service of one another; therefore, insulting the dignity of workers only degrades the dignity of the customers and the company as a collective whole. There is a need to discuss and restore the principles of dignity to re-establish the service culture of Asia. This does not necessarily mean returning to the old, but finding a new direction that dialectically merges the strength of communal dignity with new meanings of individual dignity in modern democratic societies.

Dignity in service is also a problem in the West, although several cultural differences exist. Typical service controversies in Western countries reveal that the root of the problem lies in economic value being prioritized over moral value. This reveals a need for principles that can support service participants in making autonomous humanistic decisions on the basis that service is not a separate entity but is situated in the broader context of a society. In this
Exploring Asian Philosophies and Service Culture: the Notion of Dignity

I conclude this paper with the following discussion points for future research:

- How do we go beyond Western-centric principles, paradigms and perspectives in the study of service and its design to include voices from diverse cultures?
- How do we systematically study, apply and teach the principle of dignity in service and its design?
- How do we learn and adopt culture-specific meanings of dignity, and harmonize it with meanings from other cultures?
- How do we expand the notion of service as an economical entity and design a framework that foregrounds the humanism of participation?
- How do we move beyond a customer-centric approach to service design in order to cultivate community-oriented cultures that privilege the dignity of diverse stakeholders, especially the dignity of service workers?

6. Conclusion

In this paper, I provide an overview of the three major philosophies in Northeast Asia that have influenced the region’s service culture. These humanistic philosophies—with dignity as a key principle—commonly reveal highly relational, community-centric and moral perspectives regarding service. Service is considered inseparable from everyday life, featuring community ethics as an essential piece. The downside is that customs without principle can lead to blurred boundaries and a totalitarian culture which places a burden on service workers and social minorities. There is a need to redefine the principle of dignity that has been lost. A new approach is needed that would celebrate traditional Asian cultures while still harmonizing with modern, democratic understandings.

This study contributes to service design and the broader field of design by exploring Asian philosophies, service culture and the meaning of dignity. The burgeoning field of service design in Asia represents a direct application of the Western framework; thus, a deeper understanding of diverse cultural voices will help designers develop design principles and methods that are better suited to individual countries. This approach will also bring new perspectives to Western service culture and its problems as well as helping designers to better reflect the diverse needs and voices of a global society. This inquiry reveals that service is not only a separate economical ecosystem but also a system of human relationships situated in community. By emphasizing dignity, we can refocus the social context of service and the direction of service design against the technological and political changes of our time.
Reference


**About the Author:**

**Miso Kim** is an assistant professor in the Department of Art + Design at Northeastern University. She holds a PhD in Design from the School of Design at Carnegie Mellon University. She studies service design through humanist frameworks. Specifically, she is interested in studying dignity, autonomy, and participation in service design.
Fantasia and analogical thinking: a specific reflection on teaching the essence of the Creative Leap

Valentina Auricchio
Assistant Professor, Politecnico di Milano, Italy
valentina.auricchio@polimi.it

Abstract | Many professional designers believe that creativity cannot be taught; tools, methods and methodologies can be learnt, but intuition, intended as that moment of illumination that occurs during the creative phase of the design process, is a personal matter. Within the proliferation of design methods recently developed in the past decades and that have successfully allowed designers and non-designers to build a common ground for project development and communication, the so-called creative leap has somehow not been directly addressed. This paper intends to examine one specific contribution to better enlighten the topic by reflecting on the Italian designer Bruno Munari and his book Fantasia, written in 1977, positioning it within the larger international discourse on design methods. The aim is to understand how basic thinking exercises, at the core of product and graphic design, can be revisited and applied within the domain of product service system design teaching.

KEYWORDS | DESIGN METHODS, CREATIVE LEAP, PRODUCT SERVICE SYSTEM DESIGN
1. Describing the context

Since its birth in 2005, the Design Methods course within the Master Program in Product Service System Design in the Design School of the Politecnico di Milano has evolved. It has modified means and purpose by constantly adapting both to the evolutions of the discipline and the different skills, backgrounds and knowledge of the international students enrolled every year. In this course, students come from different bachelors around the world (architecture, engineering, product design, interior design, communication design, interaction design and fashion) bringing their own project cultures pertinent to their hometown and design institutions. Therefore, the course aims to give the class a common understanding of the world history of design methods and the professional skills to build their own design process and methods in the future. Alongside the theory of the history of design methods students experiment a full design process working in groups.

Within the course we explain the different ways one can illustrate the design process starting from the more recent version proposed by the British Design Council (British Design Council 2019) described through the well-known Double Diamond model (British Design Council 2005) which defines four sequential design phases: discover, define, develop and deliver. In the latest version of this model, these phases are supported by two other elements which are defined as the Design Principles and the Design Methods Bank. The students learn that ever since the beginning of the debate around defining a scientific model and its methods, the design process has been illustrated in many ways by several scholars and practitioners starting from the first developed in the 60’s by the Design Methods Movement that has consequently given birth to the Design Research Society (Jones 1963, Booker 1964, Gregory 1966, Alexander 1964) to more recent interpretations by fellow scholars and design agencies: from the Stanford d.school - Design Thinking process (2009) where the process is described in five blocks (empathise, define, ideate, prototype and test) to IDEO’s Human Centered Design process and toolkit (2009) in which the phases are three, following again a smoother version of the double diamond model, alternating moments of divergence and convergence thinking, and giving form to the phases of inspiration, ideation and implementation.

Within the past 15 years of teaching this course there has been a constant reflection on how it was best to teach this subject, with which references, and, most importantly, how to encourage future practitioners to continually reflect on their method, adapting it to the different project complexities they might face in the future.

This paper intends to highlight one of these reflections and proposes the identification of a specific research gap in this field. In fact, in all the above-mentioned design processes there is a phase that is very rarely addressed and that lacks reflection and development of specific methods and tools. It is the phase that some scholars call the Aha! experience, when suddenly you see the problem clearly from a new perspective (Kolko 2017) and that other scholars in the past defined as the incubation phase (Osborn 1953). In any case, what we are referring to here is that unexpected moment in which a designer has an intuition.
Fantasia and analogical thinking: a specific reflection on teaching the essence of the Creative Leap

Many methods and tools have been developed to brainstorm and allow these intuitions to arise, but very few are focused on really understanding how the intuitions occur and how we can exercise our thinking and our mindsets in order to create that right fertile ground for it to happen.

For this reason, in recent years, the teaching material developed for the Design Methods course has been integrated with a series of exercises to allow students to acquire a stronger awareness of self, one’s personal project culture background, and to reinforce the designer’s mindset, attitude (Michlewski 2015) and design heuristic abilities (Martin 2009). For the first learning objective the students are asked to write a professional diary: a daily reflective exercise on their previous design method, what they are learning in class and how this will affect their design thinking, process and methods in the future. For the second learning objective a more profound reflection needed to be made on understanding what are heuristic abilities, and consequently, how these skills could be taught.

This paper aims to highlight one of the methods and exercises that have arisen from this reflection and that has been shown to be effective in teaching the essence of the creative leap to students.

How do you prepare for the creative leap? Are there any specific methods? How do we “exercise our brain” (Munari, 1977) to create a fertile ground for the so called out of the box thinking? How do we teach these methods to future designers?

These are the questions that this paper is addressing, taking inspiration from Bruno Munari’s desire to teach the art of imagination (or fantasy if there is a real distinction between these two terms today) to children and citizens and identifying a more contemporary interpretation and use of such methods. By contemporary interpretation we intend the extension and application of methods developed in the realm of product and communication design to the more recent fields of product service system design and service design, contextualizing Munari’s writings within the international discourse around design methods.

Much has been said and studied around design methods and design processes (Osborn 1953, Simon 1988, Jones 1970, Cross 2011, Huppatz 2015, Kolko 2017), but this contribution will focus on a specific phase within the process: the intuition phase (or illumination). Over more, the paper will build on a first hypothesis that intuition can be taught (or better exercised), rather than leaving it merely to the individual’s personal ability (or capability).

This hypothesis has already been verified within the above-mentioned Design Methods course in the past three years of teaching giving some interesting results, but it will need further verification in a second research phase as also a confrontation with a wider international group of scholars.
1.1 The creative jump, leap, and the meta-skill of intuition

When design professionals are asked to explain how they achieve their ideas they usually start by explaining the process that took them to the final solution. This process can be more or less structured; it can be conscious or unconscious; however, for sure it is always different, from project to project, from designer to designer, as has also emerged from the conclusions aroused by scholars that have approached this research field in the past. To mention one of them, in the attempt to develop general guidelines for design thinking through interviewing architects at work, Peter Rowe concluded that: “[…] there is no such thing as the design process in the restricted sense of an ideal step-by-step technique. Rather there are many different styles of decision making, each with individual quirks as well as manifestations of common characteristics.” (Rowe, 1987, p. 2)

A common characteristic that we could take into consideration within the many design processes, however structured they may be, is a recurrent moment in which design professionals are unable to give a rational explanation to their thinking - common also to creative professionals in other sectors (for e.g. music, art, poetry, but also business) that deal with intuitions that appear (come to them) apparently without any explanation in their daily activities.

Jones called these episodes jumps in perception, moments in which he says: “One should expect confusion, loss of confidence, and procedural chaos to arise out of one’s original strategy and be ready to jump to what feels better” (Jones, 1980). Broadbent called them creative leaps when he described the phenomenon as: “[…] a jump, a leap whose validity can never be absolutely guaranteed in advance” and added to this that: “[…] the creative leap can be as wild as possible as long as the following steps of the design process are done with analytic rigor” (Broadbent, 1966).

If we look back to Graham Wallas’s stages of control of a creative process (preparation, incubation, illumination and verification), we can go deeper into the understanding of this phenomenon which is common to any creative activity: in the first phases “the thinker is preparing himself for the solution”, in the illumination phase “a solution may present itself” while in the last phase we verify our idea (Wallas, 1926, p.41).

But how do we teach or exercise our intuition? Are there ways to do it, or is it only by practicing over and over again the same process that we learn to create a fertile ground for intuition to occur and grasp?

In his introduction to the second edition of his book, while attempting to better describe how to use his design methods (and trying to explain the meaning of his work to those that had misinterpreted it), Jones talks about the importance of having an intuitive meta-skill and the need to re-program one’s mind:

“I realise now that it is much more difficult to use these methods successfully than I thought while writing the book. Some of them take a lot more time than those
used to them see as worth spending on ‘re-programming one’s mind’ and similar secondary aims; it is very easy, once started, to lose sight of what one is doing, and to get drowned in data which one cannot use; the initial steps of some methods are difficult to carry out, at first attempt, partly because they involve the intuitive meta-skill of identifying what’s going to be important; and most people find difficulty in branching out, without experience, into a way of designing that is unfamiliar, and much more collaborative than what they are used to.” (Jones, 1980, xxiii)

In his text, Jones suggests using design methods in a mechanical manner at the beginning until one understands their functioning in order to act intuitively once one becomes an expert. This implies that intuition is a skill that should constantly be part of all the phases of the design process and not merely arise in a specific phase and it somehow also implies that intuition emerges spontaneously once you are familiar with the tools. In this reasoning, it is however unclear if intuition is a synonymous of creativity or if it is part of it or vice versa, and if imagination is an entirely different skill or not. It would be impossible to explore these definitions within this paper, however, it is important to question them since they are still unclear within the design discipline.

Going back to the design professionals and the explanation of how ideas are born, research in the past has demonstrated that often thinkers are unaware (or better unconscious) of how this happens and where ideas come from; Wallas talks about dissociation of consciousness and its usefulness for creative thought allowing the thinker to “escape from some of the habits and inhibitions which hinder the free association of his ideas” (Wallas, 1926, p. 118). In the Bauhaus, the propaedeutic course led by Johannes Itten worked in this direction, trying to free the minds of the students from prejudice, previous learning and bias in order to allow free thinking, although a deeper understanding of the Bauhaus methods should be addressed with this lens to integrate them within a broader design methods history (Maldondado 2019, Weber, 2009).

Nonetheless, probably due to the unconscious character of intuition, many professional designers believe that this specific skill cannot be taught. This belief hence leads us to say that tools, methods and methodologies can be learnt, while the meta-skill of intuition (as defined previously by Jones), when intended as that moment of illumination that occurs during the design process, is a personal matter and could be included in what has been previously identified as an ‘individual quirk’ by Rowe.

This might be the reason why within the proliferation of design methods that have recently developed in the past two decades, successfully allowing designers and non-designers to build a common ground for project development and communication, this area of the design process has been somehow neglected.

However, Jones did talk about the meta-skill of intuition, and since it is a skill we should be able to teach it, exercise it, and become experts in it. In the following paragraph we will build on the work developed by the Italian designer Bruno Munari to see if it is possible to identify some tools of methods to practice our creative thought.
2. Bruno Munari: fantasy, invention, creativity and imagination

The Italian designer and artist Bruno Munari, in describing his design process in his book Da Cosa Nasce Cosa (1981), has also omitted the description of how the creative leap (in his scheme it is called creativity) works, because he had already published his book Fantasia (1977) in which he faced the ambitious task of explaining how ideas emerge by exploring the possibility to define the main characteristics of fantasy, invention and creativity. To explain his intent, Bruno Munari writes:

“The artistic world, the world of creativity and fantasy, has always been kept secret; how an idea is born or how a work of art is built (supposing that one knows it) must never be revealed. [...] I think instead that people want to understand and therefore I am going to try to explain it hoping that others - more competent than me - continue this modest beginning of knowledge of this phenomenon that affects everyone, for a greater development of creativity and therefore of personality.” (Munari, 1977, p.18 – authors translation from Italian)

In Fantasia Munari tried to first understand the difference between the terms fantasy, invention, creativity and imagination and then he described the different rules or characteristics (he called them constants) that determine a creative act by extracting them from real professional work. The constants of the creative act developed by Munari can be inspirational to see the world through a new lens; each time one tries to apply a constant to a problem one creates a new relationship between terms and activates analogical thinking.

Table 1. Scheme of the definitions and constants developed by Bruno Munari with a description of their meaning and use. (Munari 1977)

<table>
<thead>
<tr>
<th>DEFINITIONS</th>
<th>FORCE OF THE CREATIVE ACT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fantasy</strong></td>
<td>Everything that does not exist even if unfeasible</td>
</tr>
<tr>
<td><strong>Invention</strong></td>
<td>Everything that does not exist but is practical and without aesthetic implications</td>
</tr>
<tr>
<td><strong>Creativity</strong></td>
<td>Everything that does not exist but is possible to make in an essential and global way</td>
</tr>
<tr>
<td><strong>Imagination</strong></td>
<td>Fantasy, invention and creativity think; imagination sees</td>
</tr>
<tr>
<td><strong>The world upside down</strong></td>
<td>Think of the opposite, flip the situation around, think of the complementary</td>
</tr>
</tbody>
</table>
Fantasia and analogical thinking: a specific reflection on teaching the essence of the Creative Leap

<table>
<thead>
<tr>
<th>Typology</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repetition</td>
<td>Think of multiples of the same element or of variations of the same</td>
</tr>
<tr>
<td>Visual or functional affinities</td>
<td>Analogy making between two different worlds, for eg. “the leg of a table = the leg of an animal”</td>
</tr>
<tr>
<td>Changing of a single element</td>
<td>Change a colour, change a material, put it out of place – displacement, change function, change time, change dimension, change weight, etc.</td>
</tr>
<tr>
<td>Monster making</td>
<td>Put different elements together like making a monster</td>
</tr>
<tr>
<td>A multiple combination of the above</td>
<td>Relations of relations: something that is the opposite of something else, but it is in another place and has changed colour, etc.</td>
</tr>
</tbody>
</table>

The constants of creativity suggested by Munari, and in particular the third constant on visual or functional affinities, find a direct link to theories gathered also by Geoffrey H. Broadbent in his chapter entitled “Creativity” published in 1966 by the Design Method Movement in the book The Design Method edited by Gregory.

In this chapter Broadbent focused on the different phases of the design process inspired also by John Dewey’s scientific research process. Referring to heuristics as the backbone of the study of design methods, Broadbent sustained that its week point was that it was more fascinated by the means rather than by the ends. His text was a critic to the design methods that were emerging at the time, defining them less efficient than they could be since they were ignoring the contribution of the unreliability of the human operator. In particular, his contribution focused on the importance of applying synectics (Gordon, 1968) and analogical thinking - based on psychological studies - within the design process (Broadbent, 1966, in the Italian edition p. 141).

Table 2. Scheme of the typology if analogy making described by Broadbent. (Broadbent, 1966)

<table>
<thead>
<tr>
<th>TYPOLOGIES OF ANALOGY MAKING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal analogy</td>
</tr>
</tbody>
</table>
The problem is confronted with known facts in another branches of art, science or technology. Learning from other contexts that have similar issues.

The designer tries to penetrate into the essence of the particular meaning that he attributes to the problem by means of some personal symbol. Finding an abstract principle that allows you to see the essence of the problem.

Working on desires, hopes, and utopia.

The work developed by Munari was based on his experience as an artist: each constant emerges from a reflection on art and how the rules can be extended to the development of ideas in the field of product and graphic design. But what if we apply the same constants and analogy making to product service system design? Would it be possible to apply these same thinking methods to service-oriented solutions?

In the following paragraph we will describe a first attempt to address these questions and the results that they have generated within the context of teaching.

### 3. An exercise for a creative mind in product service system design teaching

By evolving the studies around analogy making within a product service system design context, the typologies identified by Munari could be enriched with new meanings. The effectiveness of this exercise can be grasped in a first phase by analyzing existing case studies, and identifying service design projects that have been, consciously or unconsciously, ideated thanks to these thinking models or constants (as defined by Munari).

The following graph shows how the constants identified by Munari are still relevant and how, if exercised deliberately also within product service system design and service design projects, they can enhance the possibilities to develop more significant ideas and become a powerful tool for generating intuitions and creative leaps.
Table 3. Revisited scheme of the definitions and constants developed by Bruno Munari applied in service design. An exercise to verify the applicability of the model.

<table>
<thead>
<tr>
<th>CONSTANT</th>
<th>APPLICATION</th>
<th>SERVICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>The world upside down</td>
<td>Think of the opposite, flip the situation around, think of the complementary</td>
<td>A couch at home, which is considered ‘private’ becomes ‘public’ offering a hosting service. (Couchsurfing)</td>
</tr>
<tr>
<td></td>
<td>Public vs private</td>
<td>The meaning of risk management services changes from being ‘negative’ to being ‘positive’. (Deloitte risk culture - Verganti, 2016)</td>
</tr>
<tr>
<td></td>
<td>Open vs closed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Negative vs positive</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Passive vs active</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Etc.</td>
<td></td>
</tr>
<tr>
<td>Repetition</td>
<td>Think of multiples of the same element or of variations of the same</td>
<td>Sharing cars, sharing bikes, sharing homes, etc. (Sharing economy)</td>
</tr>
<tr>
<td>Visual or functional affinities</td>
<td>Analogy making between two different worlds, for e.g. “the leg of a table = the leg of an animal”</td>
<td>A pillow can be ordered in a hotel as if it were a dish. (The pillow menu)</td>
</tr>
<tr>
<td></td>
<td>Completing the sentence: “As if it were...”</td>
<td></td>
</tr>
<tr>
<td>Changing of a single element</td>
<td>Change a colour, change a material, put it out of place – displacement, change function, change time, change dimension, change weight, etc.</td>
<td>A restaurant becomes a space where you can order from any other restaurant nearby. (Food Factory by Martí Guixé)</td>
</tr>
<tr>
<td></td>
<td>Change actors or change their role in the system, change the flow of information, change behaviour, change rhythm, etc.</td>
<td>People can exchange time as if time were a currency. (The Time Bank)</td>
</tr>
<tr>
<td>Monster making</td>
<td>Putting different elements together like making a monster</td>
<td>A glamorous hosting solution allows you to experience wildlife. (Glamping)</td>
</tr>
</tbody>
</table>
Bring together and merge different offerings, services, products, behaviours, etc.

| A multiple combination of the above | Relations of relations: something that is the opposite of something else, but it is in another place and has changed colour, etc. | An office which is usually ‘closed’ becomes ‘open’ and shared with others in a public space in the city (Co-working in parks) |

The above exercise has allowed the students of the Design Methods course to be more conscious of our creative thinking, empowering intuition. When using this exercise in a real project context, students felt more at ease with the creative leap; they were more aware of their thinking and insight generation was no longer considered as being a mysterious black whole.

The first experimentations led with students in this specific course, but also in design thinking courses within other majors, suggests that there could be space for further development of thinking tools that can be exercised in the ideation phase. An intuition also tells us that there could be more constants that might emerge by studying today’s professionals, but we will leave this to a future development.

4. Conclusion

This paper has been the result of many years of reflection and teaching design methods to a class of international students in the field of product service system design. It is based on the emerging need to teach how to think and ideate while also teaching design processes, tools and methods. Service designers can learn from the previous theories developed on creative thinking, but they should also develop specific theories that adapt previous experiences to new contexts and complex problems.

This paper is a starting point for further reflections on this topic. Its aim is to bring Bruno Munari’s work within the international debate and use his reflections to elaborate a first framework for further evaluation and testing. The following steps for this research will be to deepen the understanding of the topics described and to enlarge the debate at an international level to include other perspectives and contributions. The final aim of the research in this domain is to verify if there is a research gap that needs further attention and if the assumptions stated at the beginning of this paper, the idea that creative thinking can be consciously taught and exercised, can be validated also by on field experimentation both within the academia and through interviews to design practitioners.
References


About the Author:

Valentina Auricchio Assistant professor of the Design School of the Politecnico di Milano. Specialized in strategic design projects for SMEs and Design Thinking processes. She teaches strategic design and design methods in Product Service System Design and in Integrated Product Design courses.
How to teach design thinking to non-design students: enablers and barriers to transfer design research practices.

Gianluca Carella*, Michele Melazzini*, Xue Pei*, Cabirio Cautela*, Marzia Mortati*

*Politecnico di Milano
*gianluca.carella@polimi.it

Abstract | The scientific debate on how and why teach design thinking to non-design students is strongly evolving. However, literature shows a significant gap in defining which are the key elements to train and teach a specific aspect of the design thinking process: how to deal with design-based research. Which kind of pedagogical framework can be adopted to teach design research to non-design students? Which are the main enablers and barriers that students encounter while conducting a design-based research process?

An exploratory inquiry on 70 students involved in a design studio placed in a Management Engineering Master Degree has been run to find answers to those questions. Results derived through the use of descriptive statistics show that students encounter a lot of difficulties in abstracting ideas from real situations. On the other side, what acts as an enabler is the possibility to work on a real project that provides the experience of learning by doing in a team.

KEYWORDS | DESIGN TEACHING, DESIGN THINKING, DESIGN RESEARCH, DESIGN STUDIO
1. Introduction

In the last 20 years, a considerable literature is increasingly animating the debate on how to teach and transfer design knowledge, both in design as for management and innovation areas.

A significant relevance is acquiring the design teaching related to non-design educational contexts, in particular those ones related to new engineering fields. Following the milestone experience of D.school at Stanford, where students enrolled in all the various degrees and Masters can attend a selection of courses to increase their “designerly way of knowing” (Cross, 2001; 2006), diverse Management Schools (as INSEAD, MIP-Politecnico di Milano, Antwerp, Saint Gallen, Harvard Business School) are integrating in MBAs programs design-related entire streams, labs or single courses (Author, 2019).

The form of pedagogies to teach creativity in literature are varied and manifested in different ways; recently design thinking is considered one of the new paradigms to teach design embedding new principles and practice to drive innovation (Cross, 2011; Elsbach and Stigliani, 2018).

Different authors (Glen et al., 2015) in a recent theoretical contribution emphasize the benefits of DT for management students, recognizing how it fosters the ability to face the complexity of the innovation process, the capability to be engaged in real-world situations and active learning through a hands-on approach with specific tools, and the improvement of interpersonal and soft skills.

Despite a consolidated debate related to design and management in business practice, it still emerges a poor understanding on how to transfer design thinking and design processes, through learning and educational activities, to both management and engineering disciples. In particular, literature shows a significant gap in defining which are the key elements - enablers and barriers - to train and teach a specific aspect of the design thinking process: how to deal with the Design Research process.

The research phase is the core and the crucial start of each design process; in design thinking, research is conducted with specific and peculiar methods that act as key-factors in discovering insights from data and information collected from real situations. The activity of identification of insights and then transforming them into innovative opportunities implies the capability of framing and reframing (Dorst, 2011) the problem observed in the data collection phase. This part of the design thinking process is the most important in order to obtain meaningful and innovative solutions, and it is even the most difficult topic to teach in a non-design educational context.

So, which kind of design (thinking) pedagogy principles can serve the learning of design research for non-design students? Which design research activities non-design students consider more difficult in approaching a design project? And finally, what are the main enablers and barriers that they face in experiencing a design research process?

To address these questions, an exploratory on field research has been conducted. Basic questions have been submitted to 70 students in a Design studio placed within the Management Engineering Master Degree at Politecnico di Milano. The inquiry is focused on
the key-activities that made the students confident in the process and the most difficult aspects faced in each step of the design research. Descriptive statistics have been used to generate results and discuss insights. The paper shows the main difficulties faced and the key-points in the learning process that enabled creative leaps in the design research process.

The article is articulated into five main sections. As a starting point, the theoretical background expresses how design thinking is becoming an effective paradigm in teaching design with a particular focus on the importance of conducting a valuable design research process. The methodology follows, describing how the research has been structured. Later, results analysis shows the areas of inquiry and the main derived data. A discussion follows where the main aspects to consider on teaching design-based research to management students are explained. The conclusion at the end shows the main remarks for future avenues in research about design teaching and the article limits.

2. Theoretical background

Consolidated literature identifies “project-based learning” (PBL) as one of the most used and effective approaches to transfer the design knowledge within a given educational framework.

PBL is defined as a comprehensive approach to classroom teaching and learning that is conceived to engage students in an investigation of authentic and novel problems (Blumenfeld et al., 1991; Barron et al., 1998). In PBL, the project is the focus of the teaching strategy where students learn and grasp the central concepts of the discipline (Thomas, 2000).

A considerable literature - placed in 80ies and 90ies - saw in Project-Based Learning (PBL) a first source to enrich engineering culture (Blumenfeld et al., 1991; Thomas, 2000; Stepien and Gallagher, 1993) in order to improve the proposition and creative attitude, at the same time the project management abilities.

The recent growth of requests on training in methods and techniques of creativity by more consolidated disciplines has increased, particularly in management engineering, based on the fact that managers must confront each other with increasingly complex problems (Glen et al., 2015). In this scenario, design thinking (DT) has emerged as one of the most promising approaches to creative problem solving and innovation, also acquiring increasing recognition in Innovation Studies (Elsbach & Stigliani, 2018).

Despite its consolidated nature, however, DT is also a controversial topic both in the design discipline and in Management and Innovation Studies, which has generated a proliferation of perspectives and opinions (Carlgren et al., 2016).
In this paper, design thinking is considered from a teaching perspective as one of the classified ways to represent creative processes. Both among practitioners and scholars, DT is taught through codified theoretical models. These models were developed in the last ten years in order to provide structure and to ease the implementation of the process of human-centered design (Norman, 2005). The most acknowledged ones are British Design Council’s Double Diamond (2005), IDEO’s human centred design ideology and the D.school’s Design Thinking process.

Despite the abundant presence of literature in this area - there are still few contributions related to the methods and practices useful for transferring design research techniques to non-designer. Since the purpose of the paper is to understand which knowledge and techniques related to design research are useful to be transferred to non-designer students for introducing the creative problem-solving techniques of DT, several important scholars’ studies investigating designers’ knowledge contribution process have been reviewed.

Cross (1982, 1999, 2001) has identified “a designerly way of knowing”, which has its own way to build very pragmatic knowledge for innovation based on reflective practices; and it is a way of constructing and validating knowledge with specific and original approaches, tools and purposes. This way of doing aims at producing novel results either by changing existing situations into preferred ones (Simon, 1969) or by creating new practices from scratch (Romme, 2004). Both of these two approaches start with understanding what the real situation is and what problems or challenges to deal with.

DT, same as a design innovation process, starts with research, a process of discovering insights from data and information from the real world (Kumar, 2004). However, not all the necessary information is, or ever can be, available to problem-solver, and there can never be a guarantee that ‘correct’ solutions can be found for them (Cross, 1982). It is a process of exercising through discovery and being driven to understand, to find explanations for phenomena not well understood (Owen, 2007).

Besides, designers’ minds also have an essential ability to understand the worlds of others through empathy (Premack & Woodruff, 1978; Shamay-Tsoory, Aharon-Peretz, & Perry, 2009), which allows them to look into the meanings held by others (Dunne, 2011).

Rittel and Webber (1973) have characterized the problems that design deals with as “wicked” problems, fundamentally unamenable compared to well-framed problems in science and engineering. A similar statement could also be found from Schön (1983), saying that professional practice throughout design has to face and deal with “messy, problematic situations”. As mentioned by Dorst (2011), framing is the most difficult task in an innovation process because it requires taking in a lot of data, and making sense of that. Designers need to have the ability to see hidden patterns, to parse the important information from the less important information to form a new “focus”. This activity in a design process was identified by Lawson (1979) as “synthesis”, different from the analysis in science.
On the basis of the analyzed literature, five (original) phases have been identified in order to describe and observe how a research is typically carried out by designers. The table below presents the parameters to describe each phase and related references that have been used for this synthesis.

**Table 1. Five phases of design-based research in design thinking.**

<table>
<thead>
<tr>
<th>Phases</th>
<th>Characteristic</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brief interpretation</td>
<td>Design professionals rely on hunches and presuppositions, <strong>not just facts.</strong></td>
<td>Rowe, 1987</td>
</tr>
<tr>
<td></td>
<td><strong>Play with ambiguity</strong></td>
<td>Boland and Collopy, 2004; Liedtka, Martin &amp; Dew, 2007</td>
</tr>
<tr>
<td>On-field data gathering</td>
<td><strong>Ethnographic research</strong> methods are used extensively by designers, also become popular in business</td>
<td>Mariampolski, 2006</td>
</tr>
<tr>
<td></td>
<td><strong>Empathy with users and stakeholders</strong></td>
<td>Brown 2008; Dunne and Martin 2006; Michlewski 2008</td>
</tr>
<tr>
<td></td>
<td>The researcher’s task is to <strong>look for meanings</strong> held by participants</td>
<td>Dunne, 2011</td>
</tr>
<tr>
<td></td>
<td>Data from ethnographic research can be integrated for analysis and synthesis</td>
<td>Kumar and Whitney, 2003</td>
</tr>
<tr>
<td>Frame opportunities and</td>
<td>Reflection-in-action; making “moves to <strong>reframe</strong> problems”</td>
<td>Schön, 1983</td>
</tr>
<tr>
<td>problems</td>
<td><strong>Ill-defined</strong> problems</td>
<td>Cross, 2006</td>
</tr>
<tr>
<td></td>
<td>“<strong>Wicked problems</strong>” were seen: to be unique and context-specific; to offer a host of courses for action</td>
<td>Rittel and Webber, 1973</td>
</tr>
<tr>
<td></td>
<td>Idealized design is to <strong>define the problems and challenges</strong> the organization is facing</td>
<td>Romme, 2003</td>
</tr>
<tr>
<td></td>
<td>Framing is, perhaps, the most difficult tasks; requires making sense of the data; Requires to see hidden <strong>patterns</strong>, to create <strong>insights</strong> that could be shared</td>
<td>Dorst, 2011</td>
</tr>
<tr>
<td></td>
<td>Indeterminate; design problems are <strong>wicked problems</strong></td>
<td>Buchanan, 1992</td>
</tr>
<tr>
<td>Reframing opportunities</td>
<td>Design requires <strong>expanding concepts</strong> that are partly unknown</td>
<td>Hatchuel and Weil, 2009</td>
</tr>
<tr>
<td>-------------------------</td>
<td>---------------------------------------------------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>Designer is able to adopt a new <strong>mind-set</strong> in order to develop a different perception</td>
<td>Lawson &amp; Dorst, 2009; Nelson &amp; Stolterman, 2003</td>
<td></td>
</tr>
<tr>
<td>Selecting and identifying constraints and applying guidelines</td>
<td>Lawson 2006</td>
<td></td>
</tr>
<tr>
<td>Working at high levels of abstraction as well as detailed level</td>
<td>Kumar, 2009</td>
<td></td>
</tr>
<tr>
<td>Direction identification</td>
<td>Designing <strong>new possibilities</strong> rather than selecting between alternatives</td>
<td>Boland and Collopy, 2004</td>
</tr>
<tr>
<td><strong>Needfinding &amp; Synthesis</strong> - differ between obvious and hidden needs</td>
<td>Brenner, Uebernickel &amp; Abrell, 2016</td>
<td></td>
</tr>
<tr>
<td><strong>Abductive</strong></td>
<td>Cross, 2006; Dunne and Martin, 2006</td>
<td></td>
</tr>
<tr>
<td><strong>Co-evolution</strong> of problem and solution</td>
<td>Dorst and Cross, 2001</td>
<td></td>
</tr>
</tbody>
</table>

### 3. Methodology

This paper is based on the results of a survey conducted on students enrolled in the Management Engineering Master Degree at Politecnico di Milano, specifically related to “Design management, entrepreneurship and innovation” stream. The sample refers to students who attended a 15 ECTS credits course called “Design Management Lab”, representing their final design studio. Inside the course, students need to develop an innovative solution, starting from a brief provided by a company, using both managerial and design theories and tools. The aim is to create novel solutions of product-services.

The didactic objective of the Design Management Lab is to enable students to develop capabilities and skills to handle design-driven innovation, to manage design-related tradeoffs, to mold scenarios of innovation and configure new product-service systems and business models.

The described learning outcomes are obtained through lectures on themes from both Managerial and Design fields. Moreover, the most important design tools to deal with the project are presented during the course. The assessment of students’ achievement is
verified through a project conducted in teams, presented at different times during the
course, where students have to apply the previously presented contents.

A questionnaire characterized by 5 main areas of inquiry has been submitted at the end of
the entire course to 70 students composed of 37 males and 33 females.

Given the aim of the study, the investigated areas were addressing both enablers and
barriers for students encountered during the course journey. The analyzed areas reflect the
five phases of the design-based research framed within the theoretical background:

- Brief interpretation;
- On-field data gathering;
- Frame opportunities and problems;
- Reframing opportunities;
- Directions identification.

Each area was structured with two closed questions, for a total amount of ten questions.
Closed questions were provided with multiple parameters to be analysed, ranging from 4 to
6 possible, depending on the investigated area. Each parameter needed to be evaluated on a
likert scale from 1 to 5.

All the answers were collected in a .xls file in order to create descriptive statistics graph for
each area of inquiry (Hays, 1973). The entire survey is available and provided in the
appendix.

All the results were collected through histograms and were discussed by a team of three
researchers and two Professors. After a first-hand discussion, the research team invited two
external researchers in order to freeze insights and provide further comments to the
statistics results.

4. Results analysis

The approach used for posing and then scaling the responses is the likert scale approach; the
scale is articulated in a range from 1 to 5 as parameters of evaluation, where the lowest
represents the poor impact of the investigated aspect and the highest stands for the high
presence of it. For each area of inquiry analysed through one dedicated question, only the
results of those answers/graphs which present a valuable variance are commented. The
percentages that will be reported take into consideration the answers from students who
evaluated equal or higher than 4 the related parameter (4-5). The full script of the
questionnaire is attached in Annex to this paper.
Regarding the first area of inquiry, that relates to the “brief interpretation” the biggest trouble was represented by a lack of information between the company's brief and the final expected outcome (figure 1). It was highly evaluated by 66% (46) of students. Another trouble was the issue of facing an ambiguous design opportunity/problem (figure 1), highly evaluated by 73% (51) of students.

Which were the main troubles in interpreting the brief?

![Bar chart showing the main troubles in interpreting the brief]

Figure 1. Main troubles in interpreting the brief

In the brief interpretation, there were different aspects that enabled students in data collections. One of the most important enablers was the possibility to work within a team, sharing ideas and perspectives with other people (figure 2), highly appreciated by 70% (49) of students. Other factors that worked as enablers were searching for new technology trends (figure 2), highly evaluated by 60% (42) of students; the presence inside the course of a “real” client that was providing a real project (figure 2), highly evaluated by 56% (39) of students; and looking at the possible context of use (figure 2), highly evaluated by 53% (37) of students.
In the first phase, what were the aspects that made you feel comfortable with?

Figure 2. Main aspects that enabled the brief interpretation

Concerning the second area of inquiry that relates to the “on field data gathering” the most useful method was the adoption of contextual cases study (figure 3), highly evaluated by 70% (49) of students. Also, blue-sky cases study (figure 3) was highly useful, highly evaluated by 56% (39) of students.
How did you feel comfortable with these research methods in data collection?

Figure 3. Research methods that enabled the data collection

Along the data collection process, two were the two most difficult activities experienced by students. Finding the right questions to ask (figure 4) was highly evaluated as a barrier by 66% (46) of students. Moreover, 61% (43) of students found highly difficult to identify the right “people” with whom to conduct research activities (figure 4).
Concerning the third area of inquiry, that relates to the “framing of both opportunities and problems in the development of the project” the most needed useful abilities resulted to be to **understand what was a promising opportunity** (figure 5), highly evaluated by 70% (49) of students. Another important aspect in this phase, resulted in the ability to **select the “right” research data** (figure 5), highly evaluated the 69% (48) of students.
Which were the most useful abilities you needed to “frame” opportunities/problems to develop your project?

![Bar chart showing abilities needed to frame both opportunities and problems.]

Figure 5. Abilities needed to frame both opportunities and problems.

The bigger difficulties inside this phase, were represented by two main factors. The first was selecting a promising signal among the data collected (figure 6), highly evaluated by 70% (49) of students. The second one was thinking outside the dominant paradigm (figure 6), highly evaluated by 63% (44) of students.
In reflecting on the activity of framing and identifying the opportunities, what were the primary difficulties that you encountered?

Figure 6. Difficulties encountered while framing both opportunities and problems.

The fourth area of inquiry relates to the “reframing of opportunities” phase, that inside the course happened within a co-design session with professors, tutors and students together. The most useful enabler was represented by the received feedback from the faculty, about possible promising reframing directions (figure 7). This aspect was highly evaluated by 89% (62) of students. Another enabler resulted in the possibility to work together (both teams and faculty) through conversation and discussion (figure 7), highly evaluated by 83% (58) of students.
What made you feel comfortable during the first “co-design session” with professors and tutors, dedicated to the reframing activities?

Figure 7. Main enablers during co-design sessions aimed to reframe opportunities.

The main troubles in this phase were encountered in synthesizing the new opportunities developed (figure 8), highly evaluated by 47% (33) of students. Moreover, another difficult task in co-design was represented in the moment of visualizing the results (figure 8), highly evaluated by 36% (25) of students.
How to teach design thinking to non-design students: enablers and barriers to transfer design research practices

During the first “co-design session” with professors and tutors you had troubles in...?

Concerning the fifth area of inquiry that relates with the “direction identification for the project” the main enabler resulted to be the ability to find a concrete and convincing “reason why” beyond the idea (figure 9). It was highly evaluated by 86% (60) of students.
Which were the most useful abilities you needed to identify promising directions of your project?

![Bar chart showing the most useful abilities](image)

Figure 9. Main abilities in identifying promising directions.

What resulted most difficult in this phase was the moment of understanding the level of detail that should have the direction (figure 10). It was highly evaluated as a barrier by 79% (55) of students. Moreover, other difficulties were encountered while selecting the “right” perspective on which leverage to identify promising directions (figure 10), highly evaluated by 66% (46) of students.
In reflecting on the activity of reframing the opportunities into directions, what were the primary difficulties that you encountered?

![Figure 10. Main difficulties in identifying promising directions.](chart)

5. Discussion

Placing the peculiar traits of design research identified in the literature into a complete Design Innovation process (fig. 11), it is immediately clear how the different phases can be framed into a constant dialogue between inquiring in the real world and abstracting to develop novel ideas: just like in any creative process, the DT one also iterates between poles of Real vs Abstract and Understanding vs Making, while oscillating non-linearly between Research, Analysis, Synthesis, and Realization. The complete DT process runs through these phases several times until the final solution is implemented and tested, ready for production and commercialization.

Design research, as the first part in the process, runs through all four areas before completion: design practitioners need to go through the entire process before turning to concept generation and solution development. The same happens for non-design students in the context enquired in this study: because PBL essentially presents students with a real brief and asks them to run the process first-hand to learn its tools and methods, design research is the first (and therefore most challenging) cycle iteration that students face while trying to master abductive thinking skills they never experienced before. This is a contextual
element that raises highly the difficulties in teaching design research strategies and methods to non-designers.

![Diagram of Design Innovation Process](image)

**Figure 11 The process of Design Innovation (Adapted from: Kumar, V. 2013)**

Going more in-depth and positioning in the process the five phases identified through the literature analysis while reading against this the results of the survey, we can notice how the lower part of the diagram describes the phases in which students felt more comfortable, while the upper part identifies the areas in which students have encountered higher barriers.

In particular, students have expressed as enablers all the elements in the process that have helped them get in touch with (or get feedback from) the real world, from receiving a real brief from a real company, to conducting user interviews and observations, and analyzing case-studies for inspiration. To these positive aspects, the direct support of the teaching team can be associated, a result that should not be read only in terms of uncertainty but also as a direct link with the real as visualized in fig. 11. As opposite, the abstract reasoning required in the following phases encompasses the main barriers. Framing, reframing and direction identification all seat in this part of the process and include major difficulties linked to abstracting from the real. For example, identifying insights, selecting promising signals, going beyond obvious user needs, and synthesizing opportunities have all registered suffering and stress from the cohort. In this direction, one of the most important barriers
that appear in the research is the difficulty of posing the right questions. This emerges also in literature, for instance Legrenzi (2005) paraphrasing Oscar Wilde said that “Genius is not in knowing the answers, but in posing the right questions”. This ability is one of the most important aspects that should be addressed in teaching design to non-design students. Another result that emerges from the analysis is that non-designers expect a brief with well-defined borders, as they have difficulty in understanding how to deal with blurred and complex problems. For this reason, the first part in teaching design research should be about what a brief is and what are the strategies to deal with its complexity.

To overcome the barriers outlined, it’s clear how adaptation to the creative process would need further cycles of iteration especially in such contexts in which these principles are introduced for the first time. Adapting and mastering the rules of lateral thinking, as described by Edward De Bono (1970), requires more than the typical thinking outside of the box; it necessitates accepting failure as a natural part of the process, being open to provocations as a way of overcoming the obvious, breaking established/personal concepts and perceptions, proposing unexpected alternatives with value for a majority. All these principles require more than one experiment to be mastered.

The lack of prior knowledge and experience can be identified as the main general barrier in this type of context, while all the other barriers identified in the survey can be seen as sub-barriers: the lack of familiarity with DT brings students to struggle in identifying and interpreting weak signals and insights and go beyond obvious statements. At the same time, the main driver is to be found in the enthusiasm and commitment that students show in experiencing the process, which leads them to try out things and overcome failure, thus finally acquiring an appropriate DT attitude. In this sense, the results show how the teamwork has a central role: it is often seen as a way to reassure students about the goodness of their choice. This outlines how in teaching the design process it is necessary to stress self-consciousness more. Students should be aware in understanding the value of their ideas.

Looking at the existing literature on the topic, this is not counterintuitive and highlights how going through such a process for the first time remains highly intuitive. Furthermore, this substantiates that first-hand hands-on experience is the best method to get newbies acquainted with the nuances of DT. In terms of helping overcome the sub-barriers seen in the abstract reasoning, iterative development of experiences still remains the best strategy, while more effort could be put into matching management competencies (i.e., working with statistically valid data) into DT (i.e., leveraging weak signals coming from direct observation) to provide a progressive step-by-step process of learning with more anchors along the way.

6. Conclusions

The article tries to understand what the main difficulties are faced and the key-points supporting the learning process of design thinking for non-design students. Design thinking is becoming more and more important in different disciplines. This interest is producing new
conditions to teach design and related new areas to explore the design thinking process inside different kinds of courses, and new forms to teach design in non-design contexts are increasingly emerging. Moreover, this new role of design requires the understanding of some concepts that are peculiar to the world of design but that assume great complexity in teaching non-design students. This paper has pointed out the main areas on which is necessary to focus on when teaching design thinking to non-designers. At the same time, it has emerged that certain activities of a design research process could facilitate the way non-design students approach to a project. However, the questionnaire elaborated, being made up of closed-answer questions, could be affected by a bias of students, who filter the multiple answers given in an uncontrolled way. Moreover, the results obtained could be influenced by the fact that the questionnaire was made with closed questions, excluding possible personal points of view not included in the provided answers. The sample should also be scaled to obtain a more precise result than the answers obtained. Next steps in the research will be to enlarge the amount of sample for analysis, in order to obtain wider and more accurate results. In addition, it will be necessary to go deepen on some micro activities related to design research that have not been extensively dealt in the course.

7. References


About the Authors:

Gianluca Carella is PhD candidate at the Design Department of Politecnico di Milano. His research is focusing on how design thinking can be implemented inside organizations to foster innovation. His research topics deal also with strategic design, design management and entrepreneurship.

Michele Melazzini is PhD candidate at Department of Design, Politecnico di Milano. His research topics include strategic design and design management. PhD research activity focuses on the role of design in the organization: the design interventions in affecting organizational culture.

Xue Pei, PhD, Post-doc research fellow on design thinking for business and entrepreneurship at the Design Department of Politecnico di Milano. Her current research focuses on applying design (thinking) approach, methods and tools to fostering innovation in organisations.

Cabirio Cautela is Full Professor at Politecnico di Milano and Phd in Business Management. His research topics deal with the strategic role of design, design management and how design generates new ventures. His articles were published by highly ranked journals both in innovation management and design fields.

Marzia Mortati, PhD, is Assistant Professor in Design at the Design Department of Politecnico di Milano. Her research interests cover the relationship between Design and Innovation, Design for Policy and Policy for Design, and the role of Artificial Intelligence in public services.
Not just Thinkers, Makers

Hein Dubery\textsuperscript{a}, Kyle Brand\textsuperscript{b}

\textsuperscript{ab}Tshwane University of Technology, Pretoria South Africa
\textsuperscript{a}duberyjh@tut.ac.za

\textbf{Abstract} | Relying on the Admission Point Score (APS) introduced by universities, based on the student’s final matriculation results, to see if an applicant qualify for a specific program is often not a good indicator for potential future achievement. To select students with an aptitude for practical application of knowledge and therefore the greatest potential to succeed in the program, the Industrial Design department has adopted a portfolio assessment system. Using the data from the first six years of the program’s existence, the APS is compared to the Portfolio Assessment Score (PAS) score as well as the Achievement Level Score (ALS) of the student in the actual program. Comparing these datasets highlights the importance of the portfolio assessment. From this data, it can clearly be seen that the APS is not as good an indicator for potential achievement in a program that focus on both design thinking and making.

\textbf{KEYWORDS} | PORTFOLIO, ACHIEVEMENT, ASSESSMENT, HIERARCHICAL, DESIGN
1. Introduction

Most tertiary education programs, in South Africa, rely on the Department of Basic Education’s standardised national assessments in order to select applicants for programs. The assessment of the candidate is expressed as an Admission Point Score (APS) introduced by universities, based on the candidate’s final matriculation results. However, for many design disciplines, the typical secondary education subjects and assessment thereof do not always act as a good indicator for potential future achievement. In South Africa, as a result of high levels of inequality, the quality of schooling is not consistent. After 25 years of democracy in South Africa, matriculation failure rate is still highest in rural schooling with little improvement (du Plessis & Mestry, 2019). Therefore, relying on the APS, to see if an applicant qualifies for a specific program, is often not a good indicator of future achievement in that program. A student who might show great potential and aptitude for design, could have a low APS, because of the teaching received, and not their actual potential. Therefore, relying entirely on an APS for selection into a design program, might disadvantage those students who have potential and an aptitude for design. This paper aims to assess the selection system used by an Industrial Design program in South Africa, by investigating historical data of graduates. This then provides evidence for a process for selecting not just thinkers but makers, in other words, potential graduates who can engage and apply theoretical knowledge in practical applications.

2. Portfolio Submission

The Industrial Design program at a South African University of Technology deliberately made the decision in 2008 to reduce the APS requirement as part of their selection criteria. This decision gave applicants from previously disadvantaged communities a better chance for acceptance to the Industrial Design program despite various factors that negatively impacted their APS. However, in order to still select graduates who, have the best chance of achievement, applicants are expected to submit a portfolio (Tshwane University of Technology). This portfolio submission as part of an application process for undergraduate programs, follow the precedent of many design disciplines across the globe. For example, Eindhoven University of Technology, Bachelor of Industrial Design, requires applicants to complete a homework assignment and to come for a personal interview (Eindhoven University of Technology, 2020). The Royal College of Art application process consist of a portfolio submission and a short self-introductory video (Royal College of Art, 2020). One of the portfolio requirements to study Industrial Design at Auckland University of Technology necessitates a short explanation of 12-24 pages of images or photos of the applicant’s own work related to the field of Industrial Design (Auckland University of Technology, 2020). The Industrial Design portfolio requirements for Tshwane University of Technology have been contextually devised not to discriminate against applicants from previously disadvantaged communities but to identify those with potential and aptitude for design. For example,
“using a sheet of A4 paper, make a set of detailed sketches and written instructions on how to make a wall mounted candle holder from an empty aluminium soft drink can” (Tshwane University of Technology). This assignment is seen as contextually relevant. Not all South African households have consistent electricity and therefore the most accessible alternative is to light a candle. Furthermore, to accommodate applicants from poor households, no expensive materials are required for fulfilling the portfolio requirements.

The following portfolio requirements are a prerequisite to be considered for the Diploma Industrial Design at Tshwane University of Technology.

“Portfolio requirement 1 - Using typed or neatly hand-written responses do the following:

Using 10 to 20 words, describe how you got to know about Industrial Design?

Have a good look at the Toyota Quantum minibus taxi. Look at the overall design and the detail design. What is good about the design, what is not so good about the design? Write your comments in a paragraph (40 to 100 words).

Write a paragraph (40 to 100 words) explaining why you have chosen to apply for studies in this field?

Write a paragraph (40 to 100 words) explaining anything you have done as a statement of your maturity?

Portfolio requirement 2 - Produce freehand drawings showing a new product you have designed to solve a problem in your kitchen or bathroom. Include neatly written explanatory notes with your drawings.

Portfolio 3 - Provide a set of detailed sketches and written instructions on how to make a wall mounted candle holder from an empty aluminium soft drink can (coke, fanta, sprite etc.). Your candle holder design should safely support a standard white candle to be used as a night light in a bedroom.

Portfolio requirement 4 - Design and make an envelope from an A4 page. The design may not use glue or staples to hold the envelope together. The envelope design must be capable of securely holding a valuable photograph (140mm X 100mm in size) that you are planning to post to a friend using the South African mail service.

Portfolio requirement 5 - Two photos of something you made (not school projects).” (Tshwane University of Technology)

3. Portfolio Assessment

The assessment of portfolios relies on a panel of full-time employed Industrial Design lecturers at Tshwane University of Technology. Each portfolio assessment criteria are carefully considered to the realities of the great majority of the current student body with the aim to identify applicants with a potential and aptitude for design (Nyamupangedengu,
Portfolios submitted are scored based on a list of criteria. Each criterion is either scored as a ‘Yes’ (2 points), ‘Maybe’ (1 point) or ‘No’ (zero points) which totals to a maximum score of 22. The total score for each portfolio is known as the portfolio assessment score (PAS). The criteria used to assess applicant portfolios are maturity; motivation; comprehension and language; design awareness from background; creative, visually active; problem identifier and solver; hand-skill (drawing); hand-skill (making).

Following on, a justification for including each criterion as well as an explanation on how the panel establish whether the student full-fills each criterion.

- **Maturity** – is a measure of using good sense, understanding right and wrong, being able to amalgamate what you are doing now with the results of your actions later, and other thinking processes that go along with reasonable and acceptable behaviour. A study conducted with 5808 undergraduate students showed that emotional maturity influences self-regulated learning and motivation and these in turn affect academic performance (Kahu, Stephens, Leach, & Zepke, 2015). The statement of maturity that form part of portfolio requirement one is used to evaluate maturity by means of the following keywords: age, life experience, work, travel, independence, married, communicates at adult-to-adult level.

- **Motivation** – is an important factor to include in the selection process as student motivation uniquely contributes to levels of achievement. Steinmayr, Weidinger, Schwianger, & Spinath (2019) study revealed how different aspects (ability self-concepts, their task values, learning goals, and achievement motives) motivate students irrespective of intelligence and prior achievement. Portfolio requirement one’s written component provides the assessment panel with the necessary evidence to establish whether the applicant show signs of motivation. The assessment panel is guided by the following phrases to assist them with their decision on potential applicant motivation: Adequate understanding of Industrial Design; Irresistibly attracted to activity of design, rather than imagined glamour of being a designer; Has made an effort to apply on time; prepare portfolio according to requirements; aptitude of self-belief.

- **Comprehension and language** - Research in South Africa showed that second language undergraduates usually attributes to limited language proficiency in English, and therefore affect student’s academic performance (Duckhan, Cameron, & Brenner, 2016). Furthermore, in recent years the demographics of Tshwane University of Technology changed dramatically as opportunities were opened for black students (Duckhan, Cameron, & Brenner, 2016). Increasing numbers of students come from poor quality rural schools where in the past students came from good quality urban schools. This necessitated the Industrial Design program to provide additional training that focussed on reading proficiency skills and writing skills to promote critical thinking skills for second-language students. The comprehension and language selection criteria evaluate
portfolio requirement one to establish whether applicants understood and followed portfolio instructions correctly and whether applicants can write to an acceptable level.

- **Design awareness from background** – Prior exposure to design positively influence both the acquisition of knowledge related to design and the aptitude to apply problem-solving skills. (Hailikari, Katajavuori, & Lindblom-Ylanne, 2008). The assessment panel assess the portfolio to establish a sense of design awareness from background. Guiding words such as prior exposure to design at home, school, at work, shops, friends and big city are used to measure design awareness from background.

- **Creative** – Designers typically apply critical (analytical) and creative (lateral) thinking (Liikanen, 2009), seeking appropriate information and applying domain independent knowledge and specific knowledge from memory to solve design problems. Portfolio requirements two, three, four and five are used to assess creativity. Any evidence that suggest an experimental nature, curiousness about things, an ability to imagine things or to do things are used as guidance for creativity.

- **Visually active** – Designers’ intentions due to typically ill-structured design problems require them to access and use external information afforded (presented) by primary physical objects and elements that they perceive (Haupt, 2015). Perceiving information from objects in the environment (including perceiving sketches made previously) plays a significant role during the early phases of the design process (Gibbs, 2005). Comments about what is good, not so good about the Toyota Quantum minibus taxi in portfolio requirement one is contextually relevant to many students, as a minibus taxi is their main mode of transport. Portfolio graphics and appearance; notice things in everyday life; comments on products, objects, people seen; is interested in style, fashion, visual trends are used as guiding criteria for measuring visually active.

- **Problem identifier and solver** - There are several ways of modelling the design process. Dorst (1997) proposed that design is a process that typically starts with an investigation into and a breakdown of the problem, followed by an intentional linking of the interconnections between the various components of the problem. Designers then solve sub-problems in isolation before combining partial solutions coherently into an overall problem solution (Goel & Pirolli, 1992). Portfolio requirements one, two, three, four and five are used to assess an applicant’s aptitude as problem identifier and solver. Guiding criteria for problem identifier and solver are as follow, likes finding and solving problems; has imagined better ways of doing things; has made a device/solution or fixed something; logical thinking.

- **Hand skill (drawing)** - Sketches enables designers to think of different issues and aspects of the ill structured problem (Babapour, 2016). The drawings made for portfolio requirement two, three and four provides visual evidence of the
applicant’s ability to make free-hand drawings using perspective, linework, proportion and layout to communicate ideas.

- **Hand skill (making)** - Making physical models are characterised as designers’ process of constructing a physical and tangible format of their ideas (Babapour, 2016). Physical models are usually made during the early phases of the design process using cheap and manipulative materials, such as cardboard, wax, modelling clay, wood and foam (Kim & Lee, 2016). The two photos submitted for portfolio requirement five provides visual evidence of the applicant’s ability to make things from scratch.

### 4. Thinking and Making

The three-year Diploma in Industrial Design at Tshwane University of Technology is an undergraduate qualification preparing graduates for a career in industrial design. Industrial design is an international profession that plays an important role in a country’s economic growth. In the world we live today, numerous products are designed and developed to meet specific needs. Industrial design is part of the process of changing ideas into products that can be sold. The focus of the Industrial Design program is on developing both design thinking and making. The intentions of the program are to broaden the design experiences of students and equip them with skills to turn ideas into finished products that emphasise the look, feel, safety and convenience of a product. Formal and informal community engagement projects, social responsibility projects, innovation projects and projects with an entrepreneurial focus are given to students to become familiar with a well-considered design process to develop, communicate and specify product designs.

The Industrial Design program has an integration module, one for each year (Industrial Design I, II & III), to integrate thinking and making skills competence in increasingly complex real-world design project-based assessments. Other modules such as sketching, computer-aided design (CAD), industrial materials and processes, and manufacturing methods are included in the program to support the above realm of design projects with thinking and making skills. By the end of the program many of the linked subjects are completely integrated into the integration module to assist students in designing cognitively demanding tasks.

The design culture of thinking has been characterised as a complex higher order problem solving activity, which is due to the ill structured nature of design problems. During such problem-solving activities, designers’ understanding of their design problems, typically co-evolve with their design solutions throughout the course of the design process. This is supported by a study that investigated expert designers’ design cognition and found that the way that they think about their design solutions could be typified in a hierarchical structure (Haupt, 2016). Several scholars have acknowledged the importance of developing students’
design cognition to train novice designers to mirror expert designers with the intention to improve the levels of achievement at design programs (Allen & Starr, 2018; Stables, 2014).

5. Approach

In a program with a focus to develop students to integrate theoretical and practical skills to solve design problems using a hierarchical structure, this Industrial Design program followed the precedent of similar design programs by using a portfolio assessment method for selecting students. However, the authors wanted to measure the portfolio assessment score (PAS) compared to the admission point score (APS) as an indicator of student future achievement in the program. The study was conducted using a dataset spread over a period of six years. The dataset consisting of the APS the PAS as well as the achievement level scores (ALS) of students who completed their diploma in the Industrial Design program. The ALS for each student is based on the average for all subjects over the three-year diploma. The dataset for this study was limited to successful students who passed all subjects for each year over a three-year period. Failing students and students which did not complete the diploma were purposefully excluded, as various factors including financial problems, personal issues and other external factors can be cited as reasons which goes beyond the scope of this study. The study also eliminated any students where the data was not complete, for example, missing APS, with the dataset including a total of 52 students. Although this is a relatively low figure, it spans the lifetime (up to 2018) of the program at the Xxx University of Technology, being a young program.

6. Findings

The authors’ suspicion was confirmed when the achievement level score (ALS) and portfolio assessment score (PAS) comparison was done, followed by the comparison between the ALS and admission point score (APS). To explain, the different values extracted from the data are each determined in different ways which does not only effect how nuanced the actual value is, but also the potential average of the score. The ALS and APS are both an aggregation of many different scores and have the potential for a larger range. The PAS is rated using ‘Yes’ (2 points), ‘Maybe’ (1 point) or ‘No’ (zero points) for each of the criteria. This is then totalled into a score out of 22. The 52 students who form part of the data set were also selected for the program based on this score, so the average expressed as a percentage for portfolio score is 89.7% which is far higher than the average for the APS of 69% and the achievement level average of 65.8%. In order to correct for these differences and thereby normalise the three datasets for better comparison all the values were divided by the mean of the respective datasets. The values are then expressed as a value ranging from 0 to 2 with 1 being the mean. A value of more than 1 implies higher than average achievement while below 1 implies below average. Then, the PAS was compared to ALS, as indicated in Figure 1.
As evident in Figure 1, the deviation is not as pronounced when compared to the APS once again compared to the Achievement level (Figure 2). As can be observed in Figure 2, the APS is often quite different from the achievement level. The total deviation (above or below) compared to the achievement level for each was totalled together. The PAS had an average difference of 9% compared to the achievement level, while the APS had an average difference of 14%. Both values are low which indicates that both can be considered as indicators of potential future achievement. However, this also indicates that the PAS is a better indicator of future achievement than the APS for the Industrial Design program.

### 7. Discussion

The authors are of the opinion that the APS is not as good an indicator of future achievement for the following reasons: Firstly, as noted, the quality of teaching and learning is not consistent across rural and urban schools in South Africa. Secondly, the APS can at best only confirm that the student has a general understanding of the world. The portfolio requirements and resulting PAS, are more focussed on the skills set required for Industrial Design, whereas the APS is more generalised.

Is the difference between the PAS and APS significant enough to justify the effort involved in portfolio assessment? The authors believe it still is, firstly, because it can be argued as more fair for our specific context. Secondly, the number of students selected each year is low and
therefore must be very selective, in order to maximise the level of achievement. Thirdly, it helps to expose applicants that are more likely to succeed.

8. Conclusion

This paper revealed that a better correlation exists between portfolio assessment and achievement levels of Industrial Design students than the APS and achievement levels of students. With high levels of inequality in South Africa and inconsistent quality of schooling, made it difficult to select applicants with potential success. To improve student’s design thinking potential to succeed in the program, the Industrial Design department created their own portfolio assessment system for selecting applicants. The Industrial Design department aimed in their portfolio requirements to make the assignments contextually relevant so as not to discriminate against applicants from previously disadvantaged communities, but also to best select applicants with potential and an aptitude for design, the thinkers and makers. The results showed a better correlation between portfolio assessment and students’ level of achievement than the APS and students’ level of achievement over 3 years. This indicates the preference of portfolio assessment over APS for a program that require students to integrate theoretical and practical skills to solve design problems using a hierarchical structure. Further study is recommended to refine and improve the portfolio assessment criteria and using the portfolio assessment system to better identify applicants who would not be successful for other reasons.

References


Royal College of Art. (2020, January 20). *Art and Design Graduate Diploma*. Retrieved from Royal College of Art: rca.ac.uk/schools/graduate-diploma-art-design/#requirements


About the Authors:

**Hein Dubery** received the M.Ed. degree (cum laude) from University of Pretoria, South Africa in 2016. His research interests as educational specialist is focused in the field of Design Cognition.

**Kyle Brand** completed his master’s degree in Industrial Design at the University of Johannesburg and now teaches at the Tshwane University of Technology. His research interests span a diverse range of topics including, transdisciplinary, open design and social innovation.
Radical Interdependence: learning/doing with things

Jaron Rowan
BAU, Design College of Barcelona. University of Vic – Central University of Catalonia (UVic-UCC), C. Pujades, 118, 08005 Barcelona, Spain
Jaron.rowan@bau.cat

Abstract | Design research can include a range of actions but has gradually become assimilated into the production of theory. The making of theory in design has been widely discussed (Redström, 2017), but the kinds of cognitive operations that it entails is still to be fully explored. I will argue that contemporary theory entails three different ways of relating to objects: objectivity, critique and affect (Daston & Galison 2010, Kosofsky Sedgwick 2003, Massumi 2002). These three ways of knowing, inherited from modernity, protect us from the material reality that surrounds us, from the power of objects over humans. They all contribute together to create a distance between humans and the world we live in. In the following paper exploring the power of erotics, I will propose forms of design research that don’t distance us from the objects we are analysing, forms of knowing/doing that allow us to establish interdependent relationships with them.

KEYWORDS | THEORY, INTERDEPENDENCE, EROTICS, DESIGN, EPISTEMOLOGY
1. Introduction

Design research has now established itself as a discipline and a recognizable practice (Rodgers, 2018). It goes along with, interacts with and feeds into contemporary design practices, whether academic, creative or business-oriented. Ever since Christopher Frayling proposed a categorization to differentiate research into, for and through design in his pivotal article ‘Research in Art and Design’ (1994), the number of debates and academic discussions on the subject have grown continuously. A crucial moment in this debate occurred when Nigel Cross published the article ‘Designerly ways of knowing’ (2001), opening up the question of whether it is possible to make a design science. Hovering in the background of these debates was the role of theory, or more precisely critical theory. This specific way of engaging with practice has grown to occupy a central role in design research. Essays, dissertations, explanations, exegeses and accounts of how design practice takes place are not only expected but almost a compulsory activity in any academic context. Design research can include many different actions – it can imply to, for example, prototype, diagram, draft, test or experiment – but gradually it has become assimilated into producing theory. What “making theory in design” is has been widely discussed (Redström, 2017), but what kinds of cognitive operations it entails, I will argue, is still to be fully explored.

It is paradoxical that we have come to expect theory to accompany any form of practice because it seems to function as its dialectical negative. As twins start gravitating towards each other, theory and practice engage into a choreography that materializes as design research. Historically, theory comes from observation. As the philosopher D. N. Rodowick explains, “one finds the noble origins of theory in the Greek sense of theoria as viewing, speculation, or the contemplative life” (Rodowick, 2015:7) – the division between viewing and doing is established at the very origin of the concept. Practice needs to be unpacked, exposed and explained in order to gain legitimacy. As Rodowick writes, “Theories seek to explain, usually by proposing concepts, but in this they are often distinguished from doing or practice. In this manner, (Raymond) Williams synthesizes ‘a scheme of ideas which explains practice’” (Rodowick, 2015:18). Theory needs to be systematic, consistent and methodologically robust. In this sense it has become a practice in itself, with clear rules, tones, aesthetics, rituals and gestures. Theory is now central to design research, and practice needs to be theorized in order to be validated academically. Currently, the word “theory” has weight, gravity and solidity in the humanities. But, as Wittgenstein might have put it, like every overly familiar word, on closer examination it begins to dissolve into “a ‘corona’ of lightly indicated uses” (Rodowick, 2015:3). Despite its openness, art and design schools still rely on theory as a tool to unpack and make design a legitimate research practice.

Epistemically, theory can be problematic, as it inherits some of its cognitive modes from modern ways of understanding the relation between objects and subjects, persons and things (Esposito, 2015). In the midst of the nineteenth century, with the colonial projects, the scientific and the industrial revolution at their peaks, Europe was filled with a stream of objects at a magnitude that had never seen before. Extraordinary and mysterious things to
the eyes of the common European. Artefacts, tools, magical instruments, animals, plants, minerals and subjects were being forcefully imported to the European continent from the various colonial projects. At the same time, the industrial revolution was running on full steam, and factories were producing commodities at a rate never seen before. The growth of the scientific discipline was also accompanied by the creation of new and powerful instruments that allowed the human gaze to see a reality for the first time. Confronted by the power of these objects, the European enlightenment could merely try to (re)name, categorize, taxonomize, describe, measure, inscribe, dissect, collect and explain them (Foucault, 1994).

Powered by the belief in rationality, modern ways of engaging with things implied that no object could have or exert its power over a subject. Modern epistemologies were born to neutralize the magic, allure (Goffey, 2014), strength or power of a multitude of objects that now challenged the pretense of humanism that the human, and human agency, was at the center of the world (Braidotti, 2013). To confront the power of these objects and in order to contain them, three different cognitive modes started operating almost simultaneously. In the context of the natural sciences the idea of objectivity started gaining strength. Adopted in the 1850s, objectivity is a strategy to analyse natural objects that implies becoming detached from what one is examining (Daston & Galison, 2010). It limits the impact of human subjectivity on the object that is being analyzed. All traces of magic, animism or material power had to be erased from the human descriptions of natural objects. Only a few years later Karl Marx was finishing his *magnus opus*, Capital Volume I, in which he made us aware of the fetishist power of the commodity (Marx 1990). In order to escape from its attraction, he proposed critique as a way to unveil the underlying ideology that remains latent behind each commodity. Only through suspicion one can get to understand the truth that lies hidden under the surface of any commodity, so theory would imply an act of debunking its magic. The growth of aesthetics during the nineteenth century as a philosophy aimed at understanding how objects affect the body (Eagleton, 1990) shows us that, in order to understand the object one confronting, we have to look into ourselves to see how it affects our emotions and sensations. In front of a painting, a mountain or a poem that can overwhelm us, aesthetics gives us a way to name and contain the affects these elements have on our body/soul.

2. Three epistemic movements

In their exhaustive history of the notion of objectivity, Lorraine Daston and Peter Galison note that “to be objective is to aspire to knowledge that bears no trace of the knower-knowledge unmarked by prejudice or skill, fantasy or judgement, wishing or striving” (Daston & Galison, 2010: 17). In order to achieve this, the scientific community spent time and energy to develop methodologies, instruments and techniques that would allow them to view objects without any kind of interference of the subject. The object in this context is
equated to an accumulation of qualities, for example, weight, height, density, intensity. Reality becomes datafied in order to be comparable and easily archivable. To do this, animals, plants and minerals have to be decontextualized, reduced to parts and understood rationally, that is, as small logic rations. Matter is transformed into information, pure representation that can be dealt with (Latour, 1986). There must be a distance between object and subject; they cannot contaminate each other.

Objectivity has to do away with emotions, sensations or intuitions, which all stem from the subject and could end distorting the qualities of the object put under scrutiny. These objects need to be extracted from their context and introduced into the laboratory, a clean and open space in which matter can be transformed into facts (Latour, 1986). This idea of objectivity and its ambition to constitute a universal and unquestionable form of knowledge has been largely contested and challenged. Since Kuhn’s now famous “The Structure of Scientific Revolutions”, the challenges to objectivity have come from many fronts. Even in the mid-sixties, during the Berkeley student revolts, one could walk around a campus and see the slogan “objectivity is only another word for white male subjectivity” (Gitlin, 1995: 150) written all over the walls. In her now well-known work, “Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective”, Donna Haraway also questioned the role of objectivity and its uses from a feminist perspective. She opens the paper with a defiant sentence “Academic and activist feminist inquiry has repeatedly tried to come to terms with the question of what we might mean by the curious and inescapable term ‘objectivity.’ We have used a lot of toxic ink and trees processed into paper decrying what they have meant and how it hurts us. The imagined ‘they’ constitute a kind of invisible conspiracy of masculinist scientists and philosophers replete with grants and laboratories” (Haraway, 1988: 755). Her answer, in order to escape the objective-subjective division, is to work on situated forms of knowledge, making the researcher accountable for the conditions in which knowledge is being produced but escaping the pursuit of universal forms of truth.

In the same decade as the notion of objectivity started being deployed, Karl Marx published “Capital vol I” with a chapter devoted to understand a new kind of object: the commodity. He writes “A commodity appears, at first sight, a very trivial thing, and easily understood. Its analysis shows that it is, in reality, a very queer thing, abounding in metaphysical subtleties and theological niceties” (Marx, 1990). These objects have a fetishistic character; they are able to hide the power relations that allow them to be produced, exercising their power of seduction over consumers. Objects become fetishes when their physical reality is a condensation of abstract productions forces. To suppress their power, to understand these objects, Marx proposes a very specific cognitive exercise: look behind the commodity. Find the production systems that allow it to exist. We must debunk the commodity to understand its real meaning. This cognitive exercise is what we refer to as critique. It implies learning to suspect what an object really is. A commodity is a proxy for a specific ideology that can be unveiled through a critical reflection. Understandably the traditions of cultural analysis influenced by Marxism will look at cultural objects as an envelope for ideology. Critique can unpack and expose the truth behind these objects.
The French philosopher Paul Ricouer coined the term “a hermeneutics of suspicion” to define a specific way of engaging with reality that runs through a genealogy that crosses the works of three of the most important analysts in the 19th century: Nietzsche, Marx and Freud. What they all share is a distrust for how things appear to us (Ricoeur, 1999). Confronted by the power, magic or seduction of the object, this school of thought promoted suspicion, distance and attention. That is why critical theory has normalized critical detachment as a way to engage with objects that could exercise their magic over us.

Analyzing how critique has changed to adapt to contemporary academic needs, Rita Felski writes “a preferred idiom is that of ‘troubling’ or ‘problematizing’, of demonstrating the ungroundedness of beliefs rather than diagnosing false consciousness. And the prevailing tone is ironic and deliberative rather than angry and accusatory. The role of critique is no longer to castigate but to complicate” (Felski, 2015:130). In this sense, again, as in the case of objectivity, a distance is created between subject and object, knower and known. Objects are not trustworthy; theorists must always be alert; and this mental operation can push critique into a semi-paranoid state (Sedgwick, 2013). Everything must be put under suspicion, normalizing a detached and cautious way of understanding material reality that surrounds us. As the cultural analysts Eve Sedgwick sustains, “To apply a hermeneutics of suspicion is, I believe, widely understood as a mandatory injunction rather than a possibility among other possibilities” (Sedgwick, 2003:125). This sustained suspicion transforms the theorist into a cautious “paranoid” agent, always ready to debunk objects and expose their dirty tricks. “The first imperative of paranoia is there must be no bad surprises, and indeed, the aversion to surprise seems to be what cements the intimacy between paranoia and knowledge per se, including both epistemophilia and skepticism” (Sedgwick, 2003:130). This is the main reason why critique does not get along well with practice, with materialities, with the messiness of design projects that will always be contradictory. During the 1990s critical theory was challenged by scholars pertaining to the natural sciences, in the so called “science wars” (Latour, 2004). From the perspective of rationalist scientific disciplines critique lacked “objectivity”, it always managed to find what it set out to debunk, it was seen as a postmodern hoax (Sokal & Bricmont, 2003). But still, one of the most powerful challenges to this tradition came from Bruno Latour in his article “Why Has Critique Run out of Steam? From Matters of Fact to Matters of Concern”, in which he signalled some of the main shortcomings of this cognitive mode engaging with reality. The distance between conspiracy theories and critical theory was to close.

As we have mentioned, alongside objectivity and critique, the third epistemic tradition that feeds into contemporary forms of doing theory is aesthetics. Aesthetics deals with sensations, feelings and affect. Ben Highmore writes that “Aesthetics, in its initial impetus, is primarily concerned with material experiences, with the way the sensual world greets the sensate body, and with the affective forces that are generated in such meetings” (Highmore, 2010: 185). This philosophy of affect, born against utilitarian and instrumental reason, has devoted much of its time analyzing and understanding how the arts act upon the human body. As Terry Eagleton explains, “Aesthetics is born as a discourse of the body. In its original
formulation by the German philosopher Alexander Baumgarten the term refers not in the first place to art, but, as the Greek aisthesis would suggest, to the whole region of human perception and sensation" (Eagleton, 1990:13). With the industrial revolution on the background, capitalism and utilitarianism gaining strength, philosophy wakes up to the fact that under the regime of ideas there is a sensual body waiting to be explored and understood. Aesthetics allows for the sensible life of humans to be explored; it follows affect, how objects impinge upon the body, how the body reacts to sensible stimuli.

Baumgarten was the first to work for a positioning of aesthetic in the system of philosophy. This new science of perception implied, “detaching and describing a special class of objects— in Baumgarten’s terminology, ‘perfect sensate representations’ (perfectio cognitionis sensitivae) achieved through artistic means” (Rodowick, 2015:25). Once we are detached enough from the object, we can start to understand how it affects our senses, our inner being, how it impinges on our subjectivity. In this sense, it epistemically starts signalling towards a relation between subject and object. As “the experience of aesthetic pleasure was conceived both as an external perception of the intrinsic formal qualities of the presented object and as the stimulation of the subject’s internal representational and emotional capacities, though in the form of intuitions, not concepts” (Rodowick, 2015:34), still the subject continues to be the active agent, the knower, of a world that needs to be known. Here is where we find the aesthetics’ greatest problem, as when it looks at the object it cannot really see it; it instead is a discipline focused on understanding how the body reacts to it. Rather than engaging with the external reality, it folds into the subject, scrutinizing and explaining how a certain note, colour, image of phrase produces specific emotions and sensations. To engage with exteriority, aesthetics produces a complex sense of interiority, forgetting the material reality it is intended to address to instead engage with sensations, feelings and physical states. This is how aesthetics failed to understand the social and political realities of these objects it sought out to understand. It became self-absorbed in itself as a cognitive exercise. By doing so it lost its status as a philosophical perspective and during the twentieth century and was demoted to being a specific way of doing art theory.

So what we see is that these three modes of interrogation, the three strands of modernist enquiry that converge in what we today call theory, share their discomfort with the power of objects: the hierarchical tension between subject and object; the belief that human rationality can rise above and control and neutralize the magic and force imbedded in materiality; and the perpetuation of a modernist obsession with controlling and dominating the material world in which humans live in. This has led to a crisis that Arturo Escobar describes as a “result of deeply entrenched ways of being, knowing, and doing. To reclaim design for other world-making purposes requires creating a new, effective awareness of design’s embeddedness in this history. By examining the historical and cultural background from within which design practice enfolds” (Escobar, 2018:19). They presuppose a superiority of subjects over objects, humans over things. Rationality over sensuality. They incite us to see contemporary problems through a modern lens.
This pushes us to ask, following Escobar: “can design be extricated from its embeddedness in modernist unsustainable and defuturing practices and redirecting toward other ontological commitments, practices, narratives, and performances?” (Escobar, 2018:168). Can we find ways of thinking/doing, leaning/making, researching/producing that escapes the dualist modes of thinking we have inherited from modernity? Can we devise forms of theory that go beyond objectivity, critique or affect? And more importantly, can we develop forms of research that are able to accept the messiness, contradictions and openness of materiality? Can we research design without having to distance or protect ourselves from the power of objects but, instead, allow them to seduce, play and deploy their magic over us? Can theory be evicted from its epistemic sense of superiority, opening research to other ways of knowing/doing the world?

3. Final remarks: Epistemic erotics

Distance, suspicion, affect. Objectivity, critique and aesthetics. Contemporary theory has specialized in understanding the politics, ethics and aesthetics of the objects it analyses. It has tried to define a clear-cut subject in charge of controlling objects. This has contributed to a detached way of producing knowledge that is unable to give a strong account of our interdependence with things, human and non-human entities. To conclude, I will argue that the price we have paid for this epistemic privilege is losing a way to evidence links, attachments and forms of interdependence that make modernist dualists depictions of reality obsolete. It is in this context in which I will argue for the need to engage with an erotics understood as a specific epistemic exercise. As a way to get entangled by the links and bonds that ensemble humans and non-humans, subjects with objects, persons and things. We could define this erotics as the materialization of the bonds that make us part of the world. Erotics signals the subject that is fascinated by another subject, or by another object. It engages in the power of attraction. It casts light on the broken links that modern epistemic modes have enforced on our understanding of the material reality of which we are a part of. Erotics is fuelled by curiosity, attraction, allure, desire. Erotics is a transgressive cognitive exercise as it forces the subject to lose itself in the midst of the object. As opposed to objectivity and critique, it bridges the distance with the material reality it seeks to understand by allowing it to seduce and cast its magic on the subject.

Contemporary design research’s investment in theory perpetuates the division between subjects and objects, knowing and doing. It is in this context that we argue that we need other ways of engaging with design objects or projects. If theory seeks robust confirmation of facts, erotics opens up the possibilities of playfulness and curiosity. If objectivity requires distance, erotics opens the way for presence. If critique is based on suspicion, erotics allows us to explore complicities, attraction. If aesthetics is self-absorbed, erotics pushes us out of ourselves to explore the different forms of interdependence between us and the world in
which we live in. Erotics allows shininess, viscosity, symmetries or lengths to shape ways of knowing the world. If theory needs clear categories and taxonomies, erotics allow us to engage with messiness. Experimenting with materials, with uses, with shapes and functions will always be full of contradictions, openness and uncertainties. An erotics can help define an epistemology of mutual fascinations and unrequested entanglements.

The genealogy of erotics we are pursuing here should push us to engage, entangle and establish intimacies with objects, plants, minerals and animals. In this sense, we are not thinking of an erotics as a steps towards sexuality, but as an acknowledgment of those forces that push us into the world (Bataille, 2013), escaping the self to become part of a complex network of beings. This use of erotics should be understood as a way to develop those radical interdependencies that Arturo Escobar asks designers to engage with (Escobar 2018). A way to create a bond and kinship with non-human beings, as argued by Donna Haraway (2016). A way to build dense ensembles in a Latourian sense (2008). So erotics is not the prelude to sex, but to deep intimacies with human and non-human actors. It is a movement towards thinking/being/doing with others. Allowing ourselves to be attracted by things that do not need debunking or explaining. Allowing the power of materialities to invoke complex networks (Bennett, 2010).

Erotics is a form of knowing/doing that allows the power of others to be felt, to be experienced. Following the ideas of feminist scholar and poet Audrey Lorde, if objectivity, critique and aesthetics were defined in order to neutralize the power of objects over subjects, then she sees erotics as an exercise to gain repressed powers. In her own words, “There are many kinds of power, used and unused, acknowledged or otherwise. The erotic is a resource within each of us that lies in a deeply female and spiritual plane, firmly rooted in the power of our unexpressed or unrecognized feeling” (Lorde, 1984:87). Erotics in this sense helps us to regain confidence in intuition and non-rational ways of knowing, those forms of engaging with the world sanctioned by the modern epistemologies we have previously dissected. Erotics helps us acknowledge the contradictions inherent to material complex realities. As Lorde writes, “The erotic is a measure between the beginnings of our sense of self and the chaos of our strongest feelings” (Lorde, 1984:88). Learning to trust these feelings, inclinations, sensations and propensities, we can start allowing ourselves to escape from a false sense of self and embody interdependent based subjectivities. Without an erotics, we buy into this disaffectionate, distant and ironic mode of theory that inevitably doesn’t allow us to fall in love with our practice. That, inevitably, will find evidence of material shortcomings and contradictions.

An erotics affords us to become entangled. It allows the imaginary barriers we have established between subjects and objects to be erased. Through an erotics, frontiers become fuzzy. An erotics opens ways of knowing based on touching, sucking, smelling, biting, measuring or tinkering with things. Erotics implies transgression of rules, disciplines and categories, opening the gates to indisciplined forms of research (Camps & Rowan, 2019), challenging limits and expectations. Objectivity, critique, aesthetics and erotic
Radical Interdependence: learning/doing with things

epistemologies, a repertoire of modes of knowing/relating/caring for objects. Suspicion with complicity, distance with care, affect with responsibilities. This leads us to conclude that design research needs theory, with its objective distance, its critical suspicion and its affective aesthetics, but also needs to engage erotically with materiality, with the contradictions inherent to practice. It needs to open up to playfulness, to material alliances and weird entanglements. Pushing the human to one side, learning/doing with things, through unexpected alliances and erotic pleasure.

References


**About the Author:**

**Jaron Rowan**, PhD, is Head of Research at BAU, Design College of Barcelona. Author of *Emprendizajes en cultura* (Traficantes de Sueños, 2010), *Memes: inteligencia idiota, política rara y folklore digital* (Capitan Swing, 2015) and *Cultura libre de Estado* (Traficantes de Sueños, 2016).
Rethinking & Appropriating Design Education for a VUCA World

Jan Eckert\textsuperscript{a}, Sabine Junginger\textsuperscript{b,}\textsuperscript{*}, Guillermín Noël\textsuperscript{c}

\textsuperscript{a} Lucerne University of Applied Sciences and Arts
\textsuperscript{b} Lucerne University of Applied Sciences and Arts
\textsuperscript{c} Lucerne University of Applied Sciences and Arts
* sabine.junginger@hslu.ch

Abstract | Design education once again faces the challenge to cope with a world full of volatilities, uncertainties, complexities and ambiguities. For this paper, we – the head of a BA programme in Design Management, the head of a MA Design programme and the head of a design research group with a focus on public sector innovation – explore and discuss the opportunities and challenges we see this involves for design education as we seek to prepare design undergraduates and postgraduates for a VUCA world. In this paper, we share our experiences as design educators and researchers on different levels (BA, MA, PhD) to engage with questions discussed now in the design education community. We employ our different perspectives to provoke thinking about design education and understand their implications. We start with multiple and often conflicting objectives: 1) we seek to educate and prepare BA and MA students for successful careers in today's design jobs but also for those that are emerging (many of which we do not even know about yet); 2) we need to develop and appropriate methodological and theoretical foundations and ensure they find their way back into teaching and 3), we must adjust and adapt our curricula to relevant topics and themes that emerge through research and professional practices – even in other fields! Our multilevel conversation suggests that the task of design education is to provide a frame for the plurality of design principles and methods that grounds design as a field and discipline. This, we conclude, requires new integrative forms of research and education in design and speaks to a change in the design culture itself.

KEYWORDS | DESIGN EDUCATION, CULTURE OF CHANGE, DESIGN CONVERSATIONS
1. Let’s Talk Design: Our respective experiences in design and design education

Over one hundred years ago, the Bauhaus sought to offer disciplined design education among the uncertainties of the Weimar Republic. In Post War Germany, the HfG Ulm School generated new possibilities for a new future after the end of the Nazi regime and amidst the backdrop of significant social and economic changes expressed through student unrests and radical movements. Whenever nothing seems to be what it was and whenever many things and situations can no longer remain as they are, the way we conceive of, plan, develop and deliver new paths forward into the unknown take on new significance (Junginger 2017a, p. 59). As we are writing this, the foundations for a New European Bauhaus are being laid out following the call by EU President Ursula von der Leyen for artists, designers, engineers and architects to address wicked problems in today’s VUCA world.¹ From the Sustainable Development Goals to the Green Deal, from the Just Recovery to questions of Equality and Equal Access, design challenges abound.² Yet, the skills and qualifications needed to arrive at outcomes that enhance human living are very different from those where design meant to satisfy a single client’s requirements. How do we experience this VUCA world in our role as design educators and researchers?

Response Head BA programme in Design Management (BA): Until recently, I was a design researcher in the Faculty of Medicine & Dentistry at the University of Alberta, Canada. When entering a team, my first contribution to a project, was asking different questions. How do you know what you know? The second contribution was to know how to engage with people. And the third contribution was implementation. We have a lot to offer as designers in implementation, in creating strategies so that people will know that the research exists. We know how to transfer that research. We bring that user-centeredness naturally, and we use it to engage with the diverse groups of users, and implement knowledge in real contexts (Frascara, Noël, and Ruecker, 2018).

When needing to enlarge my team, it was easy to find young graduates that were familiar with current computer programs. They were quick at finding things on-line, were relatively good at the graphic aspects of communication design, and curious to implement recent trends in design methods. It was, however, extremely difficult to find young designers with basic knowledge about behavioural and cognitive psychology, qualitative research, writing, and data analysis. Design graduates struggled to grasp the human part of complex problems, develop a research question or a research plan. They had a hard time to identify patterns of

information and interpret them to gain a more complete understanding of the design problem to articulate a design intervention. It would have been also desirable to find young design professionals with understanding of stakeholders and how to partner with them.

In my new role as the head of a BA program in Design Management, I am working toward remediating this reality. But the task is neither simple nor easy. Developing a curriculum that responds to the current demands of design practice requires careful examination of content, pedagogies, approaches, tools, teaching team and their capacity, as well as context and students’ capacities. Above all it, requires careful consideration of what we are trying to achieve: Who are we forming, to do what, where.

Each school is situated in a particular context. This context inevitably conditions the answers to the above questions. Many schools are trying to educate and train professionals that have the ability to change existing realities into better ones. But which realities? Which form of knowledge these realities require? Which principles should inform the choices of the knowledge needed to address these realities? What level of complexity should these bachelor students be able to address? How much should they be able to change? Or is their task rather to support change processes rather than to lead change? With which other disciplines should they engage to achieve the desired change?

What design knowledge is and entails in much debated. It depends on the design subdiscipline, on the diverse understanding of design, and on a lot of unchallenged assumptions about what must be learned to be a good designer.

Response Head Competence Centre for Research in Design & Management (Research)

Like Guillermina, I think it is helpful to provide context with my own journey. Before entering design education myself, I dabbled with radio broadcasting, pursued a career as journalist in print media, and somehow ended up working with Designworks/USA, a BMW company in California and Siemens Corporate Design in Germany. I had gathered extensive experience in marketing and market research, where I was introducing products into a new cultural market. Only after all this professional work did I enter the MA Communication Planning and Information Design at Carnegie Mellon University. I applied to join the newly minted PhD program under Richard Buchanan in my second year of the MA. My second supervisor, Denise Rousseau, is an expert in organizational change and public affairs as well as a former head of the Academy of Management. With Bruce Hanington, an expert in design research methods and Stephen Stadelmeier, an outstanding industrial designer, I had two additional committee members who would engage with me in questions of design research and design education across and beyond traditional boundaries.

My first teaching took place at Carnegie Mellon, initially as an assistant, then as a co-instructor before I developed and led my own courses. Research and teaching were deemed complementary and my courses were formed around my research. My role as instructor at Georgia Tech was very different, as I became a conduit for an already well-established and
well-prepared course, training incoming BA students across all disciplines in the School of Architecture in the basics of art and design. The last time I had a major role in teaching was at Lancaster university from 2007 to 2012, where I co-designed and co-ran the one-year Master of Design: Management and Policy and taught undergraduates in the management school. Working at a school of design in Denmark was the first time I was told I was a researcher whose topics and approaches would not benefit students and thus not suitable for teaching. But things seem to change. In my current position, also at a school of design, there is a significant and encouraging shift taking place. What troubles me most is that design education is central to design research – how else would we be able to open new areas for design research and design practice, if we did not find ways to reach out to people, inspire, demonstrate and make accessible these new domains, practices, processes and methods – i.e., educate – about these possibilities? I find myself regularly teaching – on conferences, at seminars, during guest lectures at other design schools and universities, yes and even through ‘theoretical’ papers. The historic foci and structure of design schools means that researchers struggle to share such insights with their own students. Being creative, researchers find ways to involve and engage students in research projects. We have been able to involve BA students in projects like the ‘Future of Government’ by the JRC EU Policy Lab. Our BA and MA students participated in the ‘Creative Bureaucracy Festival Academy’, and in the OECD OPSI conference ‘Government After the Shock’. To close the ‘research gap’, we have created a new position for a BA student intern in our Competence Centre Design and Management. We seek to support the development of future-oriented capabilities and capacities that enable students to carve out successful design careers in transdisciplinary teams. From a research perspective, this means addressing social, economic, and planetary challenges from a design perspective. I understand my educational role to provide examples of how design research works, what it can contribute, how it complements and how it differs from but complements other research practices.

Response MA Design Director (MA): Besides my own experiences as a student, also as an educator, I always experienced two different contexts with regards to design education: design being taught at universities or faculties of architecture and engineering or design being taught at schools of fine arts. Obviously, both come with fundamental differences when it comes to the background and history of these institutions as well with regards to the competences and skills being built up in their design programmes. While the latter emerge from the tradition of focusing a more artistic and expressive approach that used to aim at the aesthetic refinement of mostly physical artifacts as well as the critical or speculative examination of real-world matters, universities of architecture and engineering, instead, provide a more pragmatic, analytical and methodological approach towards complex problem-solving. Historically, these two perspectives relate a lot to the fundamental shift

---

and argument that emerged at the Ulm School of Design—between former Bauhaus student Max Bill and the group of educators around Tomás Maldonado and Ottl Aicher (a historical moment that I will refer to later in this paper).

Just recently, this difference between different institutions providing design education has been pointed out by Michael W. Meyer and Donald Norman in their paper called “Changing Design Education for the 21st Century”, where they critically examine the gap that emerged between schools of arts and design and such coming from an engineering background (Meyer & Norman, 2020). In their paper, they point out the increasing level of complexity that characterizes today’s problems – problems that can’t be exclusively addressed by an „arts & design approach“ anymore. In fact, most of today’s wicked problems cannot be exclusively approached by any single discipline. I agree with my colleague from the research department here: educating “single-trick” designers or any other professionals is not enough. A couple of years ago, I critically examined the widely known “T-shape” that combines disciplinary depth with the ability to collaborate across disciplines (Guest, 1991; Brown, 2010; Eckert, 2018). While laying out my critique, I cited Machine Learning Designer, Caroline Sinders who refers to the T-Shape as follows: “The future is less of a T-shaped designer, but a designer that’s a Jill-of-all-trades. You should have an aesthetic eye, but you need to be a systems designer when dealing with AI, you need to be a designer that focuses on ethics or (as) an ethicist, you need to have a little bit of a technical understanding. And you need to be highly data-minded and data-questioning.” (Sinders in Schwab, 2017). Both Meyer and Norman’s such as Sinders’ points of view clearly indicate a post-disciplinary future in design education – a future that, actually, relates a lot to Gropius’ call to synergise the disciplines, more than hundred years ago.

2. How would you describe the current shift and challenges in design education?

BA: Current environmental, societal and urban changes present new demands to design practice, forcing the discipline to expand from traditional craftwork to problems that are difficult to define given their complexity (Friedman, 2016; Justice, 2019; Norman & Stappers, 2015). To keep on being relevant design education must adapt to current demands. But this change is neither easy nor new, design education has a long history of change. In 1972, Icographic dedicated the whole of issue Nº 4 to design education. Patrick Wallis Burke (1972), at that time Executive Editor, reported “[Experts] maintain that many educational practices are based on philosophical premises that are no longer self-evidently true and, as a result, are out of harmony with the needs of the individual and society as a whole” (p. 2). In 1968, Tomás Maldonado, alerted us toward the need to focus design education on what he called environmental design: sustainability, making us aware of its great complexity and diversity of variables, that needed to be understood as a system of subsystems with close interdependence. He wrote
“I may have taken an effective if not decisive step towards a new philosophy of Design Education... A school of Environmental Design should include all the fields of activity which can give sense and structure to the human environment” (Maldonado, 1968, p. 53).

Although the United Nation Sustainable Development Goals (SDGs) present new challenges to design education, the need to incorporate sustainability issues across the design curriculum is not new. It is well-known that in most disciplines, it takes around 17 years for research to be adopted into practice (Westfall, Mold, & Fagnan, 2007). In the case of design education, it has taken a bit longer to incorporate new knowledge and adapt our teaching to current demands. While Antonio Guterres, UN Secretary general in the Climate Ambition Summit 2020 strongly advises countries to declare a state of climate emergency (United Nations Secretary General, 2020), most design school do not have yet fully incorporated sustainability in their curricula. One could speculate, that this is partly due that good instructors on the topic do not abound.

Addressing the current climate crisis certainly entails to rethink design and design education. To move our offering beyond understanding customers’ needs & wants, adopt new notions of growth, and reconsider current metrics of economic performance (Stiglitz, 2019). “We must transform how we live if human society and the planetary ecosystem that we are both part of and rely on are to flourish” (Wilde, 2020, p. 171). The transformation necessary to attend to human needs are tremendous, but possible if wanted. They require a shift in mindsets, priorities and understanding. In 1990, Herman Daly made the difference between growth and development: “To grow means ‘to increase naturally in size by the addition of material through assimilation or accretion’. To develop means ‘to expand or realize the potentialities of; bring gradually to a fuller, greater, or better state’” (p. 1). Still, our understanding, adoption, and promotion of growth has not changed much. It is time for action. Read reports, policies, case studies, scientific articles, watch and listen to experts like Mariana Mazzucato, Kate Raworth, Robert Pollin and many others to re-think the rationale and message we are giving to our students, and how we are preparing them to face this challenge.

**Research:** Just like many other disciplines and fields, we experience a significant disruption that challenges us to reconsider what expertise is needed today to practice design. There is also the question where design practice and design research matter today. Beyond the production and consumption, design today plays a much bigger role in articulating and ensuring the common good (see Steinberg 2014; Bason 2017, Junginger 2017b and 2018). Rather than embracing this development and providing the much-needed theoretical and methodological design foundations, there are still some who are busy guarding territories. This has produced a kind of inertia within design. Outside design, these conversations are irrelevant and the focus is on action. New approaches to design have been set up in design thinking schools, in management schools, even those focusing on the public
sector. Generally, this is a great development as it points to the need and relevance of design across many different domains. But the recent panel discussions informed by the authors of the two volumes of She Ji edited by Guillermina, lead me to give two answers to this question.

My first answer is: there is not much of a shift. As Jan has pointed out above, there is a long tradition of reflecting on design education, its relationship to art and the respective roles of theory and practice. George Nelson, for example reports in his book Problems of Design published in 1957 on Art X = The Georgia Experiment and adds the following subtitle: ‘The account of a tremendous personal involvement in a very large problem. The proposal – tooled education – was violently resisted by the educators exposed to it. But it is happening anyway.’

Nelson’s approach was based on experiments and open problems and is in line with the efforts made by the Black Mountain College, an attempt to re-envision college education in the US that started in 1933 and sought to bring to life John Dewey’s principles of progressive education: “The founders of the college believed that the study and practice of art were indispensable aspects of a student’s general liberal arts education.” It was deeply driven by Dewey’s understanding of art and experience as well as based on his understanding of inquiry.

I find it curious that neither of these attempts seem to have had much traction, though more recently, there seems to be a willingness to re-engage. And yet, to me the conversations we are continuing to have make me feel that a) we are cycling in yoghurt which means we are not getting anywhere or b) that we are obsessed to reinvent the wheel while failing to recognize or work with what is already there. Both have the not-so-nice effect of activism without substantive or sustainable outcomes. Taking this into account, the answer to the question is not much is shifting or changing in design education. Perhaps this is because we continue to re-design design schools from the inside out instead of the other way around. As one of my colleagues stated recently: "I am so tired of design research to criticize developments in society without offering a real path forward." Indeed, it is easier to express discontent and dissatisfaction with the way ‘others’ are coping with design. It is much harder to leave one’s own place of comfort and to engage in high level design conversation, as for example, Richard McKeon does in 'Communication, Truth and Society' (1957/1990). This paper encapsulates the essence of every design undertaking – regardless if by a trained designer like Dieter Rams, Charles and Ray Eames, or George Nelson or by one of the perhaps less trained silent designers brought to light by Peter Gorb and Angela Dumas (1987). For each, the three core design tasks include 1) the discovery of ambiguities 2) the invention of possibilities and 3) the expression of (new) values.

My second answer is: everything is changing as everyone designs (Manzini 2015). We see new design educators; we see new design education programmes and we see new design professions emerging. The development we witness as researchers underline what Richard Buchan’s observation (1995, p.3): "The direction of design is not entirely in the hands of
designers, no matter how much we cling to the old mythic idea of the designer as a heroic cultural figure leading the avantgarde." The Danish Design Centre – not a design school! – for example, has just started a design education programme in collaboration with a Canadian university’s School for Public Policy. NESTA UK (not a design school) has been offering design skilling for several years and its spin-off states-of-change (not a design school) draws heavily on the methods and processes of design thinking, service design, user-centred design and human-centred design. Much of my research involves working with policy-makers, policy implementers and students in policy studies who see a role for design in government. Today, most government agencies (and businesses) host some kind of innovation lab informed by if not based on human-centred design. A rarity even ten years ago it is now the norm. This indicates a significant shift in understanding of design beyond consumer goods, industrial production and the ‘creative economy’. The shift for design education is that design education is happening more and more outside design schools.

It also means that design education has to come to terms with the need for different kinds of design experts. People, for example, for whom a product might be a policy, even an organization. People, who can link the human experience and human interaction on a product and service level and connect it with strategic, organizational or policy related questions. People who have the courage to dive into this complexity rather than be overwhelmed by it.

MA: In the past few years, I spent a lot of time trying to understand how design schools might take back the lead in design education (Eckert, 2020). Amongst many studies on the future of jobs (World Economic Forum, 2016, 2019), or the creative economies (Weckerle et al., 2016), I also came across two interesting statements from the industry. The first one is made by Kate Aronowitz, partner at Google Ventures, who states that designers, who get the opportunity to have “a seat at the table” (Aronowitz 2018), often are falling short when taking these leadership roles. According to Aronowitz these design leaders “are paying too much attention to the ‘design’ part of the role and not enough to ‘leadership’” (ibid.). The second statement is an observation that was made by IBM’s design director Karel Vredenburg’s in his Keynote at Valencia Design Education Forum 2020: an internal study at IBM pointed out that 38% of their hired designers were missing formal education in multidisciplinary collaboration (Vredenburg, 2020).

Both examples show that there is a shortfall in design education when it comes to leadership and collaboration — and that’s probably one reason why many other players are taking over when it comes to teach design from this point of view: a study at Lucerne University of Applied Sciences and Arts has shown that out of 123 listed programmes using keywords such as Design Management, Design Thinking, Design & Innovation or Strategic Design over 30% are being offered at non-design departments or schools. So, the question whether design schools really are about to lose the lead in design education is an obsolete one. The question that remains, instead, is whether and how to gain that lead back?
Personally, I see two scenarios with regards to this question: in the first rather dystopic one design schools fail at leaving their disciplinary and author-driven approach behind. At the same time, they keep on concentrating on first and second order design. Consequently, the design domain loses its relevance in the context of complex problem solving and what might remain of design in other sectors is part of its human-centred approach and (visual) way to translate observations into (design) opportunities by imagining the future. The great success of design schools in this first scenario might occur, once our society passes the zenith of work as an existential part of our lives—then, the return to arts and crafts might become part of an upcoming sense-making-quest amongst people.

In the second scenario instead, design schools really start taking change seriously and realise that complex problem solving requires a post-disciplinary shift towards issue-based or theme-oriented learning. This scenario requires a decided step back from author-driven design that is focusing exclusively on aesthetics and design language by creating a bubble of self-references. At the same time, design schools need to build up competences enabling learners to extend their vocabulary to a conversation beyond the design domain as well as competences in leadership to lead that conversation. This scenario scrutinises the way we keep teaching and learning design and requires the acquisition of a new mindset of the designer to adjust design education. The acquisition of such a new mindset will require a lot of un-learning.

Many of the MA students I got to know in Lucerne joined the programme after graduating from rather traditional BA programmes in design—some of them exclusively based upon studio work and nothing else. For them, being confronted with courses in methodology, leadership, ethics or research, came with a lot of pain. Mainly, this pain was caused by the discovery that they could not succeed anymore by just delivering beautiful designs. Instead, they needed to articulate their design process and argue their decisions. I believe, this conflict is emblematic for the design domain and for design education: the fact that we need to unlearn some of the things we still regard as core for design education. And un-learning really means to „step outside the mental model in order to choose a different one“ (Bonchek 2016).

3. Is today’s VUCA-world less VUCA than a century ago?

**BA:** A century ago we had two devastating wars in Europe. Wars are by nature volatile. Today we also have wars, but in other parts of the world, so perhaps some people are less aware of them. A new pressure today added to war times is the sustainability crisis: the burning of the Amazon, extreme heat waves, drought, floods and devastating hurricanes add pressure to the social, urban, and economic current demands.

The present situation is uncertain because the size, magnitude and demands of the sustainability crisis are not clear to define, and strategies to tackle the crisis require constant adaptation.
The sustainability crisis is complex because it affects all of us in different ways: from health, to access to resources such as food, drinkable water and clean air; the cities and spaces where we live; inequalities; access to affordable and clean energy; and other human needs.

Current reality is also ambiguous because things change rapidly. However, this was also present a century ago. The challenge for most designers leading without authority (Heifetz, Heifetz, Grashow, & Linsky, 2009) in the context of the sustainability crisis, is that technical knowledge is no longer sufficient, we must accept that our current knowledge is inadequate, and must relearn.

Perhaps, other than the speed of change, what is different is that we know we are not doing our best. As Otto Scharmer (2018) explained “In essence, we are collectively creating results that (almost) nobody wants. These results include the loss of nature, the loss of society, and the loss of Self” (p. 5). Once we know, we need to intervene. But this intervention must be imagined, conceived and thought from a diverse perspective and set of values. “Humans values can change; they are not natural laws. ...The critical issue is not technology, but ethics and politics” (Capra & Luisi, 2014, p.389). Intention, attention, sensing, listening, relating and connecting will help us in this process. Regarding our connections and relations to others and the environment, Michaels (2011) explained “in the larger community, your relationships with people were based on values like respect, love, and a willingness to put others first – all of which kept your more self-oriented tendencies in check” (p. 35). Today, in the context of the VUCA world and because of the VUCA nature among other things, we work more and more, putting our relationship with colleagues, family, friends and ourselves in a secondary position. But also, the nature of our relationships at work needs to be reconsidered. Edgar and Peter Schein (2013) proposed four different types of relationship levels: Level Minus 1 is “domination” like a guard with a prisoner, level 1 is “transactions” like a bank customer and a teller, level 2 is “personization” like the one in connected groups and teams, and level 3 is “intimacy” like the ones in families and high-performing teams. VUCA times require level 2 relations, require us to connect, to share, to come together and put equity at the centre. Fostering “personization” relations in our teaching teams, in our schools and with our students should be a priority if we want to evolve design education.

MA: If we consider the situation Water Gropius found himself in when he founded the Bauhaus—just at the beginning of Germany’s first parliamentary democracy, the Weimar Republic—or the Ulm School that started off in post-war Germany, I’d say that people were just as uncertain about the future, as we are now. Just recently, it happened to me, to re-read Gropius’ Bauhaus Manifesto and compare it to the speech former director of the Ulm School, Tomás Maldonado, held in 2003 at the occasion of the 50th anniversary of the Ulm School. Besides all the arguments between former Bauhaus students and the group around Maldonado and Aicher at the Ulm School: I see some similarity between Gropius’ Manifesto from 1919 and Maldonado’s speech eighty-four years later. In his Bauhaus Manifesto Gropius criticises the barrier that has been risen between craftsmen and artists and argues
that all professions—architects, sculptors, painters, (we all) must return to the crafts! (Gropius, 1919) to pursue the “ultimate goal” (Gropius, 1919) of the art of building. In his Ulm speech, Tomás Maldonado makes a similar call: he lays out his observation that many designations for professions (e.g., architect, engineer, fashion-designer, ...) are being used in a very inflationary way (something that hasn’t changed since then). He, therefore, reminds us to use the terms “with more austerity and differentiation” (Maldonado, 2003) and proposes the term Entwerfer—a German alternative to the terms Designer and Gestalter.

While Designer mostly refers to the discipline of design and Gestalter still refers to theories and practices such as the Gestalttheorie or the Gute Form, Entwerfer is a term that leaves apart discipline and belief by shifting the focus towards the active change of something by the means of the (design) project. In the context of the VUCA world it appears remarkable to me that both Gropius and Maldonado recognise that certain situations do not require disciplinary or ideologically loaded approaches but, instead, a call for collaboration. And I believe we find ourselves, again, in such a historic moment that calls out for collaboration. Not for nothing the president of the European Commision, Ursula von der Leyen just came up with the proposal of creating a “New European Bauhaus” that is meant to tackle the challenges of the digital shift and the green transformation together as artists, designers, engineers and the society.

**Research:** I agree with MA’s response here – and have written as much (Junginger 2017a). In my mind, both the Weimar Republic in the 1920’s and later the social unrest in the 1960’s represent moments in time where people collectively recognized opportunities and consequences of systemic level changes related to society, economy, technology and environment. Finding themselves in a VUCA world, i.e. in a world full of volatilities, uncertainties, complexities and ambiguities, they turned to experiments to break free from what was then established and traditional. We live in a time where we have to decide again how we – and our next generations – want to live. We are now called on reflecting what a world it is we want to live and how we want to go about making this desirable world a reality. This, in essence, is a design challenge. It is also a revealing testament to design: design never leaves society or exits human life. It simply goes unnoticed when things seem settled. In these settled times, design education concentrates on little things along the first, second, perhaps the third order of design in Buchanan’ Four Orders. It appears that when we find ourselves collectively struggling in key areas, ranging from business to politics, from government to civil society that it is that we reflect on our own design approaches that have gotten us there in the first place and that we are searching for new approaches to get us out of this trouble. Right now, we are in such a time where it is clear that how we go about designing is either fostering change and transformation or manifesting increasingly questionable norms, values and beliefs. It is what we do in this paper: we are reflecting on how we go about designing curricula to arrive at responsible designers who are capable of engaging and addressing these challenges creatively and productively.
What could be a common goal for design education to strive for?

MA: For me the question here could be specified into: How might design education move from a disciplinary approach towards a post-disciplinary one—and should it? First: I am convinced, it should! Like my comment on our previous question, it is not the first time in history, that a fragmented and disciplinary design perspective is meeting problems of increasing complexity—and it’s not the first time, design education needs to adopt to this change. When in 2016, I set out to re-think the MA curriculum in design at Lucerne University of Applied Sciences and Arts, one term became increasingly important to me and my team—undisciplinarity. We had just examined the Swiss Creative Economy Report published by Weckerle et al. (2016), whose one key finding was that more and more designers are starting to work in non-design contexts, Weckerle et al. called them “Embedded Designers” (ibid.). This phenomenon caught my attention and together with our team, we tried to verify, whether it was true, what the report was saying. While most interviews with practitioners or representatives of the Swiss design community were confirming the fact, one group that we reached out to, kept stating just the opposite: our alumni. Consequently, we concluded that there is an ongoing shift in design practice that has been neglected by our educational programme(s) for some time—which might be the reason why most of our alumni would still stick to rather traditional occupations in design.

Three years before we started our own research on disciplinary vs. post-disciplinary approaches in design education, Craig Bremner and Paul Rodgers published their paper „Design without Disciplines“ (Bremner & Rodgers, 2013) and examined “the rupturing ad blurring of the design Disciplines” (ibid.). In their paper, they also pick-up Marshall and Bleecker’s concept of “Undisciplinarity” (Marshall & Bleecker, 2010; Bremner & Rodgers, 2013) where according to learning expert Stephen Heppell “design practice shifts from being ‘discipline-based’ to ‘issue- or project-based’” (Heppell, 2006). Furthermore, they relate to Nicholas Bourriaud’s „Altermodernity Manifesto” (Bourriaud, 2009) by arguing for an “Alterplinarity” (Rodgers & Bremner, 2011) or “Alterdisciplinarity” (Bremner & Rodgers, 2013), which in a globalising context requires “an ability to make connections that generate new methods to identify ‘other’ dimensions of design activity and thought” (Bremner & Rodgers, 2013, p. 12). These studies and concepts gave a fundamental input to the development of our MA curriculum, at the time, and resulted in an increasing number of students that would approach MA projects from an undisciplinary point of view by combining their own discipline with knowledge from social sciences, economy, computer sciences or ethics. But most importantly our students started changing their mental model from the rather traditional image of designers as problem-solvers towards problem-identifiers (Frascara, 2002; Eckert & Mason, 2010). And what seems like an “easy thing to do” really came with a lot of challenges that we tried to support by offering new courses in “Issue Mapping”, problem-framing, or conversation and negotiation training. So, to answer the question of which could be a common goal for design education, I believe it mainly is to
train young people to being able to understand and analyse complex problems from different angles and acquire a vocabulary to reach out to other people they need to work with to rearticulate the problems in a systemic way.

**Research:** To me, enhancing human living as John Dewey (1948) envisioned it provides a common goal to strive for. On the way, we have to figure out how to weave social, economic, governmental and research needs and responsibilities together. This is underlined by the OECD Quadruple Helix for Social Innovation. The Quadruple Helix points to the need for design generalists – people who can grasp the overall design issues and approaches to bring in these different areas of expertise into a coherent and consistent design effort. In his recent book *Range: Why Generalists triumph in a specialized world*, David Epstein (2019) makes a similar argument. We have focused for a long time on creating design specialists who are either product designers or graphic designers, or the like. We have not been very good at establishing the common, general contribution of design by way of identifying and communicating the very aspects, skills and knowledge. We shy away from engaging with the characteristics of design across different domains and problems. Yet, being able to do so appears to me as one of the key strengths of design and is – in my own experience – highly relevant to today’s world and its problems.

This is not to say that we should do away with design specialists. Design specialists are really good at minute details important for a specific design task. We need them. But long before we can focus on the minitua of a specific design task, we need to grasp the meta level of that design and for that we need people with different design skills, experiences and insights. The SDGs are a perfect example for how specialist knowledge and skills fail us when we are looking to systemic changes. For every one of the 17 boxes of the SDGs, we can point to stellar scholars and experts in the field. But on their own these experts have not been able to effect the systemic changes, the shifts in mindsets, the changes in rules and regulations needed to achieve the kind of transformation and change needed for climate action, poverty reduction, equal access or strong institutions and peace. For that, we need a systemic design approach. Every single box of the SDG is a desperate call for new approaches to design thinking, new methods for design, new processes for design, all of which challenge us to revisit our current design principles and approaches across all domains (not only the design schools!). In my view, design education has a role in clarifying distinct design approaches, assess their strengths and weaknesses especially in a specific context, exploit their possibilities and grasp their limitations. To get there, we have to challenge our own design thinking culture. We must be capable of providing a solid foundation and a solid understanding of design per se, or we will only send out one-trick designers. In a VUCA world, this is a disservice to the students, to the field and to society.

**BA:** The common goal of design education should be to achieve high-quality, understood as excellence. Quality means different things in diverse contexts, and it also requires diverse thing to be achieved. An editorial of a special issue on design education published by *She Ji*:
The Journal of Design, Economics, and Innovation (Noël, 2020) outlines 10 suggestions design instructors could adopt to ensure high quality design education. Below you find a summary of five of these suggestions:

1. **Train & Educate: Moving beyond Know-How.** Help students not only to find jobs, but to thrive as designers. Foster in students the need to engage in a constant learning path.

2. **Create a Context for Inquiry: From Objects to Problems.** Use problems to exercise inquiry, exploration, and the seeking of understanding. For example, how to help agricultural communities in Argentina shift from chemical to organic farming?

3. **Change the Conceptual Network: Identifying the Problems’ Components.** Let students research and define problems. Let them identify the problem ecosystem and its connections.

4. **Broaden the Scope: From Designing Solutions to Implementing Change.** Include implementation as part of the learning exercise. Implementation is a complex process with multiple stakeholders, goals, interests and many other variables coming into play.

5. **Figure out the Subdisciplines: What Are We Educating for?** Identify what kind of problems students graduating from your school will be dealing with. Which are the different skills and competencies necessary to deal with these problems?

Achieving quality requires however, more than the good disposition of a teacher, and the adoption of the above suggestions. It requires the adoption of new models, both educational and financial. It requires to re-examine our beliefs and assumptions: why to design, how to design, for whom to design, with whom to design, what to design. Why is design or relevance to society today? Why should young people engage in studying design? What value do we bring to society, organizations, and our natural ecosystem? Perhaps being more humble could help us to move forward and achieve high-quality design education. Perhaps the first assumption to question is that we help to tackle complex sociotechnical problems: Are we really doing it? And if so then, why do we struggle so much when trying to change design education?

5. **What is a “successful” design career, today?**

**MA:** When I think of current design graduates, I hope they will look for jobs in some other field than design. And I don’t mean this for economic reasons (even if still many jobs in design are underpaid), but if we compare Maldonado’s above observations to the latest „Jobs of the Future report” (World Economic Forum, 2019) it becomes clear that there is no such thing as a design career—or at least there shouldn’t. First: some of today’s problems have been supported or even created by designers for the past decades of industrial design
dedicated to mass-production or visual communication to marketing—and here I’m referring to Papanek’s critique on the design profession, back in the 70ies (Papanek, 1971).

Second: in my eyes the shift from designers focusing on the design domain towards „Embedded Designers“ (Weckerle et al., 2016) who engage in other fields than design, supports both Gropius’ and Maldonado’s vision of pursuing common goals instead of raising arrogant barriers between disciplines (comp. Gropius, 1919, Maldonado, 2003). A development that I consider as highly positive with regards to the complexity of the problems humanity needs to tackle (e.g. the United Nations SDGs).

And third: design as we know it is going to disappear! It might be the last decade that—let’s say—a graphic designer will get along without knowing to code or dealing with systems fuelled by artificial intelligence; or the last one that a product service system designer gets away without some skills in data science to gather and evaluate the right data for his or her design decisions. And even more importantly: the last one in which all designers get along without embracing social and environmental sciences to really understand the people and their environment that we are dealing with. In other words: our current way of thinking and educating design will and needs to change drastically. And first and foremost, we need to identify the right allies (such as e.g. other disciplines) to team up with.

**BA:** I understand the context that originated this question, as instructors and heads of programs we are asked to prepare students for a successful design career. However, what makes a successful design career might have different answers. Today, design and design education practices can vary widely. Not all designers understand design in the same way, and practices that are out of date are still implemented. What is a successful design career might also depend on individual aims. What makes a design career useful, valuable, pleasant, rewarding and liveable depends on each of us. Arthur, Hall and Lawrence (1989), defined career “as the evolving sequence of a person’s work experiences over time” (p. 8).

Despite the different understanding of design and its subdisciplines, hopefully all designers agree that a successful career is achieved when we create possibilities to foster better realities. But which realities are we educating students to address? What does “better” mean? What level of complexity students should be able to address? And how much understanding of other disciplines should they have to engage with multidisciplinary teams to achieve the desired change?

Design education’s final goal is to provide society with responsible, knowledgeable, skilled, experienced, informed and ethical professionals that can help people achieve goals. Lifelong learners that are also prepared to update relevant knowledge to their daily practice.

Seibert and Kraimer (as cited in Ng, Sorensen, and Feldman, 2015) defined career success “as the accumulated positive work and psychological outcomes resulting from one’s work experiences” (p. 368). Hopefully a successful design career is one where designers not only get the work done in a productive and thoughtful manner, but also have the commitment to push beyond the familiar. Designers that can shift paradigms. Trailblazers.
Careers are also affected by organizations, and employees affect organizational success. We must make organizations aware, and validate the need for designers with degrees to evolve current organizational practices. We must advocate to change the perceive value of design, so that organizations will create new employment possibilities for the future Trailblazers.

**Research:** A successful design career today can take many forms and this insight should drive any curriculum design. Again, I find it helpful to lean on the Four Orders of Design by Buchanan in this question. There are still career opportunities within every order and in any of the variations of the individual fields of the matrix. I personally believe that the design professions in the first and second orders (i.e. graphic design and product design) are prone to being taken over by artificial intelligence at some point in the future. The principles underlying these foci involve many elements that can be fed into a logarithm: experimentation with material forms, tactile and cognitive aspects, colour, etc. Some of this may lead to inferior products, some of these may lead to superior results. Humans may experience satisfaction and joy in creating these outputs and feel good about creating them. Increasingly, this might become a luxurious self-indulgent activity. I would not be surprised if artificial intelligence might achieve similar or even better outcomes. Already, tools that used to be available only to design experts in the first and second order are now readily available to nearly every child in primary school. It is still useful and relevant to know about the core principles of design and any design education worth its name will include basic education on these. The question is: where should we put our brain power – or perhaps, what is our brain power? In a VUCA world and in a world struggling with matters of sustainability, design careers that focus on just one aspect of design may seem out of date sooner than later. Currently, new areas of practice and research are opening up in the public sector – from opportunities in design education to service design, positions are opening for design facilitators on policy design, for example on the EU level in the context of the New Green Deal and the New European Bauhaus. Just recently, another colleague of mine wondered if we should not focus more on future design careers and less on design education when we work with our students. I think there is something to it.

**A conversation that needs to be continued?**

We engage in this conversation to learn from each other and to see where we are in the shifting tectonics of design education. We are aware that design is shifting, and similar discussion are being held by diverse schools, groups and associations. There are several topics that have emerged in the process: the need to shift from crafts to an evidence-based discipline; the need to re-examine contents, contexts and methods in the teaching of design; the need to focus more on human interactions; and the need for interdisciplinarity in the context of post-disciplinary and problem-based Design Education. We have raised more questions than we found answers for. We would therefore like to engage with the Cumulus and other design education communities to reflect about these questions. Underlying our quest is the provocation, if design schools still are the places where design education
happens for the VUCA world and for the SDGs. Should they even be? Again, we explicitly pose this as a provocation to stimulate debate and to engage with the pluralism that marks the Cumulus community.

Despite our different entries into design that include experiences in the medical field, the public sector, and crossing from universities to schools of fine arts, the three of us find common ground on some issues.

We seem to agree that today’s world is not any less VUCA than at the times of the Bauhaus or the Ulm School. In fact, the European Commission’s “New European Bauhaus Initiative” proves that, once again in history places of collective complex problem solving are needed to engage with this world. One similarity is that in uncertain times design's capacity of dealing with the unknown becomes more important for both society and the economy. At the same time, we observe a shortfall in design education when it comes to build up competences to address complex realities. This also means that each one of us finds it necessary to re-engage in the developments and directions of design education.

We detect in the current shift in design education different scenarios that concern all of us: Traditional schools of design and art risk to become obsolete, if they don’t adapt and expand the knowledge repertoire needed today. At the same time, multiple players in design education have emerged to fill these voids. These include non-design schools but also new design schools that explicitly focus on methods and issues not covered in traditional design schools. This has led to a certain pluralism in design education, but also to confusion, misunderstandings and even conflict. Dealing with these aspects is one of the tasks design education must tackle. Design research here has a role but for this voice to be heard, we need to strengthen design education in such a way as to promote such design research.

We also consider Theme-based Education and lifelong learning as topics with increasing demand—not only in design education but with regards to the entire educational system. At this point, design education must search for ways to engage with these topics. Mainly this means that as schools of art and design we must engage even more with other disciplines, as well as with other players in education. Design as a discipline and profession remains one of the few who do not regularly offer executive level courses to update design professionals in skills and trends in the field. Design simply assumes that practitioners are able to learn on the job. But beginning with the rise of service design, it became clear that training on the job and in the field fails many professionals.

The gap between the different educational levels has to be closed through new forms of teaching that involve research and big picture design seminars in BA and MA education. Furthermore, the confusing isolation of research from teaching needs to be overcome. Students ought to be introduced to as many possible design careers as possible. Research is one of them.

We have to engage with a variety of new fields, both from a theoretical point to be able to involve education around human behaviour, ecological matters and technological
developments – but also from a practical perspective, to grasp the realities of design contexts we are still less familiar with, such as organizations.

In the context of the design culture (of) thinking, we find that each of these points offers and needs space for further discussion in the CUMULUS community and beyond. Therefore, we would welcome the opportunity to widen our small ‘in-house’ discussion and reflect whether and which contribution the CUMULUS working groups could/should elaborate on with regards to these pressing questions of design education.

References


Eckert, Jan (2020). Why Design Schools should take the Lead in Design Education. In «Perspectives on Design: Research and Practice in communication design, fashion design, interior design, product design and intersection areas. Daniel Raposo, João Neves and José Silva (Editors) Springer – Design and Innovation (SSDI)


Rethinking and Reappropriating Design Education for a VUCA World


**About the Authors:**

**Prof. Dr. Jan Eckert** is a design educator and researcher working as head of the MA programmes in Design, Service Design and Digital Ideation at Lucerne University of Applied Sciences and Arts. He is particularly interested in fostering social awareness amongst designers as well as developing leadership strategies for cross-sectoral collaborations between designers and non-designers.

**Prof. Dr. Sabine Junginger** is a design researcher educator. She heads the Competence Centre for Research into Design & Management at Lucerne University of Applied Sciences and Arts. She is an elected member of international advisory council of the Design Research Society and member of the editorial board of Design Issues.

**Dr. Guillermina Noël** is a design educator and researcher. She heads the BA Design Management International Programme at Lucerne University of Applied Sciences and Arts. She is a member of the editorial board of international information design and the editor of two special issues on the topic of design education for She Ji.
Rethinking Design through Literature

Susan Yelavich
Professor Emerita, Parsons School of Design, The New School
eyelavics@newschool.edu

Abstract | Where design projects possibilities, literature activates their potential. This is evident in an unstudied genre of novels, poems, and essays, which give voice to objects and spaces and the force fields that bind and break them. These narratives offer a way of thinking about design that doesn’t segregate the instrumental and the theoretical. Instead, such works synthesize the quotidian and the poetic yielding a wider tributary in the thought of things and places. In this paper, the spheres of design’s multifarious entanglements will be examined within the temporalities of design itself. The effects of design and designing will be considered within three broad understandings of time: as deep, as immediate, as yet-to-be. Needless to say, these temporalities are as artificial the systems we have contrived to measure time. Moreover, these three frameworks are porous. This paper offers a new methodological contribution to design studies drawing on semiotic and textual analysis. It is meant to be viewed as much as a literary exercise as the source material that informs it.

KEYWORDS | DESIGN, LITERATURE, EFFECTS, MAKING, THINKING, PROPOSITIONS
1. The Value of Literature to Design

Design, in its ubiquity, invites taxonomies. This paper presumes to offer another. It considers design through the lens of time. It doesn’t discount other factors such as culture, politics, and technology. Rather it offers a different methodology through which to approach the multivalent nature of design. For example, a phone can be understood as a technological extension of the senses, and it can also be understood to have the properties and values of temporal immediacy. Literature is especially useful in amplifying one or more of these characteristics. Here I deploy it as a relatively unexplored method of design research, drawing on excerpts from novels, essays, and poems whose protagonists are things and places. In keeping with design studies pursuit of theory (here, literature) through practice, the paper will be punctuated with works of contemporary design as a double reading of the matter at hand.

My overarching ambition is to open up an understanding of design, not as a professional endeavour, but as the configuration of things and places that set up conditions for alternate plot lines in daily life. Literature offers a rich compendium of scenarios in which those things and places act. The fact that those things (objects, systems, communications) and places (streets, rooms, cities, buildings) are rarely, if ever, described as ‘design’ in literature is especially germane to the ambition of this project. Namely, to locate design in between the particular characteristics of objects, places, and spaces and the larger ideas they enact.

This synthesis of the specific and the poetic is evident Ivo Andrić’s novel The Bridge on the Drina, when he describes both the physical and the social character of the bridge of the book’s title:

“A man was then as if in a magic swing; he swung over the earth and the waters and flew in the skies, yet was firmly and surely linked with the town and his own white house there on the bank with its plum orchard about it.” (Andrić, 1977, p.14-5)

Yet it is always only this historic bridge\(^1\) that encourages cultural cosmopolitanism with its kapia – the swelling in the middle of its span with a sofa where people of different persuasions have met and talked for centuries. The bridge exists both in time and out of time. We see the same dynamic at work in the contemporary bridge, (below) in Sarajevo. Its vertical ‘kapia’, with a bench inside its loop, invites both a pause in an otherwise linear span and an interruption of linear time.

---

\(^1\) The plot of Andrić’s novel The Bridge on the Drina centers on an actual bridge in Bosnia designed by the Turkish architect Mimar Sinan, perhaps best known as the designer of the Süleymaniye Mosque in Istanbul.
Andric and authors like him thus amplify design by repositioning it in the space-time of language. In short, they show us the nature and ramifications of things and places that we’ve lost sight of simply because we see them all the time (, 2019, p.107).

Drawing on literature for such insights demands what literary critic George Steiner calls “a politics of the primary” (Steiner, 1989, p.30). It requires openness to an author’s way of presenting a work (and implicitly a world view), and abstention from critique until the work is fully ingested, not merely digested. Steiner argues for a performative criticism, which, in this context, entails focusing intently on an author’s words for their own qualities instead relying on secondary and tertiary exegeses.

Steiner’s commitment to a close reading of an author’s words, however criticized in literary circles as deaf to divergent readings, is striking for its parallels with that of close observation. One of the challenges of design education is creating conditions in which students can lift the veil of preconception. (As happens, when, for example, a presumption about the needs of refugees, or other populations, occludes more appropriate design responses.) Of course, close reading and close observation do not eliminate bias on the part of designers, nor is it a guarantee of how design will be received and changed by choice or accident. But close reading and close observation do offer opportunities to think design differently. This, in and of itself, takes time – something the economies that support design rarely permit.

Figure 1. Festina Lente, Adnan Alagić, Bojan Kanlić, and Amila Hrustić, 2007–2012.
2. Three temporalities of design

Design’s relation to time has been discussed in terms of patina and the social value it confers (Appadurai, 1997); as a matter of durability and environmental sustainability (Verbeek, 2005); and in terms of the simultaneous realms of the digital as it affects spatial design (Barbara, 2014). What this paper seeks to add to this highly abbreviated list of perspectives is a study of how the perception and experience of time is designed in and by artifactual narratives made visceral by literature.

The texts and projects that I will discuss deal with the dialectic between subjective and objective time. With the selection of excerpts that follows, I hope to draw out insights into how design alters temporality in different circumstances, provoking reevaluations of our relationships to human and non-human actors. By creating ruptures in the present – either by animating aspects of the past or projecting futures – design and literature lift us out of the everyday, and, if only momentarily, shift our positions in time and space, enabling us to question the world as we find it.

2.1 Deep time

How is it possible that design can make the past present? Self-conscious attempts like official memorials, grave markers, and commemorative plaques tend to have the opposite effect. In explaining what happened and when, they frame the past and pre-determine our relationship to it. Arguably, it is those unadulterated things and places - once designed – that transmit the deepest sense of time-in-the-past. Admittedly, designers cannot fashion a temporal experience because they can’t access the states of mind of everyone who might come across their work. Nonetheless, associative triggers lie dormant in the configurations, contexts, and materiality of the myriad things and places we encounter – some more than others, depending on their notoriety.

W.G. Sebald explores this phenomenological dimension of design in his 2001 novel Austerlitz. In it, he takes his reader on a journey in which temporalities collide in train stations, villages, and fortresses. The protagonist, the eponymous Jacques Austerlitz, is an architectural historian, who sets off in 1967 to discover the fate of his Jewish parents and in doing so to understand his own history and recurring sensations he’s never fully understood. Sebald’s is an essay in the uncanny, which appropriately in German means das Unheimliche: unhomely or unsettled (Vidler, 1992, p.7). In fact, the protagonist’s origin story begins with his removal from his home in Prague: at the age of four he had boarded one of the kindertransport that rescued Jewish children from Nazi German-controlled territories. As the story proceeds, Austerlitz discovers that his mother was taken to a concentration camp in the Czech town of Terezin, formerly and infamously Theresienstadt in German. Even and perhaps especially now, he finds it disquieting.

“He notes there are only two shops, one of which, strangely enough, given the town’s history, is an antique store... In the muteness of the shuttered village that
turns a blind eye to his gaze, we sense, with Austerlitz, the politics of denial, a perceptible aesthetic of denial.” (Sebald, 2001, p.12).

Austerlitz muses that his mother and the other 60,000 prisoners “had never been taken away after all but were still living crammed into those buildings and basements and attics” (Sebald, 2001, p.189). In some sense they are; after all, the world is composed of matter in various stages of decay and traces of human DNA might still be found there. But with Sebald, this is less about the bio-chemical than it is about the psychological character of the town. It projects an aura of the uncanny that is classically associated with temporalities of loss and transition (-, 2019, p.107).

For Austerlitz, the cumulative effects of encountering the now deserted town, its Ghetto Museum, and photographs of the charade of bucolic camp life is profoundly disorienting. With regard to the latter - in fact and in Sebald’s fiction - a particularly insidious distortion of reality took place at Theresienstadt in 1944, when the Nazis converted it into a picturesque Potemkin village to deceive Red Cross inspectors. Through Austerlitz’s confrontations with jarring evidence of evil’s effects – effects which are embalmed in the physical fabric of present-day Terezin – Sebald gives us to understand that space is designed as much by time and narrative as it is by its material presence.

This fusion of past and present also happens outside the pages of the novel, as when an ordinary street sign morphs into memorial, as it does with Stih and Schnock’s project in Berlin (below) in which constructs of past and present coincide. Dispersed and sporadically encountered throughout the city, the signs echo the way the Nazis used time to dilute the impact of the Jewish laws, staging them over months and years to obscure the extent of their program of dehumanization.

Figure 2. “Jews in Berlin may only buy food between four and five o’clock in the afternoon,” Places of Remembrance, Renata Stih, Frieder Schnock, 1993.
Likewise, James Fenton’s poem “A German Requiem,” positions objects meant for one temporality into another. In the midst of chaos and destruction in postwar Berlin, care is still taken to design a response to death. As the poet writes:

“But when so many had died, so many and at such speed, there were no cities waiting for the victims. They unscrewed the name-plates from the shattered doorways And carried them away with the coffins. So the squares and parks were filled with the eloquence of young cemeteries: The smell of fresh earth, the improvised crosses And all the impossible directions in brass and enamel.” (Fenton, 2009, p.15)

The brass and enamel name-plates meant to welcome the dead home in some near or distant future now mark their permanent dislocation. “One imagines that it would take small acts of patience to unscrew them from their ‘shattered doors’ and affix them to coffins. Here, the expedience of wartime burial is tempered by improvised displays of tenderness” (Yelavich, 2019, p. 15). Informally but no less profoundly, design offers a modest bridge between two states of being. The most radical temporal split is momentarily assuaged by inert pieces of metal, synonymous with life in death.

*  

Unnerving distortions of time and space are not confined to the heterotopic spaces of criminality or war. They can also infiltrate normative situations, as they do in Raymond Carver’s short story “Why Don’t You Dance?” In it, a man stages a yard sale of the contents of his home. The bedroom’s furnishings are laid out on the front lawn exactly as they were in the bedroom.

“The mattress was stripped and the candy-striped sheets lay beside two pillows on the chiffonier. Except for that, things looked much the way they had in the bedroom – nightstand and reading lamp on his side of the bed, nightstand and reading lamp on her side. His side, her side.” (Carver, 1989, p.3)

What didn’t fit on the lawn was staged in the driveway. Even the appliances were hooked up.

“Except for the three cartons in the living room, all the stuff was out of the house. He had run an extension cord on out there and everything was connected. Things worked, no different from how it was when they were inside.” (Carver, 1989, p.9)

We are never told if the sale was prompted by divorce or death, but it’s clear that it is the man of the house who’s arranged the tableaus. There is no girlfriend or wife in sight, though a couple shows up and meanders through this strange domestic simulation. The man invites the couple to drink with him; the boy passes out and the girl agrees to dance to one of the man’s records. Before they leave, he tells her that he hopes she’ll like the bed.
“Later, the she talks about it with anyone who will listen, trying to understand what she felt surrounded by things that felt depleted yet still emanating something of their past. Something was transferred in the dance that cannot be dismissed.” (Yelavich, 2019, p.216)

In Carver’s prose we hear another echo of the uncanny: “the inhospitable context of [being in] the here-and-now at the same time as imagining a there-and-then” (Vidler, 1992, p.5). What else is a yard sale but the transference of goods and their pasts to someone else’s future? Here the innocence of the transaction is compromised by time: the time to which the bed continues to bear witness, the time before it had to be sold.

2.2 Immediate Time

The second temporal perspective I want to discuss derives from the present-tense processes of thinking, making, and perceiving. While the work of design often includes long phases of research, the synthesis of that research into an outcome generally happens in a compressed time, one that often feels immediate. The psychologist Mihly Cskszentmihalyi describes this state of absorption (be it designing, writing, or conducting surgery) as one of “flow” (Csikszentmihalyi, 2014, p.67). The term is particularly useful here as it doesn’t reduce time to a point but rather to the time-space we otherwise call “now.” The precondition for entering that space is practice. Until then, time is choppy. Even the most experienced of hands can find that the process of mastering a new technique proceeds in fits and starts.

* 

These are the circumstances in which we meet a potter named Cipriano Algor in Jose Saramago’s 2002 novel The Cave. Algor has been making earthenware dishes his entire life and suddenly his wares are no longer in demand. The modern ‘Center’ - his main source of income - only wants wares made of plastic. Rather than give up his life’s work, he decides to make a new ceramic product: figurines. However, making the miniature nurses, clowns, and other costumed characters proves exasperating. The clay doesn’t cooperate. Saramago’s omniscient narrator offers an explanation – one that demystifies what is otherwise called the design process – observing that:

“Very few people are aware that in each of our fingers... there is a tiny brain. The fact is that the other organ which we call the brain, the one with which we came into the world...has only ever had very general, vague, diffuse and, above all, unimaginative ideas about what the hands and fingers should do.[...] The brain has never been curious enough to ask itself why the end result... bears so little resemblance to its instructions to the hands. Anything in the brain-in-our-head that appears to have an instinctive, magical, or supernatural quality – whatever that may mean – is taught to it by the small brains in our fingers. In order for the brain-in-our- head to know what a stone is, the fingers first have to touch it.” (Saramago, 2002, p.67)
Like all designers, Saramago’s potter draws on knowledge gleaned in two different time frames. His process involves both his past experience with kilns and clay and the unpredictable behavior of the medium in the present: he has to master slip casting. Algor gradually achieves proficiency he needs and production proceeds apace. The deep pleasure of mastery is his, until he must break the rhythm of the studio and present his work for sale. Once again, he is out of step with the market’s tempo. The Center’s buyers tell him the figurines are too precious and outdated. Mass production militates against the pleasures of ‘flow,’ raising the value of speed over the sensual temporality of intensely concentrated work.

*  

Just as designing opens up a ‘state of exception’\(^2\) from time, so does love. In Orhan Pamuk’s 2009 novel *The Museum of Innocence*, a young man’s infatuation thrives in an atemporal oasis: the family home of Füsun, the woman he adores. Having missed the opportunity to marry her when she was free, the protagonist Kemal contents himself with visiting her at her parent’s apartment in Istanbul under the guise of a distant cousin, which he does for eight long years. Every evening that he sits with Füsun and her parents the Keskins, he enters a romantic purgatory. In the process, he becomes closely attuned to the ways in which time is designed.

The most conventional mechanism, the wall clock, serves both a “reminder to the whole family of time’s continuity, and to bear witness to the ‘official’ world outside” (Pamuk, 2009, p.283). Public and personal time also co-exist in other domestic technologies: wristwatches, radios, and televisions, the latter still a novelty in 1970s Turkey. To wit, every night at seven o’clock, when the news comes on, the Keskins synchronize their watches with the start of the national broadcast. As they do this, Kemal muses that they “felt the presence of the millions of other families, all doing likewise, and the throng that was the nation, and the power of what we called the state, and our own insignificance” (Pamuk, 2009, p.286). (Note the novel is set when Turkey was governed by Mustafa Kemal Atatürk, whose secular government set out to create a homogenized nation.) Here, Pamuk’s protagonist is describing time-keeping as both a collective pledge of allegiance and an acknowledgement that:

> “It was not Time we remembered but other families, other people, and the clocks that regulated our business with them. It was for this reason that Füsun studied the clock on the television screen to check if she’d adjusted her watch ‘perfectly,’” and perhaps it was because I was looking at her with love that she

---

\(^2\) The term ‘state of exception’ is a term associated with the philosopher Giorgio Agamben and usually refers to extreme political actions that dispense with the rule of law. Here it is used to refer to a condition that dispenses with the laws of the marketplace.
smiled so happily – and not because she’d remembered Time.” (Pamuk, 2009, p.287-8)

Love and the informal social bonds forged in daily life have nothing to with official “Time” – what Pamuk calls the “evil line” that reminds us of death. This is the line (and lines) to which design seems most partial in its visualizations. That said, Pamuk offers an exception to the rule in an anecdote about a watch owned by Füsun’s father that “had two faces, one in Arabic numerals, and the other in Roman” (Pamuk, 2009, p.288). “Time” doesn’t disappear here; it is still measured. But the Eastern and Western watch faces speak to the variable ways it is marked. (Pamuk also explores the power of objects to transcend time in his museum project in Istanbul.³)

Perhaps the best that design can do is to complicate time, offering cues that our awareness of it is conditioned as much by emotion as its diurnal rhythms. That time is fungible is also apparent in Tibor Kalman’s Askew clock, below. Like Pamuk’s protagonist, Kalman recognizes that time is fungible, told by durations of pain and pleasure, of boredom and curiosity.

Figure 3. Askew Clock, Tibor Kalman, 1989.
2.3 Time as Yet-to-be

The temporality of the ‘yet-to-be,’ once thought of as an empty void, has become particularly congested today with the advent of speculative design and its offshoots. Such work is undertaken in large part in response to global warming and its attending social and environmental consequences that threaten to poison, if not entirely preclude, the future.

There is, however, another sense in which design can signal the future. It acts as the embodiment of hope in the face of everyday uncertainties. A poignant example is to be found in Wisława Szymborska’s poem “Clothes.” A woman has just seen her doctor, who tells her to check in with him again later, and that for now “it’s not too bad” (Szymborska, 1997, p.137). The exam over:

“it’s time to tie, to fasten with shaking hands shoelaces, buckles, velcro, zippers, snaps, belts, buttons, cuff links, collars, neckties, clasps and to pull out of handbags, pockets, sleeves a crumpled, dotted, flowered, checkered scarf whose usefulness has suddenly been prolonged.” (Szymborska, 1997, p.137)

Of all the objects and attending gestures involved in getting dressed, it is the scarf that matters most here. Unlike the mechanical and structural “zippers” and “sleeves,” the explicitly “dotted, flowered, checkered” textile is clearly decorative. Was she looking to a future of hospital gowns, it is unlikely the poet would take such care in dressing or, more to the point, add the ornament of the scarf?

Where Szymborska uses cloth to signal that there will be a future worth dressing for, Bruno Schulz uses it to fabricate an alternative future – a counter-scenario to the one being pursued by Germany at the time. *The Street of Crocodiles*, published in 1934, is set in the small Polish town of Drogobych, now part of western Ukraine. In it, the narrator’s father offers a “Treatise on Tailors’ Dummies, Or, The Second Book of Genesis,” claiming:

“The Demiurge... has had no monopoly of creation, for creation is the privilege of all spirits. Matter has been given infinite fertility, in exhaustible vitality, and, at the same time, a seductive power of temptation which invites us to create as well.” (Schulz, 1977, p.59)

To break that monopoly, he proposes to create a species of beings with deliberately limited capacities. There will be a different creature - each with only one limb - for every gesture. Moreover, the creatures won’t be precious.

“We shall give priority to trash. We are simply entranced and enchanted by the cheapness, shabbiness, and inferiority of material... We wish to create man a second time – in the shape and semblance of a tailor’s dummy.” (Schulz, 1977, p.62)
The tailor’s dummy is an argument for an imperfect future – the opposite of a future uniformly populated by Aryans. The dummy is neither golem, nor superhero; it is not envisioned as a savior. Instead it is a rejection of all utopias. Schulz could have made his argument against purity without resorting to materiality (the stuff of design) or referencing the figure of the Demiurge (the designer). That he chose to do so suggests an understanding that the future is not abstract, that it is made. More than that, it is tailored.

Though he would have been no stranger to history of pogroms, it is unlikely that that Schulz could have anticipated the scope of Hitler’s Final Solution. Nonetheless, there is prescience to the tale of the tailor’s dummy. This is true not just in his affection for ungainly creatures (surrogates for the poor and disenfranchised) but also in his attention to the liveliness of the materials they are made of, writing:

“Matter never makes jokes: it is always full of the tragically serious... Can you imagine the pain, the dull imprisoned suffering, hewn into the matter of that dummy which does not know why it must be what it is, why it must remain in that forcibly imposed form which is no more than a parody?” (Schulz, 1977, p.64)
In this Schulz anticipates the new materialism almost a century before it entered the consciousness of design, an example of which we see below in biodegradable bottles designed by Ari Jónsson. Made from oceanic algae, they exhibit the kind of imperfection that Schulz’s tailor wants to bring into being. Where Schulz was tacitly addressing the future of the Jewish people, Jónsson is speaking to the survival of all sentient beings whose futures are already compromised.

3. Conclusion

With Sebald, Carver, and Fenton, this paper has looked at time as latent in things. It has considered time experienced as an elastic present embedded in the act of designing with Saramago and in response to the design of time with Pamuk. With Szymborska and Schulz, it has also looked at design as aspirational and prefigurative. The careful reader will by now have concluded that these distinctions are a matter of perspective. However, even if it is the case that design is inherently multi-temporal, *experiencing* design as simultaneously retrospective, present, and propositional involves practice and risk. As Vladimir Nabokov warns:

“A thin veneer of immediate reality is spread over natural and artificial matter, and whoever wishes to remain in the now, on the now, should please not break its tension film. Otherwise the inexperienced miracle-worker will find himself no longer walking on water but descending upright among the staring fish.” (Nabokov, 1989 p.2)

References


**About the Author:**

Susan Yelavich is Professor Emerita, Design Studies, Parsons School of Design. She is a Fellow of the American Academy of Rome and the Bogliasco Foundation. Her most recent books are Thinking Design through Literature (2019) and Design as Future-Making (2014).
The chain reaction. How to design a process for transforming museums by rethinking the role of personnel

Alessandra Bosco\textsuperscript{a}, Silvia Gasparotto\textsuperscript{b},
\textsuperscript{a} University of the Republic of San Marino, San Marino
\textsuperscript{b} University of the Republic of San Marino, San Marino

*silvia.gasparotto@unirsm.sm

Abstract | The museum system is changing. The change affects the approaches, methodologies and practices involved in all the museum’s established functions: research, acquisition, conservation, communication and exhibition of man’s cultural heritage and environment. In this renovation process, to which the adoption of digital technologies has made a significant contribution, the design practice becomes more central every day. The involvement of different types of audiences led to a significant disconnection between the museum and its operators. When not involved in the transformation process, the museum personnel remain estranged, isolated by a use of languages unfamiliar to them. In this context, can the activation of co-design processes lead operators to be triggers in the management of the museum renovation process? Based on the preceding assumptions, is it possible to design an adaptive process to enhance the contemporary museum?

KEYWORDS | MUSEUM TRANSFORMATION, INVOLVEMENT OF PERSONNEL, CO-DESIGN, DESIGN PROCESS, ADAPTIVE SYSTEM
1. Introduction

In their tangible and intangible heritage, museums preserve traces of history, collective memories, elements of material culture that contribute to defining cultural identity, locally, nationally and internationally. With education, study and enjoyment as their primary purposes, museums play an important role in promoting knowledge by sharing their documentation and collections; furthermore, they also encourage civic pride.

As a “Non-profit, permanent institution in the service of society and its development” (ICOM, 2017) the museum is strongly related to the historical geographical social and political context (Mairesse, 2018). For this reason, the significant socio-economic changes that occurred in the last twenty years led to important transformations in museum practices. Changes affect approaches, methodologies and practices in all the established functions of the museum: research, acquisition, conservation, communication and exhibition of man’s cultural heritage and environment (Sandahl, 2019). In this process of renewal, design practices are becoming increasingly central (ICOFOM/UNESCO, 2018; Irace, Ciagà, Wolf & Trochchianesi, 2014; Maroević, 1998).

The exhibition project originally intended to study and define the relationship between architecture and museum collections by designing the environment to display the heritage taking into account both the layout of the objects and the configuration of the exposition. In this situation the architect received the description about the museum collections from the curator, who was responsible for the research on the subject.

The focus of the exhibition project, cantered on the relationship between space and collection, was later extended to the relationships between man, collection and space. The project – tailored to specific categories of visitors – involved curators and educators who worked together to define different profiled paths, based for example on the selection of languages, ages or on a particular disciplinary area of interest. Furthermore, the wish to allow the visitor more freedom, led the designer to provide a set of points of interest among which the visitor can move independently and modify his path in real time. The interaction between the visitors and the museum’s collections becomes more direct: visitors can independently choose the objects to explore and how much time to spend on each artifact.

The visitor’s involvement depends, of course, on her individual sensitivity and culture, but it also varies according to the way in which the objects are displayed and communicated. By interpreting the aims of the curators and by gathering all the information about the collection, the designer can emphasize one or more aspects of each piece, and define how visitors can interact with it, considering both the scientific and the emotional spheres. Each object on display represents in and of itself many different aspects: historical evidence, an example of a production process, a scientific discovery, a piece of memory and much more.

The use of digital technologies has made it possible to develop a multiple and simultaneous experience that can intrigue an extended audience with different needs and expectations. The visitor experience, led by personal devices, or mediated by the use of
proximity systems, offers the visitor an immersive and synesthetic experience (Bowers et al. 2007; Dal Falco & Vassos, 2017; Sayre & Wetterlund 2008; Villeneuve, 2013). A subsequent phase that expands the boundaries of the design process is the use of coding. The IoT and the use of interaction design shift the focus towards the study of the interaction between the visitor and the cultural heritage collected in the museum. The use of augmented objects defines new opportunities of experience between the physical and the multimedia fields. These tools make it possible to enjoy an interactive environment in which the visitor is directly and physically involved in an experience of knowledge and discovery that can enhance the cultural heritage through a historical contextualization or a futuristic simulation (Claisse, Ciolfi & Petrelli, 2017; Hornecker & Stifter, 2006; Not et al. 2019; Zancaro et al., 2015).

2. Participatory strategies as practical ways to enhance traditional cultural institutions

The researches on interaction design and visitor experience bring museum studies to propose a possible transformation of this context. This research path began in the ‘90s with a new phase of awareness for museums. A decrease in the audience, due to the lack of correspondence between the multicultural/digital world of people at large and the perception of a traditional institution frozen in the past, led curators to reflect. Their own programs were focused on a well-established segment of visitors, with specific cultural interests and civic values. They were generally older people with a high cultural level and little diversity, while increasing segments of the population were turning to other sources of entertainment, learning and communication (OECD/ICOM, 2019).

Though they also worked on reviewing information and theoretical content, museums identified participatory strategies as practical ways to enhance traditional cultural institutions to attract a wider audience. Visitors had to be actively engaged as cultural participants and not be considered as merely passive consumers (Moura et al., 2011).

For this reason, visitor-centered museums focused on promoting participation by diversifying and enhancing the visitor experience. This goal, which supported both the educational and recreational role of museums at the same time, was promoted in different ways by involving a plural audience – young school children, advanced students, general visitors to the locality, international or national tourists, or specialist researchers – in different practices and processes (Giaccardi, Palen, 2008; Anderson, 2004).

Below is a description of some of the most common practices used by museums to involve, broaden and diversify the audience, illustrated by some significant examples.
Exploring the sciences through wonder and surprise

These experiences, designed and developed within science centers and children’s museums, since the Sixties and Seventies, seek to educate a greater range of people, focusing on entertainment and on the direct involvement of the visitors, in particular children. In this type of museum – of which the San Francisco Exploratorium, founded in 1969, is considered a paradigm – the exhibition project relies on interactive engagement, leveraging wonder and surprise to convey learning to the visitor through a recreational approach to the exploration of natural science phenomena and technology, making science visible, touchable, and accessible to a wide variety of people.

Extending Human Rights by improving accessibility and inclusion

The “museum for all” focuses its research on the exploitation of the visitor experience for an expanded audience, placing keywords such as accessibility, inclusion and usability at the center. Of significant importance in this field is the project coordinated by Corey Timpson for the Canadian Museum for Human Rights in Winnipeg. On this occasion he wrote the Canadian Museum for Human Right’s inclusive design and accessibility guidelines. They can be consulted, updated and implemented online by the community.

Offering opportunities of meeting by rethinking guided museum services

The project Multaka: Museum as Meeting Point – Refugees as Guides in Berlin Museums works on widening the public and on a different experience of the heritage. Involving refugees in the museum experience, the project trains Syrian and Iraqi refugees to be museum guides, so that they can provide guided museum tours for other Syrian and Iraqi refugees in their native language. Facilitating refugee access, the Multaka project, which in Arabic means “meeting point”, helped refugees to find social and cultural points of encounter and to increase their participation in the public sphere. Started in December 2015 with the involvement of four Berlin museums, the project very successfully became an international programme with a huge public.

Collecting testimonies by redefining exhibition paradigms

Museums established with the aim of commemorating and passing down an event or a socially relevant local phenomenon also focus on the participation of visitors. In this case the contribution can come through the donation of an object/personal effect or through the sharing of a direct or indirect testimony on the topic. In the latter case, the testimony contributes both to the definition of the exhibition and the creation of a local or global community. Examples of this type are war museums, such as the Italian War History Museum in Rovereto which since 1921 has been dedicated to the experience of the Great War, the “Museo Audiovisivo della Resistenza” in Fosdinovo, inaugurated in June 2000, about the experience of resistance on the Gothic Line, or the most recent one in Sarajevo, the “War Childhood Museum” founded in 2017, which tells the experience of war from the point of view of a child.
The chain reaction. How to design a process for transforming museums by rethinking the role of personnel

All the practices of involvement described here are processes that aim for greater visitor engagement in the transformation and renovation of the traditional museum.

The interpretation of the new needs of an ever-widening audience together with the adoption of digital tools and technologies encourages museum curators to open up to a multidisciplinary community of experts. On the one hand, the definition of the exhibition cannot prescind from the multi-transdisciplinarity of its contents, on the other, the experience requires the input of experts in the social sciences such as ethnographers and anthropologists as well as the contribution of legal and administrative offices, and many other professionals.

Although the actors in the process are growing in number and range, the design process of the exposition still proposes the five most common stages: Planning, Research/Interpretation, Design, Production and Installation.

The process is shared with other experts only in the planning, research and interpretation phases, which can be summarized with the term “definition phase”. But “museums, should add a new exhibition paradigm that does not resolve issues into a pre-determined message, is proactively multidisciplinary, and has embedded multiple worldviews without editorial judgement”. (Macleod et al, 2018, pp. 34-44).

This format, which involves all the stakeholders – museum curators, visitors, personnel, designer facilitator, or other experts –, could lead to collaborative solutions that can reflect personal ideas and lead museums to act as agents of change in their socio-geographic context.

This process, generally known as co-design, finds its references in a much wider practice used both in public administrations and in business contexts.

3. The involvement of different stakeholders in co-design processes with citizens and companies

The involvement of different stakeholders in a project is a common practice in the field of design. Methodologies that relate the designer to other stakeholders are usually linked to the Scandinavian tradition of Participatory Design (Kleinsmann & Valkenburg, 2008), although it is possible to trace some foundations in authors such as William Morris and Gregor Paulsson (Holmlid, 2009).

This field is rich in approaches identified by different shades of meanings, such as: participatory design, co-creation, co-design, etc… One of the most widely-shared definitions in academic literature is the one by Sanders and Stappers (2008, p. 2): “Co-creation is a very broad term with applications ranging from the physical to the metaphysical and from the material to the spiritual, as can be seen by the output of search engines. By co-design we indicate collective creativity as it is applied across the whole span of a design process [...]”.
In Urban Planning, the first experiments and theories were shared in the Sixties. According to Kamacı (2014): “While it is commonly accepted that citizen participation is not a tool but the main goal of the urban planning, there is almost universal uncertainty as to the best way of citizens’ involvement in urban planning.”

Though the real effectiveness of the process is questioned by some (Wallin, 2013), there are many different tools that can be adapted to different situations and goals in urban planning. Some areas of intervention for participatory processes in urban planning could be, for example: the redevelopment of abandoned buildings, the conversion of a district, the revitalization of a green area. Whereas the tools are divided, more specifically, into three different types: exploratory, conceptual and deliberative.

The first group includes, for example, established formats such as focus groups or world cafes. In the second group there are tools such as design laboratories or open space technology. The third group includes methods for collective decisions, such as informed surveys or public debates.

The documented examples of urban regeneration processes through participatory design are numerous and it is not always possible to define their importance. To name just a few we might mention: “Coltivando”, the university community garden of the Politecnico-Bovisa campus (Meroni, 2013), “the MIL project”, focused on the physical and social regeneration of buildings from the 1970s in the city of Malmö, or “La Kumpania” an intercultural project designed to connect Roma and Italian women through food and cooking traditions, to resolve problems of conflict in the complex area of Scampia (Naples).

The involvement of different stakeholders is not a prerogative of urban planning alone. More recently, this approach has also been used by companies with the intent of boosting innovation processes, strategically reorganizing the company or imagining new solutions and services, especially through the methodological tool of design thinking (Beckman & Barry, 2007; Leavy, 2010; Martin, 2009; Ward, Runcie, & Morris, 2009).

Design thinking is a methodology that has been developed by many authors with different points of view (Cross et al., 1996; Badke-Schaub et al., 2010) and has the merit of extending the practice of design beyond its traditional sphere (Brown, 2008).

One of the fundamental assumptions of design thinking is precisely the collaboration between people, bearers of different knowledge who cooperate to achieve a result that must have economic and technical feasibility and desirability for the user.

There are many examples of the use of design thinking by companies in different sectors. They include the case of PepsiCo (Adi, 2015) in the packaging sector, for example, or Deutsche Bank in the field of financial services (Vetterli et al., 2016) and IBM as a company with high technological content (Lohr, 2015).

The sequence and the development of a participatory process changes according to the fields of intervention and the tools used.
Although it is not possible to find a single key of representation, since each case is characterized by many different variables – from the goals, to the tools that are used, to the different personalities and areas of expertise involved – we can try to trace some models that schematically synthesize the main phases (Fig. 1).

![Diagram of co-design processes referred to citizens and companies.](image)

**Figure 1. Co-design processes referred to citizens and companies.**

As shown in Fig. 1, excluding stakeholders and tools, the two processes are quite similar in the first two stages (Definition and co-design phase). The diagram intentionally omits timing information because they can vary according to the type and the complexity of the problems to be faced. The co-design phase, for example, can be unique, but it can also be repeated several times with the same or with different stakeholders.
In the evaluation phase of the first process – the one referred to citizens – the facilitator usually prepares a summary of all presented projects, then the public administration can make an assessment of the submitted proposals and define their feasibility and their technical requirements according to the regulations. Finally, the facilitator delivers to the community a policy paper that defines the guidelines. At the end of the process, often supported by the public administration, it is usually the citizens who carry out the approved projects.

In the second process – the one referring to companies –, after the designer-facilitator delivers a summary document that collects the best ideas, the company itself decides whether and how to carry them forward. In this case, a project assignment could be entrusted to the designer, or the development and realization of the idea could be handled by the company itself.

4. Co-design processes in museums

The cultural heritage and museums in particular may also be considered as stimulating fields where we can find experiences of participation of different stakeholders. These kinds of interventions usually aim to create a network of people to improve the museum experience and to expand the audience with which to share the material and immaterial culture preserved by the museum.

There are many people that can be involved in these kinds of activities: organizers, designers, museum personnel (both the scientific and technical staff), visitors and an extended network of people involved in the museum’s activities.

An interesting co-project based on a three-year research study was developed by the Planetarium and Science Museum of Rio de Janeiro City and the Pontifical Catholic University of Rio de Janeiro (Moura et al., 2011). The project originated with the aim of renewing some of its spaces, services and installations to offer a visiting experience suitable for many types of users. It began with an ethnographic study, a co-design workshop and a Blank Model prototyping session. “Together with children, teenagers, teachers, designers, computer scientists, and astronomers, amongst others” the experience aimed to “explore collaborative exhibits; interact multimodally; immerse in collective play; co-construct knowledge and share ideas about astronomy and other related sciences; and participate in mentorship networks together with other visitors and museum staff” (Moura et al., 2011, p. 152). During the co-design workshop, participants generated a great number of ideas. The most frequent insights were: “Create an immersive experience” and “Provide interactivity”. At the end of the experience, the most interesting ideas were prototyped.

Another case study based on co-design processes in museums is Museomix (Rey, 2017). The format, invented in 2011 by Stéphanie Bacquère, Samuel Bausson, Julien Dorra, Diane Dubray, Yves-Armel Martin, Christophe Monnet and Marie-Noéline Viguier, and repeated
The chain reaction. How to design a process for transforming museums by rethinking the role of personnel

every year, consists in a three-day immersive co-design workshop that aims to reinvent the way in which the museum’s contents can be presented to the public, by connecting with the museum staff and interacting effectively with other professionals. Museomix has involved more than 1000 participants for each year of activity and many museums around the world. This format has several goals: exploring new possibilities for the museum, imagining new ways to welcome visitors and interact with the collections, integrating the maker and digital cultures into the museum institution, opening the museum to the community through a new type of collaboration (companies, schools, artists), connecting the local culture with the global network of Museomix, training the staff to develop new skills and combine their know-how with that of other professionals. The basic team is composed of communicators, developers, designers, content experts, makers and facilitators. Museum personnel and visitors can interact with the working group in every moment. After the three days of intensive co-design activity, the teams share their prototypes with the other teams, as well as with visitors. Feedback is provided through an evaluation document. Finally, the projects can be shown in the museum exhibition as simple prototypes, or they can be developed, become stable, or simply be abandoned.

From further investigation of this case study, in interviews with some of the curators directly involved in the Museomix experience, we discovered that many of the projects would involve the visitors in an interactive experience. Furthermore, in most cases, the projects were abandoned immediately after the co-design experience or several years later. A restricted number of prototypes have been developed and are currently shown in the exhibition. Some of them need maintenance or a renewal.

A simplified model of the co-design process in a museum can be represented by the diagram in Fig.2. The process itself is very similar to the one referred to the citizens and the one related to the company, but in this case, there are some changes in the final stage of the process. Projects, in fact, can be proposed by many different stakeholders (co-design phase) and developed by a restricted number of people (curators, designers, technical staff). This leads to a great initial effort to have rough prototypes at the end.
Although there are many positive aspects to a co-design process, there are also some limitations. For example, at the end of the process, though many ideas are considered, only a few of them will be developed and displayed in the museum. Furthermore, these projects, usually related to the involvement of the visitor in an interactive experience, often have to be updated. Furthermore, the maintenance or the renewal of the technology used in these kinds of installations must be carried out by professionals with specific expertise. So, during
The chain reaction. How to design a process for transforming museums by rethinking the role of personnel

the last few years, many design studios have developed more and more specific device apps, multimedia tables or augmented reality objects for experiencing the heritage.

On the one hand, this has led to the involvement of different types of audiences, but on the other, it has caused a significant disconnection between the museum and its operators (Not, Petrelli, 2019; OECD/ICOM, 2019; Wolf et al., 2015).

If not completely involved, the museum personnel remain estranged, isolated, due to the use of languages they are unfamiliar with. To ensure that the museum personnel becomes aware and engaged, it is important that they be more involved. Participating in the co-design process can be a starting point but is not enough.

5. Transforming museums by rethinking the roles of the personnel

Museums, strongly linked to their historical, geographical, social and political context, represent possible fields for enhancing local identities. They preserve heritage traces of history, collective memories and elements of material culture in which citizens can recognize traces of their origins. Places for dissemination and sharing of knowledge, oriented towards education and leisure, museums could be configured as new hubs of a possible cultural network, strategic points that recognize the potential inherent in updating the museum experience to connect to a wider network on the territory. The museum opens up to the local community and considers new public and private actors with which to collaborate on virtuous projects, it opens towards new audiences in integration projects aimed at defining a wider community. But if the opening process does not include the network of professionals and the personnel working within it, the museum risks missing a great opportunity.

The involvement of the personnel in co-design processes in museums would give solidity and durability to the entire process of transforming the museum. The personnel, always present, can contribute to the process starting from the first phase (Fig. 3) by contributing to the definition of the state of the art. Participating in sharing the tools and objectives that will be used in the co-design process creates awareness of the problems identified as a priority by management and curators, and of all the information that constitutes the context of the project.
Figure 3. The role of personnel in a co-design process.

Awareness of the system makes the personnel feel they are an active part of the co-design process by sharing possible solutions. Following the definition of the summary report, the museum personnel will participate actively, together with the technicians and curators, in verifying the feasibility of the project. The personnel will be then trained to contribute to the realization of the solution, to its updates and its possible implementation. If staff members feel comfortable supporting or leading participatory activities, the project could go far.
References


**About the Authors:**

**Alessandra Bosco** Architect with a Ph.D. from the Politecnico di Milano and Professor at the University of the Republic of San Marino, where she is Director of the Graduate Program in Design. She has authored numerous essays and publications and conducts research in the fields of exhibition design with a focus on the participative approach.

**Silvia Gasparotto** Assistant Professor at the University of the Republic of San Marino. She was awarded a Ph.D. in Design Science from IUAV University of Venice in 2016 and has published essays in national and international journals.

**Acknowledgements** The paper was conceived, written and reviewed jointly by the authors. The introduction was developed together by the two authors. Alessandra Bosco produced paragraph 2 and Silvia Gasparotto produced paragraph 3. Together they design the frameworks and wrote paragraph 4 and 5.
The concept of Interaction Design under review: literature review and interviews with qualified informants

Eduardo Ariel de Souza Teixeira
ESPM
eariel@espm.br

Abstract | The article mentions a parallel about the conceptual strands for the Interaction Design theme. It relates what had already been addressed in the literature with in-depth interviews with professionals and educators, providing a unique record of this field in the city of Rio de Janeiro. Thus, it can be postulated that the material is related to the descriptive analysis of the concept of interaction, recognizing a multifaceted and human prism in its conception. This proposition is relevantly because of the Interaction omnipresent character permeating the entire process of production and consumption of information in the present times. By the conceptual relationship between information and interaction emerge a new literacy. Therefore, the matter of this research may be review of the design interaction concept and how it’s iterative intrinsic with humans- interfaces with technology, into continuous cycle of redesigning our perspective of living.

KEYWORDS | INTERACTION DESIGN, USER EXPERIENCE, EMOTIONAL DESIGN
1. Introduction
The article analyses the concept of interaction, recognizing a multifaceted and human prism in its conception (Lévy, 1999). This proposition is also related to Card, Mackinlay & Shneiderman (1999) insight concept during interacting with visual information. Such dynamics can be related to interaction through accessible connectivity, as well as the way in which the construction of this dialogue between people, tasks, goals and aspirations is projected. It may rise to a point of interest and concern when thinking about more social developments for the interfaces developed by such professionals involving information and communication technologies.

2. The research prior definitions
The research is essentially theoretical in nature, including a descriptive section, and its main objective is to critically investigate both the concept of Interaction Design and its more contemporary understanding. The research seeks, initially and using a bibliographic review, to understand the concept of Interaction Design. In the second part, it takes a very empirical character, where interviews with professionals and educators stand out.

More specifically, the theme of the research is related to a descriptive analysis of the concept of Interaction as a key issue for building the concept of Interaction Design, in a dialogue with Information Science, Usability and Information Architecture.

3. Review of the literature references
3.1 Information and interaction
The objective here is presenting conceptual issues that are related to the theme, but from a perspective of Communication and Information Science, as a priority, since such theories will impact Interaction Design as an area of knowledge. As example of one of the key issues, Drucker (2002) should be remembered, as he emphasizes that, in a world where technology is not natural, but rather created by man, technological changes will always express a new worldview. And the artifacts of such new expression will always come from the creative vision of man. However, Information Science (IS) will be construed as the driving agent of this theoretical and conceptual journey. As Saracevic (1998 apud MIRANDA; BARRETO, 2002) indicated by highlighting that the IS’s interdisciplinary nature is inexorably associated with Information Technology (IT). It is an activity that takes part in the evolution of the Information Society. Therefore, it refers to information boom as a social issue that began in science and has now spread to any and all human endeavors. According to Hobsbawm (1995 apud BARRETO, 2002), and Asimov (1988), based on the analysis of the last fifty years of the 20th century, mankind saw more innovations being inserted in its coexistence than in the
The concept of Interaction Design under review: literature review and interviews with qualified informants

rest of human history. In addition, Tomaél, Alcará and Di Chiara (2005), related such achievements to two subsequent components: availability and exposure of information.

The reach of information meaning as proposed by Barreto (2002) refers to the individual as a cyclical procedural flow for life, which usually provides a starting point for discussing the transformations that arise from ICTs (Information and Communication Technologies), from the emergence of new knowledge-related demands. For Tomaél, Alcará and Di Chiara (2005), where human beings are leading players, sharing information and knowledge will only bring results if this implies a learning process, as simple access to information and knowledge without such a process will not change reality, and will therefore lose sense.

Thus, one should keep in mind Dixon’s statement (2000) when he says that, if people begin to share ideas and realize the importance of this process, sharing itself will create the culture of learning. Meaning arises from exchange, and especially from interaction.

3.2 Interaction Design, beyond user experience

In the quest for understanding the concept of interaction, one may realize that Design, as a project activity centered on human beings, consists, in its way of seeing, in interpreting, in coexisting with the social environment in a holistic and ethical way. Based on such Interfaces, it is suggested, according to Royo (2008), that definition reaches a broader context, so that Interaction Design can be characterized in a more evolved stage of this conception, as follows: a space that sets the boundaries of interaction design with a view to its form, language and actions that fully anticipate interaction with information, respecting users’ native skills in order to facilitate its use to fulfill a specific need. In this case, it may be synonymous with user’s experience, but it certainly goes beyond a handling-based quality.

Another similar view found during this review proposes, recalling Lima and Dias (2012), that Usability is linked to the system’s ability to interact with the user. Therefore, it appears to be a property of the interaction between product, information, user, task and context. At this point, once again, interaction is seen as a key element and as a connecting agent for the others. That said, users’ involvement can be revisited at three different levels: tasks, emotions, and qualities associated with the product.

In this case, now talking about affection, pleasure, enjoyment and fun, all these elements can be critical to stimulate both interaction and the discovery of new ways of interacting. In this regard, it makes sense to revisit Desmet’s proposition (2004) when he describes emotions as a mechanism that signals when events are favorable or unfavorable for a particular interest. Certainly, they are not properties of technology, but they can be construed as feelings arising from the experience of use. Therefore, it is possible to recall another objective of Interaction Design by highlighting that it should stimulate interaction and exploration. And this will not happen by chance but is rather the result of a careful interface design. However, one must not forget the role of equalizing competences and challenges as an equation to reach a stage of confidence and relaxation that can lead users
to a sense of Flow. This is the pleasure acquired by performing a task in itself and also as Williams and Dargel (2004) advocated.

In a slightly further elaborate proposition, Saffer (2007) said, when considering that Interaction Design is more related to human behavior than to the aspect of the screen. Together, Preece, Rogers and Sharp (2002) are referred to when they describe the same concept as the design of spaces for human communication and interaction. Now, after such substantiations, it can be highlighted that interaction design should aim to connect people through products and should be an informational space where communication can take place, as Krippendorff (2005) pointed out. In other words, the value is not in the things themselves, but rather in the knowledge contained therein and in the new knowledge generated by using it. To this end, Information Architecture (IA) will always bring very effective contributions, because, as a concept, it must be regarded from a perspective that involves the content, the business strategy and the user. Additionally, information must be seen as something that has to be designed and structured to be found, accessed and used. It is noted that, in a transversal way, interaction design is present, but it is also true that without information, such interaction cannot be sustained. Garrett (2003), on the other hand, broadens this understanding by believing that IA is about content design and user experience.

In turn, both IA and Interaction Design are part of a highly complex ecosystem of behaviors, being a part of the interactive human-information-technology dialog.

4. Interviews with educators and professionals

The interviews with professionals and educators in the areas of Design and Communication sought to map out their understanding of such issues related to the subject of the research. In order to have a representative sample of different profiles and cultures, professors from two nationally renowned specializations, located in Rio de Janeiro, were selected, either because of their pioneering spirit or because of their recognition in the market. Therefore, such collaborators can be regarded as opinion leaders, educators and representatives of major companies in the interactive media sector.

The interviews had a pre-defined logic, and included a structured procedure, in which the concepts were presented sequentially, always one at a time, exactly as below.

1. Information.
2. Interaction.
3. Interaction Design.
Table 1. Interviewee profile

<table>
<thead>
<tr>
<th>Code</th>
<th>Training</th>
<th>Trainer</th>
<th>Specialist</th>
</tr>
</thead>
<tbody>
<tr>
<td>1MMEBGRP1212</td>
<td>Design</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>2MMLTPAM1012</td>
<td>Design</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>3MMERFINPU0912</td>
<td>Design</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>4MFCHMGPU1212</td>
<td>Design</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>5DMLMACOP1112</td>
<td>Design</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>6MMFRFCOP1112</td>
<td>Communication</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>7NMLCAGPU1112</td>
<td>Design and Communication</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

4.1 Information

The first word, printed on the sheets handed out to participants, encouraged interviewees to make remarks regarding the plurality of understanding, human dominance over its nature, the vast amount of information in current times, and its ubiquitous nature in post-Internet society.

First interviewee, NMLCAGPU1112, when thinking about Information, contributes by recalling researcher Peter Morville. Then he talked about complexity, just like other collaborators, to the point of saying that such concept had not been properly defined. As a justification, he contextualized it as follows: “... it is a rather polysemic term from the point of view of Information Science. It can have different meanings and can be construed in different ways”. Finally, he found a definition he prefers. So, he said: “I really like the view where information is seen for itself. In it, information is understood as an attribute of the universe, that is, of our world. And it has space, energy, mass, movement and information”. Collaborator MMFRFCOP1112 said: “Information is, more than anything else, a function.” Then he went on: “The function of any data is to become information”. Interviewee MMLTPAM1012 said: “Information is the medium in which we live”. This collaborator justified his initial thinking by going beyond the context and postulating that one lives in the information medium whilst, at the same time, information frees the individual, giving them autonomy so that they (users) may do whatever they want. However, at the same time, Information would condition people in a variety of delimiting situations. Thus, the collaborator recalled Bill Viola, a New York born American video artist, when he said that the concept of information refers to its own access, as well as the waste of information due to overexposure.
4.2 Interaction

Interviewees shared different impressions, but with very similar guiding principles, particularly the way in which interaction has a broad human dimension and how it is both marked and shaped by the same existential plane.

Specifically, for educators and specialists (DMLMACOP1112), interaction has a temporal boundary. In this way, the current time, the way in which demand becomes evident, the inherent medium of use, the allowed density, the types of drives, the responses provided by the apparatus and the never-ending real time mutation must be contained in any definition related to such a concept. Due to the proliferation of interactive technologies, the interviewee believes we are living in the era of technological interaction ubiquity. Then he postulated that the types, density and depth of interaction may be different due to the characteristics of the devices. He also pointed out that the degree of depth and intensity is not always the same, as there are times when the user investigates deeper than others. With his own approach to the temporal issue of interaction, interviewee MMLTPAPM101 said after a brief pause: “Something that marks our passage through things”. At this point, it has to do with the human ability to interact with objects or people. He goes on in his reflection: “... is the relational. In other words, it is what we seek, desire and that fulfills us in a certain way”. Interviewee MMFRFCOP1112, in turn, said it is the systematization of a human relationship, especially for those who come from the areas of Communication and Design.

More specifically, NMLCAGPU1112 likes a concept of Interaction that comes from the investigations made by researcher Alex Primo (professor at UFRGS). This professor and researcher fail to understand interaction through a reductionist perspective. He sees interaction as a reaction and explains: “When interacting with a machine or software, a person will get a pre-programmed response within a selection of alternatives existing in the algorithm of that technology. In turn, the user will respond reactively - just like the artifact, but in another dimension. So, when it comes to Human-Computer Interaction (HCI), we are, in general, dealing with this type of interaction”. However, there is still another level of interaction, seen as mutual. In such an interaction, a human can interact with another human or even with several users, but always mediated by a machine. Above all, within the same proposition, the interviewee highlighted that several people could interact with each other, all participating at the same time, although abiding by the same mediation dynamics performed by technology. Thus, the interlocutor could enable changes, certainly modifications, during the course of their own experience. To him, this means a level up in terms of interaction. Sometimes, aspects of the so-called reactive interaction can be found in mutual interaction, but this is not a rule.
4.3 Interaction Design

Here, questions related to dialog experience design arise in a specific context, using technological tools as a means, guided by the skills of those individuals who operate the interface.

Interviewer MMERFINPU0912 comments on experience as a more contemporary concept, namely: “It is a way to design dialogues. As a designer, I believe that all interactive products come to solve an interaction problem”. In this regard, the interviewee advocates Interaction Design as a means to get to the solution of such a problem. According to collaborator MMLTPAPM1012, Interaction Design has the following meaning: “It’s how I design interaction. Even if it is idealized”. Then, the interviewee tried to synthesize his thoughts, as follows: “It is when I design the experience the user will have in terms of interaction”. For interviewee MMEBRRGPU1212, it is when the specialist will act in the way of designing how people will interact with the system. At this point, the collaborator made a reference to the sense of materialization of product’s key concepts. Interviewee MFCHMGPU1212 commented on how the designer should design the interaction of a product, advocating a very close relationship with Information Architecture. In the same way, collaborator NMLCAGPU1112 highlights that Interaction Design should have to do with the act of designing a certain product that will play the role of mediation between the different types of possible interactions, namely, either reactive or mutual. He continues linking the concept to design, research and a relative search anticipating how interactions will take place. On the other hand, participant DMLMACOP1112 said: “Design using all the multimodal capabilities of the tools”. For this to happen, he refers to Design, in the sense of a project, making people use technologies in a natural way, without looking like they need a lot of effort and, above all, technologies that make sense, especially at the time of using. Thus, he states: “Do something that makes sense at that moment rather than through the free means of technology. Making sense is the greatest thing”. To better explain his thinking, the interviewee goes on: “… not the free means of technology. One sees when something is forced and when something is natural. So, it closes, fits and there is real involvement”. In conclusion, he says: “… how much people take ownership, take advantage of and enjoy their integration with information through the interface”.

4. Conclusions

This final section is not intended to exhaust the issues raised, but rather to provide a parallel perspective on the central themes addressed herein.

Based on the bibliographic sources, it was possible to verify a relationship between Interaction Design concepts and the other concepts. The interaction, technology and information trinomial seem to have two modular transversal axes: design and users. Thus, the sense of design as an articulating field is reinforced, which interacts with technology,
making it unnecessary to legitimize a single immutable concept. However, certainly, information aims to change the way the receiver will perceive something and, because it is dynamic, it becomes complicated to define it in a deterministic way. Therefore, a first wording is created to characterize Interaction Design more fully, although other facets can still be addressed. These include the proposition of an intimate Information Architecture, almost internal to the individual, since, in order to design based on users’ experience of use, it is necessary to have a better understanding of their habits, activities, mental work and feelings when dealing with the digital world of information. Additionally, based on Suri (2007) - an understanding that, as the interviewees have already pointed out, is not effective to train new information architects and interaction designers. At this point, a point of interest and concern arises when thinking about the more social developments for the interfaces developed by such specialists involving information and communication technologies.

In a slightly further proposition and based on what Saffer (2007) said when considering that Interaction Design is more related to human behavior than to the aspect of the screen.

Together, Preece, Rogers and Sharp (2002) are referred to when they describe the same concept as “the design of spaces for communication and human interaction.” Now, after such substantiations, it can be highlighted that interaction design should aim to connect people through products and should be an informational space where communication can take place. In this way, it can also be assumed that ICTs are an interface to bring people together, since it is the means of this communication and not the end. This is justified when one accepts that the new logic is in the value of the information obtained from an interactive experience. In other words, the value is not in the things themselves, but rather in the knowledge contained therein and in the new knowledge generated by using it.

However, at this point in the discussion, consider that interaction begins long before the existence of a concrete product because, in theory, it is a productive and creative act of an individual who needs and longs for a tool capable to provide him with information - here a more internal space is considered for the external, that is, it speaks directly to the dream and ideal that will eliminate the bitter nature of such emptiness caused by the information gap to the potential user. At the same time, ICTs will intensify and enable end consumers to innovate interactive technological products and services. It is through this same interaction that people share meanings and senses digitally, since the Information Society operates based on information that is loaded with intention and feelings.

Therefore, the concept can be configured through the ubiquity of technological interaction, the first steps of direct manipulation and integration with users’ studies tracing their informational needs, in addition to case studies covering a broader topic. Thus, ultimately, the Interaction Design seems to be, in this context, the design of plural experiences that will mark the passage through information structures that dignify human beings, thus enhancing their qualities, bringing meaning and improving their most intimate skills.
References


**About the Author:**

**Eduardo Ariel de Souza Teixeira** is a professor, researcher and academic director at ESPM. Graduated in Communication from ESPM, Post-graduated in Interface Design from UniCarioca, master and PhD in Design from the PUC-Rio. Post-Doctorate in Information Science from IBICT.
The Emergence of Modern Design Discourse in the Eastern Mediterranean Region (EMR)

Qassim Saad
School of Design and the Built Environment-CURTIN UNIVERSITY
Qassim.saad@curtin.edu.au

Abstract | This study will offer an overview of applied discourses of design in the Eastern Mediterranean Region (EMR), including Egypt, Palestine, Lebanon, Syria, Jordan, and Iraq. These countries have been known for their pioneering statues, creative engagements, and influence on shaping, resourcing, and sustaining the emergent project of modernity in the region since the 1940s. Studies of the contemporary discourse of design for these countries are acknowledged as underdeveloped, with extremely limited studies addressing its context and practices. This study will survey identical phases throughout the contemporary history of these countries, observing major stages that transformed the societies within them into sovereign territories and national states after World War II. The study will explore and critically review key historical themes in the regional socio-political rhetoric since the 1950s, specifically those associated with and involved in shaping the emergence of design as a modern discourse in the region.

KEYWORDS | DESIGN IN THE EASTERN MEDITERRANEAN, EMERGING DESIGN, MODERNITY, DEVELOPMENT, INDUSTRIALISATION.
1. Introduction

Studies in the socio-politics of development culminated in design discourse as a process at the micro-level to enhance technology transformation and industrialisation to achieve economic growth. This context emerged in the Eastern Mediterranean region after World War II, when development was promoted as a process targeted at fulfilling basic human needs. The United States clearly articulated these principles through a program President Harry S. Truman presented in his inaugural speech on the 20th of January, 1949:

“Fourth, we must embark on a bold new program for making the benefits of our scientific advances and industrial progress available for the improvement and growth of underdeveloped areas.”

Based on the United States’ extensive engagement with industrialisation, this program attempted to promote society’s economic growth over the previous European colonisation era (Dorrestijn, 2013). According to Mignolo (2011), this era was shaped “not by appropriating land, but by managing finances and natural resources through the project of development and modernization” (Mignolo, 2011, p. 32).

The politics of modernity and development directed the political rhetoric of developing countries such as the EMR during the vibrant era of the 1960s-80s, and was reflected in the design context progressing and linking with development strategies. It endorsed the vital need for developing countries to apply design knowledge and practices in their strategic development plans. This is presented as a unique attempt in the design history of the developing countries, and the region, which was acknowledged at the end of the 1970s when the Ahmedabad Declaration was articulated as a framework of interlinked design discourses and socio-political practices for the benefit of developing countries (Saad, 2013).

The postcolonial regimes in the region embedded ‘modernity’ and ‘development’ as synonymous terms in the political, economic and social rhetoric from the 1960s. A number of resolutions since then guided and demonstrated the context and pedagogy of design education applied models in the region. These can be classified into three different models:

1. Applied Arts Designers (AAD) sustains the Art and Craft and the Bauhaus methods and practices in design pedagogy. AAD dominates education programmes at the higher education institutions and the local professionally accredited institutions in Egypt specifically.

2. Design as a discipline in the institutions of Fine Arts, seen predominantly in Iraq, Syria, Lebanon and Jordan. This model continues to amalgamate design knowledge

---

2 [Applied Arts Designers Syndicate](http://www.eds.org.eg/portal/)(the website in Arabic)
The Emergence of Modern Design Discourse in the Eastern Mediterranean Region (EMR) based on aesthetics and local traditional context and practices. This context applied also on the design professional practices in these countries.

3. A model of design programs established within schools of architecture since the 2000s, responding to marketing demands to link design as a profession with the architecture. Such demands promoted by the private higher institutions spread rapidly in Jordan, Lebanon, and other regional countries. It is similar to model (2) concerning pedagogy and the practice of treating design as a fine arts discipline.

The dominant geopolitical instability and broader conflicts from external as well as internal powers, seen extensively in the current chaos overtaking regional societies such as Syria, Iraq, and Lebanon, can be seen in numerous cultural manifestations. Those conflicts holding design disciplines moving outside the dominant ‘early modernity’ emerged context and practices, as can be seen in other cultural creative practices such as literature, poetry, fiction, theatre, cinema, art, architecture, sport, media, and communication. This study will explore and critically review key historical themes associated with the emergence of design as a modern discourse in the region since the 1950s.

2. Design as a Manifestation of Modernity

A sense of hope was revived in the region to liberate people from the long-term Ottoman hegemony when, at the turn of 20th Century, Western modernity emerged in the region with the introduction of Western progressions in science, technology, art, and social systems. The slow emergence of direct and indirect communication channels between Arabs – the regional majority – and Europe extended the number of European books, periodicals, and newspapers available to Arabic readers. Moreover, new opportunities were available for regional students to continue their studies at European Institutions. As a result, many waves of migrants from Syria, Lebanon, and Palestine departed their lands and went to the ‘new world.’ The expansion of communication with Europe and America supported efforts by regional writers to engage in writing and to “express in Arabic their consciousness of themselves and their place in the modern world” (Hourani, 2005, p. 503). Despite this, religion continued to fuel reactions against practices rooted in Western modernity, and movements in Egypt, Syria, and Iraq “acquire[d] the strength to confront Europe and become part of the modern world” (Hourani, 2005, p. 503). A challenging debate developed between traditional Islamic thinkers and the newly-educated social leaders with regard to the alignment of modernity with Islamic principles in education, socio-cultural practices, and economics, based on the fact that “modernity is Western, and imperial powers have imposed the Western ways of thought associated with it on the Middle East” (Helfont, 2015).

Simultaneously, this era addressed the rise of nationalist political beliefs that guided civil leaders to seek European support in their attempts to detach from the hegemony of the Ottoman Empire. (Mackintosh-S, 2019) Moreover, geopolitical and economic factors led the European colonial powers that controlled parts of the regional territories after the end of
WWI to arbitrarily draw borders, dividing the region into new states. These borders represent the “colonial power seeks to design a world that accords with its desire for power and control.” (Kiem 2017, p. 2) Also, those borders have remained a major source of conflict and instability in the region in present times. European attitudes promoted the self-determination of national entities and created a new Arabic political identity that justified their mandate agreements with the local social groups. The colonial mandates were formally granted in 1922, when the League of Nations gave Britain sovereignty over Iraq and Palestine, and France sovereignty over Syria and Lebanon (Jackson, 2017) (Mackintosh-S, 2019). Support for the modernisation of these new territories and transforming their isolation into part of the new world was one of the major arguments justified and legalised Western domination in the region (Kingston, 2002).

European mandate powers supported the formation of states in the region, and shaped their socio-political order. Iraq, Jordan, Syria, and Lebanon then further provided consultation, finance, and technical expertise covering broader aspects relating to forming governments, managing the social system services, and planning for infrastructure projects targeting the major cities of Baghdad, Damascus, Beirut, and Amman. Urbanising projects based on modern architecture was introduced in those cities and first seen in government administration buildings and transportation networks and stations. These buildings were prioritised to support the creation and expansion of modern social system services relating to health, education, housing, and social security. The era culminated with the introduction of early modern material objects in parts of those regional capitals such as railway stations (Figure 1), hospitals, schools, higher education institutions. These buildings demonstrated early attempts to introduce modern architecture in addition to their furnishing and accessories. While many of these early examples were designed by European architects or imported from Europe, they were promoted as modern lifestyle objects to enhance people’s interaction with them. Examples of other modern lifestyle objects introduced at this time include domestic furniture, home appliances, transportation vehicles, and electric appliances.

These buildings and objects served as inspirational elements for many handcraft practitioners to develop their products, style, materials, and production techniques. These modern material objects are reflected later in many socio-cultural manifestations and supported the regional transformation toward the modern European lifestyle. This was seen not only in private houses, but also a wave of modern social spaces such as cafés, social clubs, cinemas, public libraries, art galleries, museums, theatres, and public services offices. Access to these services gradually expanded outside the elite social groups and into the newly flourishing middle-class consisting primarily of public service workers. In fact, this vibrant social group supported the expansion of design and production processes to fulfil their demands for modern housing, domestic furniture, entertainment, publications, and many other modern lifestyle services.
The relatively stable socio-political order in Egypt, Iraq, Lebanon, and Jordan at that time contributed to socio-cultural progression beyond the basic human necessities. For example, the Iraqi government created the Iraqi Development Board (IDB) in the late 1940s, aiming to utilise the expansion revenue from the oil export industry to finance extensive infrastructure and urban planning projects. This covered the entire country and presents a unique example of enhanced progression toward modernising the country. Baghdad also emerged as a modern capital city during the 1950s. The IDB commissioned elite European and American architecture, in addition to pioneering Iraqi architects to design modern architecture for
public buildings, university campuses, national theatres, sports stadiums, and many other buildings (figure-2).³

Figure 2. Louis McMillen, Umberto Varnini, Walter Gropius, and Hisham Munir (an Iraqi architecture) 1967, The University of Baghdad campus. Source: Harkness, John C. The Walter Gropius Archive..., P237) In http://postwarcampus.wordpress.ncsu.edu

Since World War II, the EMR has been considered a pioneer in the successful implementation of modernity through applied strategies and programs of development, considering that,

“post-colonial societies... are said to be strong, in that people rely on social networks rather than the state to meet their needs... they rely on tribes or villages notables. As a result, it has been difficult for these states to carry out their policies and they have often had to resort to violence (Helfton, 2015).

That era of political stability ended dramatically, fuelled by military coups initiated in the early 1950s in Egypt and then Syria, and in the late 1950s in Iraq. These coups introduced political instability driven by age-old problems, both internal and external, leading to the

³ The Iraqi Development Board (IDB) commissioned Le Corbusier to build a mammoth sports stadium, Walter Gropius from the Architects Collaborative to design Baghdad University, Alvar Aalto to design a civic center, and Frank Lloyd Wright to design an opera house. Additionally, the pioneer Iraqi architects Mohamed Makiya, Kahtan Awni, and Rifat Chadirji were offered the opportunity to design many public buildings.
The Emergence of Modern Design Discourse in the Eastern Mediterranean Region (EMR)

dynamic and meta-complex problems seen in the region today. When the project of modernity was framed by these problems—empowered by a collective identity—the situation again fostered religious contradictions and political fundamentalism began to flourish. Intellectual modernity as a structure and concept progressed under complicated circumstances that were widespread in the region. According to Tagharobi (2016),

“there were three waves that demonstrated transformation toward modernity in the Middle Eastern region: Modern literary forms were primarily seen as a way of supporting social and political reform... Emphasis on domestic sources of thoughts and development under leftist influences, when the will to change was manifesting through nativism... The last wave of intellectuals see the path toward change in analysing their own societies through modern critical disciplines and by adopting historical perspectives towards their contemporary issues.” (Tagharobi, 2016).

Historically, design knowledge was applied to promote the production of handcrafts, which was treated as an important sector for its ability to support regional economic growth. At the same time, design practices were applied as a secondary layer to the production of quality crafts ready for export to international markets, specifically in Europe. In this context, the design discourse promoted the “organic relationship that the crafts-person had with his works, and with his culture” (Author, 2005, p. 106). Overall, attempts to introduce modern design discourse in the region, as well as in many other developing countries, reflected the specific contexts and practices of design in these countries. Craft-oriented societies and social practices dominated the making process in countries like Egypt and Syria, for example, (Faroqhi, 2012) which exemplified the design context following art and craft movements. The stagnation and disempowerment of the modern design discourse in the region represents a resolution from the long-standing promotion of traditional contexts of design and its association with artistic and artesian practices. These practices dominated, and continue to be the guiding context and practices behind design education in the majority of design education institutions established in the region since 1950s.

4 In Jordan, the US ‘Point Four’ program focused on technically and financially supporting local craftsmen through design consultation, grants, and services, with a local community development foundation established for this purpose. The Walter Dorwin Teague Association in America studied the Jordanian handicrafts industry in the 1950s, and the study later led to a strategic plan to develop a number of NGOs to support craft sector production, training, and marketing in Jordan. (Saad, 2006)

5 For example, the Faculty of Applied Arts in Egypt, established as a vocational school in 1839. In 1909 the school initiated craft and art as a new discipline. In 1932, the School of Vocational Education changed its name to the School of Arts. In 1942 it was referred to as the Higher School of Applied Arts. In 1975 the school partnered with the University of Helwan (a state-funded university) to become the Faculty of Applied Arts. It is now known as the mother of all Applied Arts faculties in Egypt.
3. Politicisation Modernity

The socio-political order has undergone dramatic transformations since the 1950s, seen in the military coups over monarchies in Egypt in 1952 and in Iraq in 1958, while Syria has faced many military coups since its liberation from the French in the late 1940s. The rhetoric of modernisation and development has been extensively promoted by the new regional post-colonial military regimes since the 1960s, using “the military and their methods of discipline and indoctrination” (Mitchell, 1988, p. XI). The socialist political discourse in Egypt, Syria, and Iraq utilised “development... led by an alliance of the military and the working class” (Kadri, 2016, p. 12) to achieve modernisation, which was defined by Mignolo (2011) as

“a want to have a comfortable, middle-class existence with all the amenities and attributes that go along with it—clean water, indoor plumbing, electricity, telecommunications, infrastructure, personal safety, rule of law, stable politics and a good education system.” (Mignolo, 2011, p. 52)

This was further inspired by political debate that the developing countries initiated against colonialism or neo-colonialism, articulated through the principles of the ‘non-aligned’ political movement established after the Bandung Conference in 1955 in Indonesia, where new independent Asian, African, and Latin American countries agreed to cooperate economically and culturally to oppose neo-colonialism. The movement’s first meeting was later in 1961, where developing countries “made visible the hidden face of modernity, that is, coloniality” (Mignolo, 2011, p. 47). The instability of international political discourse during the 1960s, affected by Cold War tensions, empowered developing countries to search for alternative solutions to strengthen their development strategies (Trentin, 2009). Industrialisation was endorsed by many of those countries as the fundamental objective in their progression to achieve modernisation and development. Industrialisation was considered the path to transforming economic growth from agricultural-led into industrial-led, to fulfil the modern lifestyle of materialisation while at the same time responding to the politics of self-efficiency.

In this political context, design discourses were promoted in association with their social context,

“beginning with the arts and crafts movement in Britain in the 19th century... social engagement was a main driver of design theory from the time of the emergence of the profession of designer in the context of industrialization” (Dorrestijn, 2013, p. 47),

and utilised as essential creative practices serving industrial manufacturing production. Furthermore, this aligned with previous local and international attempts seen in design theory, design education, and professional design practices during the 1960s–70s that stimulated design discourses’ core function in social and economic growth through industrialisation (Gwendolyn, 2017) (Papanek, 2018). Debates concerning the modern role of design practices have continued in the political rhetoric in developing countries since the 1970s, responding to the expanding demands for materialisation and its signifying...
characteristics in the empowerment of social groups. According to Bonsiepe (2006) “the excluded, the discriminated, and economically less favoured groups as they are called in economist jargon... [amount] to the majority of the population of this planet.” (Bonsiepe 2006, p. 30) This is applicable to the scale and types of technological knowledge transforming developing countries, supporting the need for design practices to engage and effectively utilise these new technologies. However, new technologies are divided into hardware and software; that is, “technology implies hardware and software—and software implies the notion of design as a facet of technology that cannot be dispensed with” (Bonsiepe, 2006, p. 31). This definition supports the role of design in industrialisation, as well as its role in socio-political capacities to create a path toward the democratisation of society and to “provide for a broad sector of the population to have access to the world of products and services in the different areas of everyday life: health, housing, education, sports, transport, work, to mention only a few” (Bonsiepe, 2006, p. 32).

Responding to late 1970s political debate, the ‘Design for Development’ movement was introduced politically when the ‘Ahmadabad Declaration’ was issued in India in 1979. The declaration resulted from joint efforts between the United Nation Industrial Development Organization (UNIDO), the International Council of Societies of Industrial Design (ICSID), and the Indian National Institute of Design (NID) (Figure 3). The document explicitly proposed the engagement of design with development as the right way to approach design in developing countries. Additionally, the document marked the “first time that industrial design had been suggested as worthy of inclusion in national development plans” (Coward, 2005, p. 545). The declaration’s major principles presented the following points regarding design:

- Design is “a powerful force capable of improving the quality of life of developing countries’ populations.
- Designers should understand and recognize the values of their societies and reflect them in their designs.
- Designers should utilize both local, traditional resources and modern science and technology.
- Designers should collaborate with one another to ensure that collective identities are preserved and the priorities of these collective identities are met” (Ahmedabad Declaration, 1979).
India was characterised as one of the ‘non-aligned’ movement’s founders and leadership countries, as was Egypt at that time, and this fact was addressed as the political ideology that supported the establishment of the ‘Ahmedabad Declaration.’ As Margolin (2006) argued, “it was in the spirit of an aggressive call by the developing countries to restructure the world economy that the Ahmedabad conference was held and the declaration was produced” (Margolin, 2006). However, the ‘Ahmedabad Declaration’ continues to maintain its position as the only official document at the international level that articulates the strategic role of design discourse and practices in supporting the development of developing countries. Additionally, the document articulates the spirit of modernity in the political context by shifting design from its local and traditional context toward enhancements in the modern context. Iraq was the only EMR country to sign this document, and embedded its principles throughout design education and professional design practices specifically in the discipline of industrial design. This addressed the Iraqi political demands toward industrialisation. As Parsons (2016) writes:

“What the Modernists sought, therefore, was not to turn design into ‘fine art’ or tradition-based craft, but to blend the best elements of traditional craftsmanship,

Responding to the declaration principles the Iraqi government, with technical support from the United National Industrial Development Organization-UNIDO, established a centre to support local industrial manufacturing corporations through research and development. The Specialized Institute for Engineering Industries-SIEI was established in the late 1970s with objectives to utilise industrial design knowledge and practices in the process of developing Iraqi manufactured products.
modern mass production and fine art into a new way of producing material goods that made sense in the social context of contemporary life” (Parsons, 2016, p. 46).

This context enforced the nature of interdisciplinary knowledge and practice that culminated in the design process in terms of innovation, visualisation, production, promotion, and marketing. These practices identified design as a micro-element within industrialisation and production processes; however, the nature of design practices overwhelmingly shows that design plays a macro role in efforts to achieve human development goals, especially in developing countries. Such arguments support the value many governments placed on addressing and elevating design as a strategic factor in their development planning. New waves of policies—the ‘design policy’ or ‘design and innovation policy’—utilised design discourse as a core for strategies toward implementing and promoting the country. Additionally, the power of design has been identified in relation to national economic growth. Accordingly, further new waves of design policies have been issued in countries such as Estonia, India, New Zealand, South Africa, and many more. The transformation of design discourse emergent in developing countries can be visualised as seen in Figure 4.

Figure 4. Mapping design discourse emergence and transformation in developing countries and the EMR’s
4. Conclusion

Since the 1950s, revitalising capital and other major cities in the EMR has been demonstrated through modern infrastructure, urban planning, architecture, and broader expansion of available materialisations to provide a better quality of life for the region. Design practices and services have been creatively utilised to enhance regional societies’ transformation and achieve development. This process was initially guided by the mandate system and later by the postcolonial national governments. The process influenced the emerging design context to enhance economic growth and development; as seen in strategic infrastructure planning by both the development board in Iraq (IDB) and later in Jordan (JDB) initiated during the 1950s-60s and also by sustained industrial manufacturing capabilities in Egypt and Syria, also promoted Lebanon as the regional destination for finance and tourism. The process benefited from the relatively stable socio-political systems until the 1950s. The state-supported postgraduate scholarships of that period must be strongly acknowledged for the ways they allowed local architects, artists, and applied artists to study abroad, who after graduation became the pioneering figures of foundation programs in architecture, art, and design at the higher education institutions. These programs then expanded to broader disciplines in architecture, communication, ornamentation, fine arts, etc. in Egypt, Lebanon, Syria, and Iraq and the establishment of associations to support and promote local handicrafts sectors in Jordan.

The principles of modernisation and development have been re-contextualised since the 1960s by developing countries and articulated through the political principles of the non-allied movement, which later promoted self-efficiency policies. These factors imposed new nationalisation military orders in Egypt, Syria, and Iraq, actioned to face the hegemony of neo-colonialism over the region’s natural resources. The 1970s-80s experienced extensive promotion of economic growth based on industrialisation, which was represented as the core principle to achieve modernisation and development. The milieu offered the emerging design context and practices new scope, aimed at developing local visual aesthetics and reflecting creative adaptation between modern aesthetics and the regional heritage visual culture, articulated by Akkach (2014) “The main preoccupation of this trend has been the idea of difference. The search for cultural identity in all spheres of thought and practice has been essentially a search for difference” (Akkach 2014, p. 61). Creative application of this adaptation can be seen in architecture, communication media, and many other creative works (Figure 5). Moreover, the design studies progression toward utilising design practices to achieve innovation through strategic national policies inspired the creation of the ‘Ahmedabad Declaration’ of ‘Design for Development,’ which transformed the role of design into a strategic core element of development planning. This was specifically enforced through design education in Iraq for example. (Saad, 2020).

---

7 Examples of the historical discourse surrounding this development can be found in Britain, through events such as the conference of ‘Design Policy’ organised by the Department of Design Research-Royal College of Art, the Design Council, and the Design Research Society in 1982.
Derived from international experiences around the significance of design knowledge and practices in branding, new events continue to emerge in the regional capital cities that target the strategic role of design to support local innovation and creativity. Examples include ‘Design Weeks’ in Beirut, Amman, and Cairo. Unfortunately, outside these new events, the design discourses in the region continue to suffer from deep immobilisation since 1980s due to socio-political instability, and the dominant conflict limits expansion in the region.

---

5. References


Ibid


Ibid


Ibid

Ibid


About the author:

Dr Qassim Saad is an Iraqi industrial designer living in exile since 1991. He taught design and assigned for academic leadership roles across international institutions. Saad research embraces creative practice outputs and scholarly publications related to design and social context in the EMR
The engagement of visitors in faber’s houses and studios. Empirical design research and experimental actions in Lombardy

Raffaella Trochianesi*, Anna Mazzanti*, Alessandra Spagnoli*, Davide Spallazzo*

*Design Dept., Politecnico di Milano
**raffaella.trocchianesi@polimi.it

Abstract | Lombardy is characterised by industriousness and creativity, a crucial aspect of the region’s identity that drifts from eminent artists, designers, and architects from the late XIX century to the beginning of the XXI century. This context is the action field of D.E.SY. (Designing Enhancement Strategies and Exhibit SYstems for the Italian House Museums and Studios), a research project carried out by the authors that aimed to improve and investigate theories, methodologies and design solutions in order to foster enhancement strategies for house-museums and studios of artists (faber): eminent creative personalities connoted by a tangible output and whose studios and houses are influenced by their “creative action”. The three meaningful examples of experimental actions developed within the research are: Genius Loci; Atelier as living nature; and The art and its inhabitants: artistic imaginaries between houses and exhibitions. In conclusion, the paper argues the interdisciplinarity between design and art through an empirical approach and three experimental actions focused on the enhancement of both tangible and intangible values of artists (faber) and their workplaces.

KEYWORDS | ART&DESIGN, HOUSE MUSEUMS, CREATIVE’S ATELIER, DESIGN FOR CULTURAL HERITAGE, CULTURAL NETWORK
1. Introduction

Lombardy is characterised by industriousness and creativity, a crucial aspect of the region's identity from the late 19th century to the early 21st century, including internationally renowned artists, designers and architects.

This context is the field of action of D.E.SY. (Designing Enhancement Strategies and Exhibit SYstems for the Italian House Museums and Studios), a research project carried out by the authors that aims to improve and deepen theories, methodologies and design solutions to foster strategies for the enhancement of house museums and the studios of artists and designers (faber): eminent creative personalities marked by tangible production and whose studios and houses are influenced by their "creative action".

The places involved include both real institutionalised house museums and spaces that represent just neglected potential future museums, but still reflect the narrative of their original function. Moreover, they can be spaces owned by public or private institutions. The focus of the research also includes houses and/or studios that have been partially modified over the years. The narrative of the original place is hidden but still traceable and could be virtually reconstructed thanks to the remaining visual documentation and other sources.

This essay aims to present some results of the research developed in the analysis of existing cases and addressed to some design-drivem proposals in order to enhance the experience of visiting such places.

The subject of this study is a group of representative house museums and studios from the late 19th and early 21st centuries. They are all significant examples of eclectic culture, the expression of artistic personalities, at the same time designers and compulsive collectors, a mise en scene of their taste and creative spirit. These "special" environments, paradigmatic "magician's laboratories", are therefore considered to be a well-recognised heritage even by museum protection and conservation institutions such as ICOM. Indeed, in addition to an immersive portrait of creative and unique personalities, they also include many aspects of everyday life and thus important historical traits that are recognisable as an outstanding part of territorial identity. Moreover, faber spaces, often animated by passionate heirs and curators, represent a countertrend to a diffuse and less sustainable hypermuseum. In this way, taking into account the projects developed by D.E.SY., these spaces generate educational processes for communities (Bosoni, Lecce 2019; Mazzanti 2019).

On the other hand, the analysis of the criticalities related to these places highlights the connection between different narrative levels: the historical background of the houseowners/creators’ lives, their specific personalities, the lives lived in these houses, the relationship with their own creative expressions in their lives, the relationship between their collections and their creations, the relationship between the space of creation and the space created.
Three significant examples of experimental actions developed by the authors within the D.E.SY research are: *Genius Loci*, a cultural experience based on an interaction design approach; *Atelier as living nature*, a series of exhibitions located in ateliers; and *The art and its inhabitants: artistic imaginaries between houses and exhibitions*, an experimental action focused on the exhibition and meta-design approach.

*Genius Loci* was developed in collaboration with Museo Bagatti Valsecchi and proposes an innovative approach to enhancing heritage through non-invasive digital technologies.

Three photographic exhibitions entitled *The Atelier as Living Nature* were hosted at the Fondazione Albini, the Fondazione Castiglioni and the Studio Negri; they showed views of studios at the time when their creators were active, creating an intriguing dialogue with the current studio environments and the voices of the *faber’s* heirs and museum curators. The exhibitions also fostered an eloquent new narrative, reawakening the connotation of these spaces as a true 'Living Nature'.

*The art and its inhabitants: artistic imaginaries between houses and exhibitions* is based on the interpretation of the "portrait" of the artist’s home and studio and aims to answer two research questions: how does the physical workspace influence the artist's creation process? How do the creation processes and techniques combine to "shape" the creative space? Herein, the aim is to collect different design-driven interpretations within the same methodological context: from a field analysis to an interior design output.

In conclusion, the article supports the interdisciplinarity between design and art through an empirical approach and three experimental actions focused on enhancing the material and immaterial values of artists (*faber*) and their workplaces. Museum scholars define these as "talking spaces", places that with their furnishings become the "body of an intention" (Orsini, 2012). The D.E.SY. methodology has focused on them with non-invasive good practices and micro-interventions to decode them as environmental diaries (Mazzanti 2019).

2. Experimental actions

2.1 *Genius Loci*

The Bagatti Valsecchi House Museum is a special place, with a vibrant soul, worthy of exaltation. The house is the result of the creative minds of Fausto and Giuseppe Bagatti Valsecchi, two brothers of the Milanese upper middle class of the 19th century who dedicated their lives to it.

To create a real sixteenth century mansion, the brothers dedicated themselves to a detailed study of the most important palaces of the Italian Renaissance, not to reproduce a specific model of the past, but rather to take advantage of multiple sources of inspiration that they could elaborate in a completely personal key (Rolando, 1999), creating what was called the
Bagatti Valsecchi Renaissance (Pavoni, 1994). In so doing, the house became a mix of authentic and carefully selected pieces from the Renaissance period and details personally designed by Fausto and Giuseppe. The final result appears as a middle ground between the collection and the personal aspiration, but we must not forget that, primarily, it was a context of lived life. In fact, the house was inhabited by the Bagatti Valsecchi family until 1974. After that date, Fausto and Giuseppe’s descendants opened the doors to the public, transforming it into a museum: they restored it to the original condition in which their creative ancestors left it.

This rich environment already provides detailed information about what is displayed but it is missing the valorisation of the most intangible heritage it can provide: the Genius Loci, the spirit of the house, including the figure of the fabers and the actual results of their work. Consequently, Interior and Interaction Design were selected as suitable means to create an engaging and situated experience, oriented by a human-centred approach. Moreover, the aim of the project was to take inspiration from the very specificity of the place, respecting and combining the will of all the parties involved: curators, visitors and designers, standing respectively for the place, the typology of experience and the means to meet all expectations. For this reason, for instance, nothing could be introduced or modified not to distort the frozen image of the time; while a temporary and replicable event format worked the best for a personal and engaging experience.

For a thorough knowledge of the location, preliminary on-field investigations had to be conducted to better understand the existing relationship between the place and its visitors, mixing traditional and bespoke research tools, aimed at involving users unaware of being guiding the generative phase of the design process (Hanington, 2010). Firstly, quantitative data about the visitors of the previous semester were collected through the statistic system of the museum. Secondly, to get a closer to the users of the institution and to comprehend its dynamics, an ethnographical enquiry based on unobtrusive shadowing has been undertaken. That seemed to be the better solution to get impartial information about the visitors’ experience inside the museum, as their direct involvement in this exploratory phase could have vitiated the results.

This information helped in getting familiar with the place and its users, assessing the great appeal of the house that amazed and engaged visitors with its sense of familiarity. Though, the observed behaviors and emotions prompted the modalities for a direct confrontation with the possible users – aimed at identifying the meaning for the intervention – and ultimately the design itself.

At the end of the research, all the parties involved highlighted the desire to have the homely dimension prevailing on the museum identity, so that the welcoming and familiar sensation could be emphasized.

---

1 A project by Martina Sciannamé (2017), supervisor: Davide Spallazzo.
In order to make the most intimate side of the house emerge, we returned to the original personification of the *Genius Loci*, whose symbols were painted on the walls. Even if this tradition acquired different meanings, it has never really disappeared, on the contrary, it has taken the form of noble families’ coats of arms. That is why we translated the two main emblems of the Bagatti Valsecchi brothers in the materialization of Genius Familiaris (eagle) and Genius Rerum (lily). Each of them embodies a particular point of view of the Genius Loci and stands for a different visit path to discover the house’s life on a symbolic reception day when the Bagatti Valsecchi brothers were still alive. The first one reflects the memories of the people who frequented the house, while the second gives voice to the objects’ point of view.

To make Genius Loci come alive, an integrated and flexible technological system has been designed so that the space could become responsive in a natural human-environment interaction with pervasive and concealed devices, not to alter the perception of space. In particular, audio and projection modules had to be deployed across the rooms to convey contents when triggered by the interaction module, a beacon-powered amulet worn by each visitor or group of visitors. The entire system also responds to the requirements of flexibility and scalability, as the modules can be easily moved and reprogrammed to be adapted to different settings and narratives.

Strolling around the house is at the core of the interaction and in the different rooms, visitors may encounter three kinds of experience, according to the relevance of the place itself. Those where visitors just have to pass along are the sound passage rooms. Here, the immediate detection of the visitor wearing an amulet triggers environmental noises or distant voices. In the vision rooms, where evocative events could happen, the amulet activates a projection module, making shadows appear to visualize a significant scene. While, in the active narration rooms, visitors have to discover hidden details. The overall experience translates into an evening event, outside the museum opening hours, in which the visitor can experience an intimate and magical relationship with the house. The visit begins with the selection of the Genius that will guide the entire experience, and a brief tutorial for the interaction modalities. Then, across the rooms, different narrative strands are interwoven to show different aspects of everyday life and culminate in a banquet in the Grand Salon, the symbol of the social life of the period.

Designing solutions to exhibit the Genius Loci is a delicate process. First, one needs to stay in the place, to live it, willing to understand and listen to it, in order to recognize its essence (Crespi, 2013). Then, when the spirit is revealed to the designer, the challenge is to make it patent without being intrusive, to let it pervade the environment as if it was the most natural outcome. In this way, the resulting experience of the visitors appear more authentic, they establish a deep bond with the free-of-barriers institution, they feel privileged of being part of an environment that is revealing its true and most hidden self in an almost human manner, and, finally, they develop an unparalleled sense of belonging in such a place.
2.2 The Atelier as Living Nature: reflecting (on) Studio’s heritage

Within the research framework - that supports both multidisciplinary systemic insights and field experimentation in museological and culturally oriented design areas – the D.E.S.Y. Research group promoted three photographic exhibitions entitled 'The Atelier as Living Nature'\(^2\). The exhibitions are part of the Milano MuseoCity 2019 event - promoted by the namesake Association and the Municipality of Milan, and by a network of private and public cultural institutions working to promote and enhance the dissemination of Milan's museum heritage. The three small exhibitions at Fondazione Franco Albini, Fondazione Achille Castiglioni, and Studio Mario Negri were dedicated to the image of the studio through the eye of the photographer who captured the panorama at the time of their creators. The archival images presented in the actual exhibits have become a stimulus to start a deeper reflection on the spaces and to show their original auras, as they are an eloquent narration of the present time, which can be enriched by reawakening the connotations of these spaces as true examples of 'Living Nature'\(^3\).

In the context of the research, the 'Living Nature' theme was thus dialectically reflected in the particular environments of the studios and ateliers of creative people, designers, architects or artists. These are places full of hints and interpretative clues. It is an environmental and immersive 'nature' created from eloquent objects: works, tools, and inspirational subjects, more or less evident signs which outline the memory of the protagonists. "Whether it is the artist's atelier, an almost always solitary space, or the architect's or designer's studio, which is usually collective, we find ourselves faced with places that are always full of memory (where the archive area is the pulsating testimony of the creative heart), environments that preserve an atmosphere and are the mirror in which we can still see the reflections of those who have practiced and lived in them, when they are no longer active but are 'kept alive'" (Bosoni, Lecce 2019). These spaces, while constituting 'still lives' with respect to the time in which they were established, are, in fact, still vital and often dedicated to renewed and new activities (as in the case of the Fondazione Achille Castiglioni and Fondazione Franco Albini). In this sense, the 'Living Nature' theme has been recognized as an interpretative and meta-design metaphor useful both for observation and for the design of actions to enhance these spaces.

The three small exhibitions were therefore an opportunity to experiment with different curatorial and exhibition approaches to the same interpretative metaphor. The studios of an architect (Albini), a designer (Castiglioni) and a sculptor (Negri) lent themselves to being reinterpreted through archival photographic images, often authored, that testify to the passage of time, the evolution of spaces and of private and professional life, the endurance of a particular 'creative aura' that, reread with the eyes of the present, acquires even more charm and strength. T This precious archival resource (the photos), which can almost always

\(^2\) Exhibit project promoted and curated by Anna Mazzanti, Giampiero Bosoni, Rita Capurro, Chiara Lecce, and Alessandra Spagnoli.

\(^3\) Nature, in all its forms, from the natural or anthropized landscape to the relationship between man and the environment, was the guiding theme chosen for Milano MuseoCity 2019.
be found in the *faber's* spaces, is therefore a primary resource for activating storytelling design strategies and represents the "hub for the enhancement of the *faber's* home and studios". (Bosoni, Mazzanti 2019). The three studios, which differ in the morphology of their spaces, their character and their distinctive features, still reflect the soul of their *forgers* and, at the same time, their heritage filtered through the eyes of their direct heirs. Therefore, since the three exhibitions were presented as parallel and coordinated through a single fil-rouge, the different curatorial and exhibition strategies adopted made it possible to highlight the peculiarities of these studios. The curatorial and design choices - such as the selection of the images, the design of framing system and spaces’ layout - made it possible to translate the metaphor into three different design interpretations: the frame as a focusing tool for Fondazione Franco Albini, the unexpected glimpse for Fondazione Achille Castiglioni, and the intimate retrospective for Studio Mario Negri.

As for the exhibition at the Fondazione Franco Albini, the selection of shots aimed to show the three temporal and physical movements of the studio: from via Panizza 4 to via XX Settembre 21 and, finally, to via Telesio 13. Among the selected images, the iconic portrait of Franco Albini taken by the American photographer Irvin Penn in 1948 is the only evidence of the studio in Via Panizza. Franco Albini and Franca Helg are portrayed side by side in the Via XX Settembre studio in the 1960s. The shots from the 1970s, set in the current studio in Via Telesio, bear witness to the transition to the “Studio Architettonico of Franco Albini, Franca Helg, Antonio Piva and Marco Albini”. Strict light wood frames soberly highlighted the pictures. The photographs were integrated into the spaces according to a principle of cleanliness and spatial rigour: the images of the various Albini studios have been superimposed on the layout of the current Foundation’s headquarter and have been arranged on parallel levels - almost never overlapping - unravelling a clear, almost linear narrative of the evolution of the studio over time.

A different approach was adopted in the exhibition presented at Fondazione Achille Castiglioni: from the photos’ selection to the display setting, the aim was to give a "concentric" interpretation of the Castiglioni brothers' professional history. A limited selection of archival shots recounted the first studio of the brothers Livio, Pier Giacomolo, and Achille Castiglioni in Corso di Porta Nuova preparing the viewer for a reinterpretation - through images - of the current studio in Piazza Castello. The shots by Luciano Ferri and Ugo Mulas, among others, cover a period from the mid-1940s to the mid-1960s. Through the images, integrated in simple white passe-partouts (a legacy of the last great monograph dedicated to Achille and promoted by the Triennale di Milano in 2018/2019) it was possible to recognize objects that have become iconic, the three brothers involved in the various design phases, and illustrious visitors who testify to the cultural dynamism that characterized the studio’s life. The glimpses, details and moments captured by the shots were directly compared with the current layout of the studio, preferring, whenever possible, oblique and unexpected set-ups: a direct homage to Achille's amusing and shrewd personality.
Finally, at Studio Mario Negri, it was decided to set up images which, as in previous cases, would retrace the evolution of the sculptor's studios (from Via Pisacane, to Via Stoppani 6 and, finally, to Via Stoppani 7), emphasizing the intimate and introverted aspect of his creative activity. Through the shots it is possible to recognize the artist as he gives form to his works, the objects and tools that characterize his private corners, the sculptures he made and those in progress: testimonies that reveal years of hard work and creation, from the 1950s to 1987. Frames of different shapes, sizes and finishes, which were previously an integral part of the studio, have amplified the aura of an already intimate and private place. Views, perspectives and instances of intense creative fervor have brought the space back to life, allowing the viewer to perceive the sculptor's strong presence, and "act as memory consolidators" (Trocchianesi, 2014). In all of these studios, the photographic archives show themselves to be 'active folders' capable of underlining the constant presence of fabers as "spatialized biographies" (Bosoni, Mazzanti 2020).

2.3 The art and its inhabitants: artistic imaginaries between houses and exhibitions

The art and its inhabitants: artistic imaginaries between houses and exhibitions is the title of an experimental action aimed at involving young designers and researchers in the exhibition design field.

This research is based on the interpretation of the "portrait" of the artist's home and studio and aims to answer three research questions: how does the physical workspace influence the artist's creation process? How do the creation process and techniques work together to "shape" the creative space? How can this content be synthesised in an exhibition?

The aim of this action is to collect different design-driven interpretations expressed through exhibit solutions within the same methodological framework and spatial context: from a field analysis to an interior design output.

In this way we can have a collection of several interpretations developed according to a process that starts from the field analysis towards an interior design output embracing the following methodology divided into three stages:

Immersing&Reading

- Studying the artist's personality, his works of art and his productive process.
- Visiting the actual space (the artist's house and studio).

Method and tools: desk research, on-field research, interviews, camera, sketches pads.

---

4 Project curated by Raffaella Trochianesi and Anna Mazzanti, 2018-2019.
Output: map of topics and suggestions, sketches and notes.

Interpreting&Abstracting

- Graphically synthesizing the “essence” of the artist and his workplace (spatial and mental) through a critical approach.

- Focusing on a specific topic starting from the artist’s production.

  Method and tools: metaphor, abacus of chromatic, material and iconographical codes.

Output: moodboards, diagrams and collages.

Translating&Representing

- Translating the artist’s studio identity into a design exhibition that hosts both the artist’s works of art and a spatial (archetypal) interpretation of their own house and studio.

  Method and tools: exhibit score/partitura allestitiva, narrative model, exhibit model, design attitude.

Output: diagrams, sketches, technical drawings, render.

This approach allows to “extract” some crucial elements that represent the pillars of the relationship between the artists and their workspace through metaphorical communication registers.

This research action produced twenty-four design exhibitions, hypothetically placed in PAC – Padiglione di Arte Contemporanea in Milan, as “indirect portraits” of artists and their house-studios. For each of them, narrative models and exhibit models have been defined. The narrative model is the way in which the narration of the exhibition is organized, while the exhibit model is the design attitude with which the space is treated in order to stage the contents of the exhibition.

The metaphor is also an important tool able to synthesize the core of the idea using evocative images belonging to other contexts. But the essence of this process is the spatial interpretation and translation of the house studio into an exhibit model: how do interior designers locate and interpret the studio’s synthesis of the identity in a place out of the studio itself? What metaphors, spatial models and design attitudes do they choose in order to express the relationship between the artists and their creative space?

If we read and compare all the design results of this research action, we can find some recurrences. Following some design attitudes which interpret the identity of the studios:

- Scenography: in the exhibition the studio is represented by a scenographic setting through different ways and systems: i.e. layered wings able to stratify multiple images and perspectives of the workplace; stage setting as a reproduction of a
meaningful part of the workplace in a style which is not realistic but totally white and out of scale.

- **Synecdoche:** in this case the identity of the studio is present in the form of a synecdoche (the part for the whole) using a specific piece of furniture present in the workplace: i.e. the *wardrobe of memories* (Leonilde Carabba) is reinterpreted in different ways within the exhibitions, as a big video wall where visitors can discover her stratified memories and art suggestions or multiplied as an actual furniture system with which visitor can physically interact (opening doors and drawers) and find objects and information; the *freestanding tripartite screen* (present in the Fornasetti’s house/studio and collection) becomes the main display system here; in the exhibition the *red room* – which in the Fornasetti’s house/studio is a "secret" and totally red one, where all pieces of furniture and textile, objects, and books are red (even in the titles of the books there is the word “red”) – becomes an immersive room where visitors can discover thoughts, private objects and special pieces of information; the *colours and materials* as architectonic references to the actual place (Mario Negri).

- **Domestic paradigm:** the exhibition is interpreted as a cross section of the house/studio. In this way visitors are immersed in the private space of the artist: i.e. the *wall as a linear unrolled space* in which rooms and corridors are photographically reproduced in the same vertical surface, the bi-dimensionality is interrupted by niches with actual objects or interactive screens (Fornasetti); the diverse rooms of the house/studio are “spread” in the whole exhibition in a sort of multi articulated and “diffused home”.

- **Abstract spaces:** the exhibition “undresses” the space all figurative references to the actual artist house/studio: i.e. in a “neutral” context parts of *walls and surfaces are malleable* in terms of materials and settings in order to make the place performative and dynamic (Pomodoro’s creative process); some parts of the house/studio is reinterpreted by *archetypal spaces* like tunnels and caves in order to underline some crucial meanings of artworks and their symbolic context; the *white box* as a “neutral” place where pictures of the actual workplace are shown as a documentation.

This research project demonstrates the interdisciplinarity between design and art through an empirical approach and an experimental action able to extrapolate the interpretative logics of both the tangible and intangible values of the artists and their workplaces. The latter influence the creation process and, symmetrically, the creation process shapes the workplace: indeed in Fornasetti’s case – for instance – part of the space is a repository of sources of inspiration (see the room with the archive of iconographical units) and part of it is a show of countless objects. Pomodoro’s studio includes an archive of works, documents and – at the same time – a workshop “shaped” by materials. All of these artists and places tell something about the creation process, the inspiration path, the physical and/or mental approach to the art. All of
The engagement of visitors in faber’s house and studios.
Empirical design research and experimental actions in Lombardy

des these spaces can be expressed by metaphors like: the introspective journey, the retreat, the labyrinth, the wonderland, the Wunderkammer, the silent island, the grammar of signs and so on, in a continuous dance of evocative images and physical installations (fig. 1).

Figure 1. The chart illustrates the correspondences between the artists involved in the research and the design attitudes and metaphors assumed in the exhibition systems related to them and their studios (Trocchianesi 2019).
3. Conclusions

The three actions previously described, demonstrate three different ways of enhancing the topic and object of the research:

- In *Genius Loci* the object of the research – Casa Bagatti Valsecchi and its tangible and intangible heritage – is the actual context in which visitors explore the narrative related to the house itself.

- In *Atelier as living nature* the object of the research – the ateliers and their tools and works – is the actual context of the exhibition and, at the same time, the subject shown through the mediation of pictures.

- In *The art and its inhabitants: artistic imaginaries between houses and exhibitions* the object of the research – the essence of the studios, the artist’s personality and their works – is not shown in the studios themselves but in another place (PAC-Padiglione d’Arte Contemporanea).

Sharing attitudes and skills, the researchers involved in D.E.SY., therefore, have set up experimental laboratories where the different narrative processes adopted underline the immersive portrait of the faber and his work, his poetics and his interpretative ideas of spaces. In doing so, they found ways to make submerged and hidden meanings eloquent and evident. In conclusion, therefore, it is a matter of display techniques, or immersive narratives through digital technologies or exhibit re-constructions and interpretations. The common intent has been to bring back to life what Valery (2008) called the "poetic state" of the faber.

References


About the Authors:

Raffaella Trochianesi. Architect and Associate Professor at Politecnico di Milano, Department of Design. Director of the specialisation Master IDEA_Exhibition Design, she deals with Design for Cultural Heritage in terms of museography and exhibition design, communication and enhancement of local areas, new models and narratives of cultural experiences, relationships among design, humanities and arts.

Anna Mazzanti. Assistant Professor in History of Contemporary Art, at Politecnico of Milano, Department of Design. She is responsible for the FARB DESY project (2017-2019), deals with museology, environmental art, history and art criticism of the 20th century.

Alessandra Spagnoli. Assistant Professor at Politecnico di Milano, Department of Design. Her research interests mainly concern processes of cultural enhancement guided by design in terms of strategy, actions and communication and new practices and narratives in the fields of exhibit and retail design.
Davide Spallazzo. Assistant professor at Politecnico di Milano, Department of Design. Active in the field of Interaction Design and Human-Computer Interaction, he mostly studies the role of digital technologies in the enhancement of Cultural Heritage towards meaning-making and social engagement.

Acknowledgements: The paper is the result of common research and findings undertaken by the authors within the research D.E.SY. (Designing Enhancement Strategies and Exhibit SYstems for the Italian House Museums and Studios). Nevertheless, the paragraph 1 was edited by Anna Mazzanti, the paragraph 2.1 was edited by Davide Spallazzo, the paragraph 2.2 by Alessandra Spagnoli and paragraphs 2.3 and 3 by Raffaella Trochianesi.

We would like to thank Marco Albini, Paola Albini, Elena Albricci, Leonilde Carabba, Giovanna Castiglioni, Barnaba Fornasetti, Laura e Luciano Fiume, Antonella Gornati, Marina, Chiara and Lalla Negri, Casa Museo Lodovico Pogliaghi and Museo Bagatti Valsecchi.
Theory under suspicion: criticality and material meaning in practice based research.

Marta Camps\textsuperscript{a}, Jaron Rowan\textsuperscript{b}

\textsuperscript{a}Instituto de Materialidades Políticas (IMP). BAU, Design College of Barcelona. University of Vic — Central University of Catalonia (UVic-UCC), C. Pujades, 118, 08005 Barcelona, Spain

\textsuperscript{b}BAU, Design College of Barcelona. University of Vic — Central University of Catalonia (UVic-UCC), C. Pujades, 118, 08005 Barcelona, Spain

Abstract | Practice based research projects in design constitute a relatively young practice and despite the recent growth of books and articles dealing with the subject (Camps & Rowan, 2019; Vaughan ed. 2017; Redström, 2017; Muratovski, 2015), the articulation of practice and theory in these kinds of projects still remains problematic. The following paper explores alternative forms of practice-based research in design capable of engaging with criticality whilst avoiding its tendency towards signalling shortcomes and contradictions without providing ways for reparation. It also deals with how to avoid the shortfalls of objectivity or demonstration but nonetheless not falling into subjectivist practices (Verwoert, 2007). We will be looking into ways to embed design practices in a complex and heterogeneous present, working with pluriverses (Escobar, 2018) and situating practices in more than discursive material worlds.

KEYWORDS | PRACTICE BASED RESEARCH, CRITICAL THEORY, MATERIALIST AESTHETICS, ENTANGLEMENT
1. Introduction

Theory and practice have not always found it easy to fit in together in academic curricula and in studio or practice based education. Even if we acknowledge that the notion of theory itself is problematic and doesn’t constitute a neatly defined practice or stem from a single continuous history (Rodowick, 2015), in some contexts theory and practice can be perceived as competing or even antagonistic practices. The cultural theorist Raymond Williams in his work Keywords, “identifies four primary senses of the word “theory” emerging by the seventeenth century: spectacle; a contemplated sight; a scheme of ideas; and an explanatory scheme” (Rodowick, 2015: 18). In this sense theory has come to be a set of conceptual operations that “seek to explain, usually by proposing concepts, but in this they are often distinguished from doing or practice. In this manner, Williams synthesizes ‘a scheme of ideas which explains practice’” (Rodowick, 2015: 18). But as we will see, theory seeks to do more than mainly explaining practice.

In one of the fundamental texts that came out of the Frankfurt School, Max Horkheimer sets out to establish a more active role for theory. In his work Traditional and Critical Theory, he challenges the notions of objectivity and impartial universal knowledge that characterises modern science. He argues that the dualist Cartesian split that separates mind from body, subject from object has contributed to create a form of instrumental rationality that runs through modern epistemologies. He argues that “traditional theory” is a result of this paradigm in which the rational subject thinks he can understand external reality. Traditional theory is a detached cognitive operation that explains how things are. He opposes this traditional theory to what he brands as critical theory. For this new way of doing theory, reality is not waiting to be understood, but it is actively enacted through social practices. Subject and object are both social formations. This is why critical theory does not only contemplate reality from a distance and unpacks its mysteries, it needs to give a robust account of the social, economic and material conditions that shape reality. Critical theory does not only aspire to describe how things are, its main aim is to contribute to social change social, deal with inequalities and make power relations evident. If traditional theory is happy to describe how things are, critical theory aims at contributing to change reality in order to create a more equal and just society.

Critical theory has found an interesting space to inhabit design research projects, in the form of discussions and works on design and feminism (Rothschild, 2011), decolonizing design¹, design gender and discrimination (Costanza-Chock, 2018), design and diversity, design and surveillance (Weizman, 2017) or the politics of material objects (Winner, 1986). But despite the growth of interesting projects and critical practice, we have experienced how in many cases critical theory reproduces some of the epistemic mistakes and errors its seeks to

¹ See https://www.decolonisingdesign.com/
eradicate: it privileges words over things, theory over practice, discourse over material meanings (Boscagli, 2014), suspicion over affect (Kosofsky, 2003), concepts over actions.

Theory has grown in design studies programs and arts and designs universities and it is now central to design research schemes, but we will argue that new ways of engaging with theory/practice must be explored. Ways in which material meanings are taken into account (Barad 2007). In which the knowledge/action split is undone. This implies the pursuit of ways in which to enrol and work with non-discursive meanings and addressing semio-technic entanglements (Puig de la Bellacasa, 2017) and the need to investigate and integrate non-western epistemologies (Sousa Santos, 2017; Viveiros de Castro, 2009), giving space to explore materialist aesthetics (Gregg & Seigworth, 2010) and playful ways of performing knowledge.

2. Theory Under Suspicion

Our aim is to explore and showcase some of the strategies/devices/prototypes we have devised in order to bridge the theory/practice gap. In order to promote “knowledge in action” (Camps, 2019), and more experiential forms of learning. Forms of learning that matter. Meaningful engagements with art and design research projects. These are pedagogical experiments aimed at finding new ways to integrate theoretical concerns and practice based forms of researching. We are aware that practice based research projects in design constitute a relatively young practice, despite the recent growth of books and articles dealing with the subject (Camps & Rowan, 2019; Vaughan ed. 2017; Redström, 2017; Muratovski, 2015). Still, most of these proposals and discussions end up producing more theory. Separating matter from meaning, as if theory provides meaning for a matter that waits to be understood. This is why we aim to work through pedagogical practices that can promote and help to establish these forms of “knowledge in action”, in which concepts, examples, experiences, and intuitions can be invoked. In this sense, this does not constitute a research method per se, these are not closed ways of doing research, but open strategies/devices/prototypes that can be redone, contested and continually reworked. The following pedagogical experiments consciously aim at going beyond the modern epistemic framework we have inherited in which science and art occupy different academic spaces. Going beyond binarisms, bridging the knowledge practice divide, reworking through modern taxonomic categories, and challenging hetero-patriarchal and colonial epistemic regimes, our aim is not to put theory aside, but to allow it to inhabit and become entangled with material practices avoiding epistemic privileges. The following pedagogical experiments try to circumvent the knowledge-truth paradigm, to link learning with affect, theory with joyfulness, material with meaning, ideas with care.

These proposals stem from the certainty that sustaining uncertainties is one of the hardest problems for design students and researchers. Our previous research has proved agents that engage in design research projects usually feel more comfortable with closed assignments,
M.Camps, J.Rowan

conceptual certainties and methodological boundaries (Camps, 2019). Tinkering with learning processes, experimenting with inventive methods (Lury & Wakeford, 2012), or deploying theory strategically, enables messiness and confusion to become part of a creative research process. In this sense we consider that it is important to design strategies to sustain “knowledge in action”, a practice inspired by the political and aesthetic work carried out by the artist and philosopher Erin Manning and the philosopher Brian Massumi (2014). In an attempt to see how affective theory could be put into practice they devise forms of engaging with theory that transcend the mind/body, thinking/doing categories. In that sense we aim for research practices that give place to forms of knowledge woven into the body, through practice and repetition. Involving the senses and going beyond ocular-centric ways of producing theory, by touching (Puig de la Bellacasa, 2017), licking (Morton, 2013), sweating (Pérez Galí, 2013) or sensing rhythms (Ikoniadou, 2014) as forms of learning and understanding the world.

The following strategies/devices/prototypes, or as Isabelle Stengers smartly has put it, the creation, invention and use of artifacts (facts or art) (Stengers, 2000:50), allow our students to become engaged in the research process and forget the inherited frameworks of research from natural sciences or social sciences, which aim to obtain objective outputs or get closer to some kind of truth. For these artifacts to work, we must rework traditional ways of assessing research outputs and deploy new indicators under which these projects are going to be measured. Research in design should not aim at establishing universal truths, neither should they be a material representation of how theoretical discourses operate. The experiments that follow aim at engaging in a sensorial dialogue, in which different knowledge genealogies, theories, materialities and located forms of knowledge can take place.

In our experience as teachers and researchers, we have often found that the power of critical theory and its great capacity to debunk the material reality it confronts ends up blocking forms of creativity and material intuition. We must find meaningful ways of engaging with theory without aiming at becoming theorists, but design researchers with a deep understanding of the contemporary world in which we inhabit. The strategies/devices/prototypes we have developed stem from the awareness as teachers and researchers that in too many occasions the deployment of sophisticated theoretical apparatuses can overpower practice based design research projects. Despite theory’s desire to change uneven power relations, to provide a coherent framework in which to understand contemporary issues, can become an obstacle for the development of projects by students and researchers.

During these last five years in our work we have experienced that, the more students/researchers advance in their engagement with theoretical issues, the more responsibility they feel regarding their role as designers. They become aware of the implications of trying to function as active agents of change in contemporary social issues. A much needed step if one confronts complex challenges and socio-technical controversies.
Nevertheless, this responsibility does not always transform into creativity, on the contrary, their practice often suffers either from a material paralysis, or they feel the need to translate and represent the concepts put forward by certain theoretical discourses. The concepts they work on are so powerful, the epistemic consciousness of their shortcomings can be so violent, that it is common to end in a creative impact that can turn the proposals for research action or projects more rigid and troubled, concerned exclusively with fulfilling the requirements of the premises of critical theory. This can lead to believing that for a project to have meaning, for it to be meaningful, it must be justified and accompanied by a dense theoretical analysis. We would like to argue that practice matters, and because of that, it can produce its own meanings.

Our aim with the following strategies is to move beyond this feeling that theory operates as a judge of material actions and rather establish a joyful conversation with verbal, material and sensitive discourses. We propose that design research projects should not be obsessed with debunking, seeking revenge, judging or saving the world, but, as Arturo Escobar reminds us, they should be concerned with the idea of opening up possible worlds. Or as he puts it, they should engage in designing for the pluriverse (Escobar, 2018).

3. Entanglements of material meaning: some attempts

Once we have identified the risk that theory tends to contribute to the production of more theory, and that in occasions it is struggles when it has to relate, engage or become entangled with practice, we propose a repertoire of possibilities for handling this reality. We need to clarify that in the following paper we will not focus on the development of design research projects and their relationship with theory, but on how can we start exploring meaningful material entanglements by encouraging the establishment of live relationships that place the practice in specific networks of practice, systems of ideas, aesthetic repertoires. To do so we have been inspired and we have worked with the idea of intra-action developed by the feminist physicist Karen Barad (2007). This notion helps us to explore and articulate encounters between critical theory, the politics of matter and the sensibility of aesthetics. It is in fact an invitation to take part and be able to contribute to the creation of a mutually constitutive entangled agencies, in which matter, discourse and bodies occupy unexpected positions. What we have called “entanglements of material meaning” are areas of potential engagements with theory/practice that can lead and end in

---

2 For deeper insight to this subject we recommend reading “Building Theory Through Design” (Markussen, 2017) in which the author shows how design projects can lead to new theory distinguishing between three basic forms of theory construction: guiding philosophies, conceptual frameworks and ideas borrowed from other disciplines, manifestos, annotated portfolios and design implications, all exemplified by PhD theses.
the shape of performances, drawings, paintings, constellations of objects, sound based projects, movement and body languages, interactive outputs, etc. In this sense they are not defined methods, recipes or closed procedures, they function as ways of generating engagement. Ways in which to explore more evocative ways of mattering meaning. Ways to envisage and define sensorially genealogies of thought and action. Following Donna Haraway’s assertion that we are constituted by relational ontologies, that who or what we are is defined by a dense and complex set relations with and into the world, our aim is to detect and shape these relations. Promoting ways in which to embed one's own practice into social, political, material and aesthetic concerns. Shaping the meaning of a specific practice by locating it alongside other meaningful practices.

These meaningful matter entanglements also draw inspiration from the idea of “community of practice” developed by Richard Blythe and Marcelo Stamm in the context of Practice-based Design Research in doctoral studies (Blythe and Stamm, 2017). As they put it, “a community of practice can be understood as the choir of voices that operate as self-talk during the creative process. This self-talk, although an individual phenomenon, is an internal conversation with peers and collaborators (and sometimes challengers) extending the social aspects of community also to individual thinking” (Blythe and Stamm, 2017:59). This leads us to open our field of action and focus on contextualizing the proposals in a more effective and conscious way. This idea of “communities of practice” was initially developed as a way to identify those forms of knowledge production that take place beyond academic or institutional learning environments (Lave & Wenger 1989). In any given formal or informal context, people devise ways of sharing ideas, producing specific arrangements and forms of knowledge that help these communities to deal with practical issues that affect their life. Following this idea, rooted in the pragmatism of Pierce or Dewey, defining a community of practice helps the researcher to become aware of the subjects, spaces and practices that inform and contribute to expand their own practice. Drawing a community of practice implies becoming aware of who else is working on the same issues you are dealing with, who is sustaining similar concerns. Who is affected by your practice and what practices affect your own work.

The challenge we face is to articulate forms of theory and practice that belong to different fields, disciplines and genealogies. To open conversations and links with other researchers/practitioners whose work resonates with our own. Establishing non-hierarchical topologies of instruments, technologies, debates, concerns and matters. Becoming open to being affected by other projects, seeking to affect the work of others. In this sense, these entanglements can be more poetic than logical, more evocative than descriptive. Learning to identify other instances of meaning, other ways of mattering theory, contributes to defining our own practices. Research is about establishing non-linear and extraordinary links, coherence is what provides a framework for this exercise of material entanglements and actualization. By identifying and establishing entanglements we can intra-act in a new system of meaning, the aim should escape from casual linking in order to seek deep and strong intra-actions, to intertwine a particular practice with other practices and theories. Locating our practice in one or other community of practice, linking it to a specific set of theories, a defined set of aesthetic inclinations or other, makes our practice perform in completely different ways. Making oneself accountable for these entanglements,
acknowledging how you affect a certain context or affects your practice implies a deep understanding on how your practice operates.

The following examples come from the PhD. thesis “Knowledge in action: undisciplined teaching practices” (Camps, 2019), and they explore some of the issues developed above.

**Pencil quotes:** Pencil quotes constitute a specific way to do a literary review, in this case, working on visual summaries and handmade drawings and diagrams. Instead of engaging linguistically with concepts, these pencil quotes acknowledge other ways in which meaning can be attained and knowledge created. Diagrams, colours and visualizations can be created allowing non-linear ways of ideas to emerge. These images open-up new meanings and relate in weird and open ways to the ideas and discourses which have previously been developed semantically. This contributes to the creation of new relationships and hierarchies of information and other ways of presenting concepts. Pencil quotes are spaces of assimilation of the theory that help to deepen its meaning. Still these pencil quotes are still too flat to allow intra-actions, to give place to entanglements with other ideas or practices. Their limitations become apparent when our aim is to define a new system of relationships. However, this is a first step towards mattering theory, towards working in a more visual and personal way. This contributes to attain a better understanding and developing new meanings of theoretical and discursive practices.

We have selected three pencil quotes that unpack and work through some key concepts and ideas put forward by different authors, in this case Damasio (1994, 2018), Federici (2010) and Braidotti (2013) that serve specifically to the research and practice of the thesis:

Figure 2. Pencil Quote: Federici (2010). Camps (2019).
Bruno Latour, inspired by a concept put forward by John Tresch (2005) develops the notion of the *cosmogram* in order to provide ways in which to display and allow for the interaction of human and non-human agents in the design and transformation of natural and social reality. A cosmogram is a device with which we learn to describe the associations of convenience, coexistence, opposition and exclusion between human and non-human beings. As Latour himself points out: «Mapping cosmograms means becoming sensitive to these lists of associations and logical duels without resorting to the distinction between the rational and the irrational, the modern and the archaic, the systematic and the asystematic» (Latour, 2000:115). We have explored ways in which to develop these entanglements of humans and non-humans, tools and ideas, techniques and practices.

The following example was an attempt at making pencil quotes to intra-act with other quotes and materials. To generate a more complex set of relations and genealogies that would help to shape a specific cosmogram. Once some of these links were drawn on paper, there was a need to look for another tool that would allow these relationships to move, grow or change.
Figure 4. Drawn on paper genealogy. Camps (2019).
This cosmogram was digitized and uploaded on an online server[^3], that allow interactions between discrete objects and movement among them. Each element, mostly pencil quotes, specific theorists or projects, was tagged with information such country of origin, date of birth or when it was published, keywords, etc. The tool allows these elements to be recombined, generating different relations among them. Their sizes can be altered, which also allows to give more or less importance to specific elements in a genealogy or another. These temporal arrangements help to envisage how cosmograms can change, can grow or give place to new genealogies. The combination of elements, the possible links and entanglements among them, define specific cosmograms that later can be redone. In this sense, heterogeneous elements can come into conversation, can be linked giving place to new meanings and cosmologies.

[^3]: In this case the free-software activist server https://hotglue.me/
Performative genealogy: a litany

This artifact is inspired by the interdisciplinary research project “Choreo–Graphic Figures. Deviations from the Line”, led by artist Nikolaus Gansterer in collaboration with choreographer-dancer Mariella Greil and artist-writer Emma Cocker, in dialogue with a team of international critical interlocutors⁵. The proposal stages an eccentric encounter between drawing, choreography and writing that aims to

---

⁴ [https://practicasculturalesypedagogicas.hotglue.me/](https://practicasculturalesypedagogicas.hotglue.me/)
investigate those forms of ‘thinking-feeling-knowing’ produced through collaborative and interdisciplinary reciprocities. At the same time it explores the performativity of notation (figures of thought, speech and movement) in order to materialize research. What we find particularly useful and inspiring from this kind of proposals is that they explore the nature of thinking-in-action where different practices enter into dialogue. It allows different semiotic meanings, practices and bodies to become entangled and to collide. This opens-up the opportunity for new layers of knowledge and affection to become embodied, encouraging «the need to invent and define research methods that explore results and formats capable of challenging the hegemony of the written word» (Rowan y Camps, 2018, p. 55).

In the following strategy/device/prototype, we have worked through this sense diagram proposed by Gansterer and tried to transform it into another machine to allow this meaningful material entanglement. In this case, it is a sound base device that operates on a purely sensorial dimension: a litany. Originally litanies have their origins in Christian songs or prayers, from the 5th century, which constituted long and monotonous enumerations of frequently repeated prayers, with a standardized cadence. In this case we take up the litany as a possible practice to help to entangle matter and meaning. To do so the researcher needs to work on an open list of references, ideas, theories, practices, objects, materials, needs, aspirations or fears. Through an exercise of free association of concepts, ideas and experiences, the litany provides a context for them to be located in different proximities and rhythms. It creates a (dis)order, in which intuitive associations become weave through sound. This is an evocative way generating relations between elements that can seem apparently disconnected. It helps overcome the practice/theory divide, and works against the idea that knowledge operates following rigid disciplines. In this way, the voices of artists, thinkers, designers, sociologists and scientists as well as different materialities (colours, textures, sounds…) can be brought together through a sensorial entanglement of meanings and traditions.

Litanies contribute to synesthetic experiences. The performativity of sound here affects the bodies of those listening, where concepts, words and images become entangled in their minds. Sensorial entanglements take place. The litany presented in Marta Camps' thesis was entitled “The (Artificial) Division of Knowledge”6 In this case, the litany, originally handwritten in a slow and monotonous rhythm, chains together ideas and images and builds up this prayer through a series of enumerations. It is both a written and an audio-performatic piece that provides an opening to an imaginary of arbitrary hierarchies.

---

6 [https://archive.org/details/letanialadivisionconocimiento](https://archive.org/details/letanialadivisionconocimiento)
Figure 6. Performative genealogy. Camps (2019).
4. Conclusions

In the following paper we have discussed some of the problems derived from trying to entangle two different material practices: producing theory and design research projects. We have looked into ways to embed design practices in a complex and heterogeneous present, situating practices in more than discursive material worlds, and trying to find new ways of producing material meaning. Along this paper have argued that practice based design projects need to work on the creation of strategies to situate these practices in the world, allowing material and political interdependencies, discursive continuities and material entanglements to become apparent.

We have shown evidence of research projects in which rich entanglements of semiotic and material elements are present, in which aesthetic, political and social considerations are taken into account, contributing to go beyond the epistemic affordances of criticality or discursive based practices. We have tapped into a history of practice-based forms of research in design, showing how notions such as “community of practice” can help us to define more complex ways of situating and materializing links between heterogeneous practices, complex discourses, theoretical approaches and socio-aesthetic concerns. We have explored ways of engaging with criticality whilst avoiding its tendency towards signalling shortcomings and contradictions without providing ways for reparation.

In this sense we have explored the consequences of embedding the notion of relational ontologies into design research, showing how semiotic/material entanglements, situated practices and aesthetic concerns matter. This paper is a small contribution to a long debate on how to make design research projects meaningful, in this case, by working and providing evidence of how practice not only is embedded in the world, but by establishing new links and robust entanglements, helps to produce new worlds. Design is an ontological practice, material/meaning entanglements contribute to the production of these new worlds, or pluriverses using Escobar’s terms (Escobar 2018). In this sense, helping to find, understand, establish and become accountable of these entanglements, is a way of making design matter in a world that needs healing and repairing. It’s a meaningful way to make design matter.

References


About the Authors:

**Marta Camps, PhD.** is Pedagogical Director at BAU, Design College of Barcelona. Co-founder of the research group Instituto de Materialidades Politicas, interested in experimental projects where art, design, technology, science and social concerns are meaningfully combined.

**Jaron Rowan PhD.** is Head of Research at BAU, Design College of Barcelona. Author of *Emprendizajes en cultura* (Traficantes de Sueños, 2010), *Memes: inteligencia idiota, politica rara y folclore digital* (Capitan Swing, 2015) and *Cultura libre de Estado* (Traficantes de Sueños, 2016).
Tokyo 2020: globalisation and self-orientalism in the communication of the next Asian Olympic Games

Claudia Tranti
Master graduate and teacher assistant at Politecnico di Milano
claudia.tranti@polimi.it

Abstract | The paper aims to review of the communication strategy of Tokyo 2020 Games, starting from a historical analysis of the previous Japanese Olympics: the critical stances are supported by bringing together the theories of the main Olympic design reviewers and by using the Decolonising Design critical method. The discussion focuses on the underlying ideology of Olympic designs, highlighting the bond between local culture and global branding. The research has been carried out by consulting original documents concerning Olympic design from the Historical Archives of Olympic World Library (Lausanne) and the Musashino Art University Museum and Library (Tokyo).

KEYWORDS | OLYMPICS, NATIONALISM, GLOBALISATION, JAPAN, BRANDING
1. Decolonising design critical framework on ‘a cultural performance of global proportion’

Since their birth in the late 19th century, the Olympic Games were strongly influenced by consumerism, as the host cities implemented a vast number of strategies to cover the organisational costs: from the sale of tickets and gadgets to the long-lasting sponsorships with worldwide partners (Chappelet, Ferrand & Séguin, 2012).

Another distinctive trait of the Olympic Games is the political involvement. Indeed, despite the Olympic Movement’s claims to be an apolitical association, the Games have often mirrored the dynamics of international conflicts: the many boycotts during the Cold War or the struggle for the recognition of China’s and Taiwan’s National Committees are just a few examples (Guttmann, 2002).

The link between Olympics, politics and consumerism, allows tracing a critical analysis which involves design as a fundamental means to convey values and identities and to support the mass production of consumers’ goods. The visual design projects for the Games, as well as the design of the symbolic venues and objects related to the event (torch, cauldron, podium, medals, stadiums, etc.), are in fact the touchpoints which are meant to create a link between the audience and the values spread by the Olympic Movement. The importance of these aesthetic experiences is well expressed by Kang and Traganou:

“The key features of the reception of the Olympics are grounded upon the aesthetic experiences of the spectacles created and disseminated by the global media and entertainment industry complex.” (Kang & Traganou, 2009)

From the point of view of communication design, if we consider the Olympic Movement as a brand and a brand as “the entire organisation from the stakeholders’ point of view” (Davis, 2010) the vast number of stakeholders which revolves around the Games enriches the brand with many facets, giving life to “a cultural performance of global proportion” (MacAlloon, 1984). This “global proportion” is rooted in the DNA of the Olympic Movement, since the Olympic Charter claims to promote “universal fundamental ethical principles” which aim at enhancing the “harmonious development of humankind” (International Olympic Committee, 2019, p. 12).

Despite the aspiration to universality, the Games are, from its inspiration (ancient Greece) to its modern references (British sports), a cultural expression of the European elite class of late 19th Century (Chatziefstathiou, 2005, p. 367). The organization of the Games, which classify athletes according to their nationality, is a direct consequence of the Internationalist ideals of that time. It is then possible to identify the birth and spread of the Olympic Movement as a part of a bigger process, which is deeply rooted in the colonialis/internationalist mindset of Western cultures: imposing local (western) cultures on a global scale with the claim to be universally valid or correct.
Decolonising Design approach traces a suitable framework to analyse the contradictions between local and global culture in such a complex event as the Olympic Games. Khandwala provides a concise explanation of the ideas that lie under the concept of decolonisation:

“It’s an acknowledgement that in the West, society has been built upon the colonization of other nations, that we exist within a system of privilege and oppression, and that a lot of the culture we’ve come to see as ours has actually been appropriated or stolen”. (Khandwala, 2019)

From a design point of view, colonization lies in the principles and methods of what is considered ‘good design’: a canon, often regarded as universalist, which is in fact deeply rooted in Euro-American culture.

2. Japanese westernisation and the problematising of national identity

Japan was the first Asian country to host the Games: a chance for western countries to come into contact with a radically different culture. When it comes to Olympic design in Japan, we can witness the multifaceted intertwining of different cultural influences, both local and western/global.

In order to analyse these design projects according to the decolonial privilege/oppression dichotomy, it is fundamental to understand the unique configurations of Japan’s international affairs through history and the key moments in which it faced colonialism:

- after more than 250 years of political and commercial isolation, Japan underwent a lightning-fast process of modernisation during the so-called Meiji Era (1868–1912) in order not to succumb to Western colonialism;
- in the pre-WWII period, Japan has carried out an aggressive military strategy aimed at colonising neighbouring countries. This Pan-Asianist militarism was rooted in Japan’s national feudal culture and influenced by Western model of colonialism:
  “[…] when the premises of the national hierarchy were transferred horizontally into the international sphere, international problems were reduced to a single alternative: conquer or be conquered” (Maruyama, 1963, p. 138);
- after the Axis’ defeat in WWII, Japan has been occupied by the Allied Powers for six years (1945–1952): the Japanese constitution was rewritten under the American influence and the Emperor’s powers became strictly limited by law.

The two-sided role of Japan as a coloniser and a colonised country originates a unique mixture of local and foreign culture, which results in a rich and multifaceted expression of its national identity. Along with the introduction of Western culture, the Empire began to question its own traditions, problematizing the issue of national identity in order to relate to
foreigners. From a decolonising design point of view, the notion of problem-solving itself is markedly linked to the Western approach to design:

“the work of design, even when practiced with a supposedly ‘socially-conscious’ mindset, ultimately follows ‘the guidelines of the oppressor,’ teaching designers to assume the world as a well-defined set of problems to be solved” (Oliveira, 2018, p. 94).

Design is a solid example of a Western discipline which has been assimilated by the Japanese culture and reinterpreted in original ways. At the same time, the visual outputs of Communication Design provide a touchpoint to critically examine the expression of national identity in Japan.

3. Tokyo 1940: self-orientalism and reinterpretation of western models

Japan was in charge of hosting the first Asian Olympic Games in 1940. However, after the Marco Polo Bridge Incident, the Government decided to cancel the Games.

The cultural relevance of an Asian country hosting the Games was underlined by Pierre de Coubertin in person:

“The task of celebrating the XIIth Olympic Games will be the greatest ever given to a country, for it does not mean merely to pursue the Olympic Torch through the universe and to unite the whole of Asia with the Modern Olympism in a most cordial manner, but also to combine Hellenism, the most precious civilization of ancient Europe, with the refined culture and art of Asia” (The Organizing Committee of the XIIth Olympiad Tokyo, 1938, p. 13).

The communication artefacts designed for the 1940 Tokyo Olympics are characterised by the lack of any kind of visual coordination. The Organising Committee couldn’t set up a communication team on time, and the competitions for the poster and the seal have been carried out without the supervision of a design director. The finalist posters show a blend of Western references and Japanese traditional culture: some of them remind Art Deco sophisticated simplicity, other ones recall propaganda images of contemporary dictatorships and their classicist inspirations. The winning poster represents the first Emperor Jimmu Tenno as 1940 was also the 2.600th anniversary of the foundation of the country (Traganou, 2016). The use of stereotypical Japanese images (cherry blossoms, Mount Fuji, geisha) is regarded by the critics as a self-orientalist attitude (Traganou, 2016): the way that Asian countries use to depict themselves according to Western-Orientalist narrations. This alignment to the Orientalist point of view could be regarded both as a sign of “perceived-inferiority” compared to Western countries and as a way of injecting the native culture in a different framework in order not to lose it and to better communicate to a new audience.
Tokyo 2020: globalisation and self-orientalism in the communication of the next Asian Olympics


Western design and art were regarded as a model from part of the Japanese people themselves, as in the case of Yosuke Natori, the founder of the nationalist propaganda magazines *Nippon* and *FRONT* (Morioka, 2012). During his trip to Europe, he drew inspiration from the magazines’ stunning modernism, and he decided to import those visual design features in Japan.

Figure 2. Yamana, A., Nippon 5 cover. Kono, T., Nippon 5 cover. Hara, H., FRONT 7 cover.
It is crucial to highlight that, in the above-mentioned cases, European art and design were used as a void visual reference without taking account of their historical and political implications, since classicist mannerism in the Olympic posters and modernist visuals in *Nippon* and *FRONT* magazines were both used as neutral languages to convey nationalist messages.

**4. Tokyo 1964: traditional references in a modernist universalist corporate identity**

After its defeat in World War II and the Allied occupation, Japan wished to regain independence and international credibility: both Olympics and design have proved to be fundamental tools to convey a renewed and peaceful national identity to the world. One of the key moments in this process was the World Design Conference held in Tokyo in 1960, where designers from all over the world were provided with a common ground to discuss about contemporary issues. A relevant speech on the balance between tradition and innovation was given by Yusaku Kamekura. As he asserted:

“Tradition is a burden for the designer, but one which he cannot reject. We have the duty to take our tradition apart, and then put it together in a new way” (Kamekura, 1960, p. 33).

He then enumerates some examples of Japanese art: the family crests (*mon*), the rigorous body movements of No and Kabuki, the tea ceremony. All of these traditions are strategically selected to be formally related to modernism: they are all characterized by geometrical purity and a focus on the function. Traganou (2016) claims that the continuity between tradition and modernity is only apparent: modernity was, in fact, imposed forcefully as a Western cultural standard. However, instead of just passively assimilating the design method, Japanese designers actively contributed to the development of the discipline with crucial innovations, some of which were initially triggered by the Olympic Games.

The international discipline of Corporate Identity and the Olympics met in Tokyo. The design guide sheet, a proto-branding manual, became a blueprint for the Olympic design management of the following Games. The universalist ideals were also embodied in one of the most important visual elements of the Tokyo 1964 Olympics: the pictograms. With Otto Neurath’s work and the above-mentioned *mon* as main inspirations, Tokyo 1964 pictograms were conceived as a universal language to overcome linguistic barriers (Katsumi, 1964). According with the denial of pre-war nationalism, the 1964 Olympics has also been a way to re-establish a new meaning for *hinomaru* (Japanese flag) after the WWII. Even though the logo designer Yusaku Kamekura (1960) stated that the main idea behind the design was to represent the sun, the similarity with the Japanese flag was highlighted by both other designers and the official report of the Tokyo Games.
Far from being a revolutionary break with the past or an example of mere continuity, the Tokyo 1964 Olympics could be more appropriately thought of as a hub where various influences converged and from which other trends took off. Corporate identity and modernist visuals, regarded as a sort of universally understandable *lingua franca*, were used to convey a renewed Japanese national identity.

5. Sapporo 1972 and Nagano 1998: from the crisis of universalism to the rise of branding in the globalised-neoliberal world

The universalist ideals behind the pictograms and corporate identity started to collapse (Traganou, 2016) with Sapporo 1972 Winter Olympics.

The stillness of the Tokyo 1964 red circle was broken by the modular approach adopted by Kazumasa Nagai for the Sapporo 1972 logo, which allowed to combine three square elements in different ways. The typographic poster by Gan Hosoya shows a dynamic and bright effect applied on the letters, which clearly moves away from modernist style. The illustrated poster by Kenichi Kuriyagawa depicts an archer wearing traditional clothes and the city of Sapporo in the background. This output is similar to a proposal made for Sapporo 1940 Olympics and restores tradition without significant reinterpretation (Comité International Olympique, 1983).
The eclecticism of the Sapporo Olympics denotes a change in the approach to the project, as modernism was not a principle nor a design method anymore, but just a set of stylistic elements. The alleged universalism of modernist artifacts like pictograms turned out to be not so universally valid: for instance, Japanese rural population couldn't understand them at Expo Osaka 1970 (Komatsu, 1970). From then on, modernism and corporate identity took separate paths.

With the advent of globalisation in the following years, the role of the nation in the international context has dramatically changed:

“In the one hand, the trade liberalisation brought to worldwide deregulation of capital. In the other hand, single nations, free from controlling the economy, still have sovereignty over their territory in an increasingly connected world. ‘We now recognize that the local, regional, national and global operate in dynamic simultaneity’” (Fallan & Lees-Maffei, 2016, p. 14).

At the same time, in the globalized world:

“The culture of mainstream commercial design has developed [...] to support and promote neoliberalism” (Julier, 2012, p. 345).

As a consequence, corporate identity evolved into branding, according to which the communication of the product relies on marketing techniques applied to design: brands are systematically built on values which are chosen to match the consumers’ aspirations and are not necessarily related to the actual qualities of the product/service itself. Design direction became significantly weaker with the speed of neoliberal market demands and the rise of new media: in order to satisfy these increasingly complex needs, the projects started to be entrusted to several different agencies, resulting in a lack of overall vision (Burns, 1993).
1980’s Japan was radically different from the past: a rich and strong country which aimed at increasing tourism thanks to the promotion of nihonjinron (Japaneseness) (Collins, 2008). However, the values chosen to build the Nagano 1998 brand were not specifically Japanese, but they were meant to be universally understandable: participation of children, homage to nature, festival of peace and friendship (The Organizing Committee for the XVIII Olympic Winter Games, 1998). The visual identity designed by Landor does not stem from Japanese culture: the logo is a snowflower (snowflake+flower) in which each petal represents a moving athlete (The Organizing Committee for the XVIII Olympic Winter Games, 1994). The pictograms, not conceived as a universal language, were designed to trigger an immediate recognition of the brand thanks to their similarity with the logo. Despite the rich and detailed brand manual, the huge amount of material produced to promote the Olympics lack a univocal approach to follow. The numerous posters do not share a common layout: both them and the website were not included in the guidelines.

Even if not explicitly included in the brand values, the tradition was recalled in many forms: the torch design, the poster with the artwork from Sesshu, the podium, the sumo wrestlers at the opening ceremony. This form of neo-traditionalism was not managed in a consistent way, and the overall result is far from the stricter visual coordination of Tokyo 1964.
6. Modern hybridity and criticalities in Tokyo 2020 design project

The analysis of Japanese Olympics from the 1930’s to the end of the Century exposes both the development of the Country’s design and the multifaceted approach to the representation of national identity.

The centrality of values that already emerged in Nagano 1998 brand, has been pursued in Tokyo 2020 project as well, despite the crisis that overwhelmed the neoliberal market in which this design framework has been born. As Julier stated:

“The flexibility of neoliberalism and design culture ensures their predominance” (Julier, 2012, p. 348).

The main concept behind Tokyo 2020 Brand Book is the tradition/innovation binomial, visually represented by two colours (blue for innovation and red for tradition) and the display of contrasting images: contemporary architecture and temples, VR gaming and traditional board game Shogi, industry and agriculture, city and countryside, kawaii-style girls and geisha. The modern hybridity is also put into words by emphasising the contrast between the city of Tokyo (innovation) and the rest of Japan (tradition):

“At the Olympic Games of Tokyo 2020, innovation prospers when contrasts between Tokyo and Japan become united and harmonised” (Tokyo Organising Committee of the Olympic and Paralympic Games, p. 22).

The brand essence is based on four pillars: celebration, diversity, harmony and innovation. Their interaction gives birth to what is defined as the promise of the Games: “Innovation from harmony”. In order to identify these contrasting and complementary aspects of Japan, a survey was submitted to non-Japanese people: they were asked to link a series of adjectives to the city of Tokyo or to Japan as a country. The choice to rely on a foreign audience to define Japanese national identity can be regarded as a renewed form of self-orientalism: the elements of Japanese tradition are selected and re-organised as an easily understandable narration for a Western/global audience, which can easily fit into Western/global models of neoliberal marketing and branding.

The idea of highlighting both traditional and innovative aspects of Japan, can be related to the concept of modern hybridity:

“Asian host cities distinguish themselves in their deliberate evocation of their modern hybridity: the co-existence of modern development with ancient cultural traditions” (Collins, 2008, p. 187).

Beyond the Brand Book, the re-interpretation of tradition was systematically pursued in many of the artefacts designed for Tokyo 2020: the Olympic Torch, as well as the bid logo for the Tokyo 2020 Candidate City, recall the sakura flower, a worldwide renown symbol of Japan.
Tokyo 2020: globalisation and self-orientalism in the communication of the next Asian Olympics

The official logo by Kenjiro Sano (which was later discarded due to alleged plagiarism) contained a red circle as a reference to Tokyo 1964’s hinomaru. The colours red, gold and black are drawn from the tradition, and inspiration from Ikko Tanaka’s work is blended with Bauhaus-style modernism (Howarth, 2015). After the reject of this first logo a new international competition was launched in late 2015: among the shortlisted proposals, we can observe references to Asagao traditional flower and to Japanese deities (Mairs, 2016). The winning design by Asao Tokolo takes inspiration from a traditional pattern from the Edo period. As stated in the Brand Book:

“It is a traditional Japanese colour, indigo, and I drew a stylish Japanese appearance. Three kinds of squares with different shapes represent differences in nationalities, culture, thought, etc, and even though there are differences, the message of ‘diversity and harmony’ is put in a design that connects beyond them” (Tokyo Organising Committee of the Olympic and Paralympic Games, p. 26).

In this case, a traditional pattern has been associated to a meaning which was not the root of its original design. This process reminds of the appropriation of western design during the pre-WWII years, but it is self-applied by Japanese designer to Japanese culture, demonstrating how colonization mindset has taken root in the Country itself.
The pictograms are not designed as a universal language, but as an explicit reference to the golden age of Japanese design. As the designer Masaaki Hiromura declared:

“I have tried to express the dynamic beauty of the athletes through these pictograms, while respecting the legacy bequeathed by the pioneers of the Japanese design industry in their designs for the Tokyo 1964 Games” (Tokyo 2020 Unveils Olympic Games Sport Pictograms. Designs embody the artistry of athletes in action, 2019).

In this case, the imported discipline of design and the Western-inspired modernism switched from innovation to tradition, adding complexity to the multilayered perception of tradition in Japan.
The fragility of globalised-neoliberal design direction was exposed by some criticalities and contradictions in Tokyo 2020 Olympic design, which are hard to conceal with the ideal of “harmony” promoted by the Games brand (for instance, the above-mentioned incident of the alleged plagiarism of Sano’s logo). The two colours shown in the brand book are not consistently used for the applications: the tickets, for example, are designed in 5 different colours. Moreover, the colour combination method is inspired by traditional kimono craft, instead of representing the harmonisation of contradictions (Tokyo 2020 Olympic and Paralympic Ticket Designs Unveiled, 2020). The mascot Miraitowa was selected in a process which involved elementary school kids. An initiative meant to engage the population in the design process, which could be however regarded as a sign of design direction weakness: looking at the diversity of each mascot candidate, it is possible to affirm that the visual coordination with the logo’s blue pattern results in being totally fortuitous (The mascots were chosen by the elementary school children’s voting, 2018).

7. Conclusions

The analysis of Olympic design pinpoints different phases within the representation of the Japanese national identity. According to the internationalist principles of the Olympic Games, Tokyo 1940 design could express its own militarist nationalism. The universalist ideals behind the Corporate Identity for Tokyo 1964 started collapsing with sparks of eclecticism in the Sapporo 1974 design. In a globalised-neoliberal world, the branding project for Nagano 1998 is characterised by a focus on values and the use of marketing techniques applied to design, revealing at the same time the fragility of design direction.

Tokyo 2020 has developed the branding and marketing strategies further to identify the founding values, but the values and the visual guidelines were not consistently used to manage the whole project. In this fragmented context, in which single designers worked on single outputs without a firm design direction, the reference to the tradition appears to be devoid of its original purpose and refilled with new meaning. It is possible to draw a parallel between these dynamics and Tlostanova’s take on cultural appropriation processes:

“It is crucial not to just give voice to or include the other in a certain prescribed and restricted way and then appropriate the devoid of meaning, but rather to change the whole logic in which anyone can be made into another to begin with.” (Tlostanova, 2017, p. 59)

In the case of the Tokyo 2020 Olympic design, the above-mentioned “other” turns to be Japan itself: the Decolonial Design framework proved to be a useful tool to describe and analyse the reasons behind apparently universal design principles and methods. Japan turned on itself some colonial and neoliberal processes for what concerns national identity and tradition.
As Japan could be historically placed on both sides of the privilege/oppression dichotomy and the Country actively took part to the development of Western/global culture (as for the Olympic Movement and for design), the boundaries between what is Western and what is traditional has recently become more blurred: Olympic design itself is now regarded as a Japanese tradition, to the point which Tokyo 1964 pictograms became a traditional reference for Tokyo 2020 design. By acknowledging today’s blend of tradition and innovation, is it still valid to perpetuate a colonial mindset in post-colonial design? In the case of neoliberal-global branding projects, wouldn’t it be more upstanding to represent how tradition evolved into contemporary culture instead of replicating it in a fixed, never-changing way? The dualism between innovation and tradition is not so well-defined as shown in Tokyo 2020 Brand Book.

It is renown that globalised and neoliberal market demands for boutique multiculturalism (Tlostanova, 2017, p. 53) and neo traditionalism, however, it could be more interesting to represent contemporary culture, with its complex intertwining of tradition and innovation, than to use well-known, “safe for foreigners” symbols and attributing them new meanings that are not related to their origin. To avoid superficiality and misunderstandings it would be better to represent tradition in smaller and more manageable contexts like art exhibitions or theatrical performances, where it is possible to showcase tradition with a curatorial and historically accurate approach. This approach is also consistent with the celebration of Olympic Games, since the International Olympic Committee entrusts cultural events to the host city: a unique opportunity to give to tradition an appropriate place and time to be studied and appreciated.

References


Tokyo 2020: globalisation and self-orientalism in the communication of the next Asian Olympics


Tokyo 1940 OCOG (1938) Report Of The Organizing Committee On Its Work For The XIIth Olympic Games Of 1940 In Tokyo Until The Relinquishment.


About the Author:

Claudia Tranti is a master graduate in Communication Design and teacher assistant at Politecnico di Milano, Freelance Designer and Junior Art Director at OmnicomPRGroup. Her interest in Olympic design developed from the research carried out for her graduation thesis.

Acknowledgements: As this paper stems from my master’s thesis, I would like to thank my reviewer Francesco Ermanno Guida for his advice and guidance. My gratitude also goes to the staff of the Olympic World Library (Lausanne) and the Musashino Art University (Tokyo) for their kindness, patience and expertise.
Towards borderless futures: How transcultural approaches changed the practice of graphic design

Juliana F. Duque
Universidade de Lisboa, Faculdade de Belas-Artes, Centro de Investigação e de Estudos em Belas-Artes (CIEBA)
jduque@campus.ul.pt

Abstract | The purpose of this article is to discuss how transcultural approaches changed the praxis of graphic design, combining elements from different cultural contexts. Such a process, accentuated within the countercultural phenomenon of the 1960s, echoed the desire to build a borderless cultural identity, enhanced by the velocity of a world on the brink of the digital media revolution. This research intersects transculturality, counterculture, and graphic design according to the idea of change. The methodology reflects a qualitative approach conveyed through literature review, documentary research, and content analysis. Transcultural practices adapt to social, political, and artistic circumstances, fostering visual responses. The study suggests that this methodology outlived the countercultural movement as a resource for challenges to come, integrating and enriching design processes and thinking. Contemporary social design, such as that concerning climate change, can benefit from the coalescence of different cultural experiences and backgrounds to propose innovation.

KEYWORDS | TRANSCULTURAL GRAPHIC DESIGN, TRANSCULTURALITY, COUNTERCULTURE, SOCIAL DESIGN, DESIGN THINKING
1. Introduction

The evolution of graphic design practices into participatory processes intersected counterculture and transculturality during the 1960s. Transculturality, a still recent term in the field of cultural studies, grew and adapted within the countercultural phenomenon of that decade. That was in part due to the improvements in transports and means of communication at the time. With greater ease of movement, there was an increase in migrations that provided possibilities for cultural exchange. The other reason stems from the energetic nature of counterculture and its will for disruption with obsolete social, political, and artistic paradigms. With both premises, it was easier for the participants to overcome geographical and even mental barriers. The world was about to become smaller.

Counterculture established a transcultural network by promoting change along with new connections and intersections. Epstein (2009) argues that such a structure demystifies and transcends cultural identities. Also, as the prefix ‘trans’ indicates, transculturality carries and stimulates transformation, transcendence, and transgression, concerning an idea of process and mobility (Gernalzick & Pisarz-Ramirez, 2013; Zhang, 2018).

For Patrickson & Young (2013), transcultural adaptation is a site of innovation. The field of design already works in this direction, operating transformations to adapt to the everchanging world. As a fluid territory, it prompts change through multidisciplinary actions that lead to new solutions and scenarios (Krucken, 2008).

This study aims to explore transculturality as a potential source of change in the process of thinking and doing design. The motivation derives from the traces of extensive use of this strategy within the countercultural scenario of the 1960s and the little attention still given to the subject. During that period, transculturality supported and integrated a challenging graphic language that, according to Auther & Lerner (2012), was capable of rethinking society at large. From this case scenario, this study also aims to outline opportunities for intervention in the contemporary design scene, reflecting on possible uses to promote innovation.

Transculturality is an evolution of the term transculturation developed by Fernando Ortiz in his 1940 study about the Cuban society (Mignolo & Schiwy, 2003; Côté, 2010; Cadman & Song, 2012; Marotta, 2014; König & Rakow, 2016). Ortiz wanted to find a replacing term for acculturation, to better express the interactive and transformative processes between groups of different cultural origins (Benessaieh, 2010; König & Rakow, 2016). From then on, authors from distinct areas started exploring the phenomenon and its adaptations (König & Rakow, 2016).

For Birringer (1989), transculturality is something beyond cultural narratives of identity, difference, and opposition. Epstein (2009) seems to agree with this perspective, describing transculturality as a model of cultural development and liberation. For authors such as Lull (2000) and Kraidy (2002), this notion is close to that of hybridity and the communicative
Towards borderless futures: How transcultural approaches changed the practice of graphic design

process it creates. For Côté (2010), both concepts imply an action “in which former cultural traits form new cultural practices in the course of its transformation” (p. 123).

Other authors, such as Pratt (1992) and Hutchinson (2001), study this process as an impact of colonialism on indigenous cultures. Concerning this subject, Patrickson & Young (2013) argue that the use of transcultural methods “may at first appear to be a potential source of inauthentic mimicry, or even exploitative appropriation” (p. 44). It is necessary to look at the relationship between transculturality and design to distinguish these situations.

Most studies intersecting transculturality with the 1960s counterculture seem to focus on the North Atlantic network. Subjects range from lists of countercultural events and participants to the ‘transatlantic bridge’ and the socioeconomic realities behind this network of ideas and knowledge. In general, these authors pay attention to the social sphere of counterculture while the field of design remains little explored. Transculturality often appears indirectly in this context with the identification of its traces occurring within the descriptions of counterculture itself.

McKay (2005), as well as Kosic, Juncker, Monteith, and Waldschmidt-Nelson (2013), describe the circular influence between the countercultures of the United States (US) and the United Kingdom (UK). For Marsh (2016), the improvements in commercial aviation eased this transatlantic bridge, responsible for the cultural exchange of ideas, sensibilities, sounds, and images. Salvatore (2016) extends this perspective by involving India in the transcultural network. Guarnaccia (2017) also includes India, arguing that the voyage of Allen Ginsberg (1926-1997) to that country in 1961 helped to bring the Indo-Himalayan spirituality into the United States. Both authors acknowledge the importance of the western tours of Indian sitar players and masters of meditation.

Massey (1998) approached transculturality when studying youth countercultural waves. For her, those phenomena form constellations within a social space resulting from cross-cultural relationships and interconnections, from the local sphere to that intercontinental. These interactions provide what Boudreau (2010) designates as the construction of identities in constant evolution.

2. Method

This study proposes an analysis of 100 posters and album covers from 1965-70, the most proficient period for countercultural graphic design. The goal is to identify possible formal or methodological transcultural traits, to assess how they may have contributed to a new graphic language capable of changing the practice of graphic design.

The first step is the literature review on countercultural graphic design. The aim is to search for traces of transculturality. This phase is followed by a visual analysis of posters and record covers, two of the most widespread objects, according to six parameters: 1) their geographical provenance; 2) the number of authors; 3) their purpose within counterculture;
4) their production context; 5) possible multi-origin influence; 6) identifiable transcultural traits.

The analysis criteria allow exploring the links between transcultural processes and features such as the number of authors, the aim of the graphic material within counterculture, the social context, and the place of production. The search focuses on illustration due to its prominence in countercultural layouts. Typography and photography often blended with the drawings or collages, thus taking part in the study. Color appears as a secondary element as it may represent specific cultural traits in association with the other features.

The third – and last – phase is an exploratory/relational analysis whose goal is to evaluate the transcultural ethos and its consequences for the practice of graphic design. The study covers materials from the United States and the United Kingdom, the epicenters of this kind of graphic design, but also from Brazil, a country with a substantial countercultural phenomenon during the 1960s.

The sample of graphic materials comes from 20 authors/collectives who worked within the countercultural phenomenon of one (or more) of the three countries either with music, protest, or both: Alton Kelley, Bob Fried, Bonnie MacLean, David Vaughan, Hapshash and the Coloured Coat, Joe Gomez, John H. Myers, John Van Hamersveld, Lee Conklin, Martin Sharp, Norman Orr, OM Tentacle, Peter Hugar with Suzanne Bevier and Su Negrin (as a group), Rick Griffin, Rogério Duarte, Ruth Garbell, Stanley Mouse, The Fool, Wes Wilson, and William Henry.

3. Countercultural graphic design

Countercultural graphic design marked a diversion on the direction of post-war modern design, then headed towards what Drucker & McVarish (2001) refer to as the universal language of visual communication, “based on the values of clarity, rational organization, and functional efficiency” (p. 259). Colored, organic, undulating, and often crypto-hypnotic, this new visual approach clashed with the universalist goals of modernism (Darricau, 2014). At the same time, as a design practice, it got deeply involved within the cultural and social scenarios, embedding societal features and symbols of each place.

To better understand the development of such a kind of graphic design, it is essential to keep in mind that the counterculture of the 1960s was a complex social and cultural phenomenon that produced multiple revolutions (Greenwood, 2016). The younger generation stood up for a variety of causes against the conservative and aggressive establishment, from the war in Vietnam to the use of nuclear weapons. Authority abuses, as well as social injustices related to race, sexual orientation, and gender, were also covered (Broackes & Marsh, 2016). Hebdige (1979) easily summed up this circumstance by saying that counterculture explored all the relevant speeches from that period. As a result, this
phenomenon became broader in both social and geographical compositions than precedent anti-establishment waves (Suri, 2009).

Counterculture is also deeply related to the concept of place and to what Barnes (2013) considers as its natural fluidity. By looking at San Francisco and London, ‘focal points’ of counterculture, one immediately sees their ongoing and relational character, decisive for the phenomenon’s development and expansion into the western world (Criqui, 2005). Each city, despite their increasing contacts, developed its own countercultural identities, thus creating different design ‘schools’ (Grunenberg, 2005).

That is why the visual differences between the British and American approaches are so evident (Figure 1). While the British designers tended to create bucolic scenes with detailed illustrations, the Americans developed more aggressive layouts. The latter used acidic colors, highly distorted typography, and Art Nouveau women, along with Native American and Indian imagery or illusory patterns (Golding & Miles, 2018; Morley, 2018). Despite this contrast, transculturality seems to emerge as a graphic strategy in both contexts.

Figure 1. British (left) and American (right) countercultural graphic design. The British posters are generally built around a detailed illustration while the Americans transform the text into an element of the drawing. Both reveal transcultural traits: The left poster (Hapshash and the Coloured Coat, 1967) creates a dialogue between Europe and America with the castle, the flying saucers, and the reference to the CIA. At the right (Wes Wilson, 1966), the mystic sorceress is balanced and protected by the oriental yin-yang symbol.
4. Towards transculturality

Countercultural graphic design, in search of its own identity, absorbed and worked on references that varied according to the geographical origin of the author and the design typology itself. Such inputs, as the layouts indicate, came from different times and places – from the anti-academic movements of the late 19th century to Victorian mysticism, psychedelic substances, shaman rituals, and oriental religions (Grunenberg, 2005; Hathaway & Nadel, 2011; Darricau, 2014; Lowey & Prince, 2014).

A closer look at those materials, from distinct countries and years, allows exploring how transculturality permeated the process of design as a practice that, according to Robins (2008), creates new patterns of cultural diversity. The discussed examples summarize the analysis and reveal the extent of the use of this approach in both formal and methodological ways. In 1967, the English duo *Hapshash and the Coloured Coat* – Nigel Waymouth (1941-) and Michael English (1941-2009) – designed the poster *Are you Experienced* for a performance of Jimi Hendrix at the Fillmore Auditorium in San Francisco (Figure 2). The layout portrays Hendrix as a native North American healer, in an attempt to connect him to his home country and enhance his “magical” talents. There are flying saucers – remnants of the American UFO fever – a dragon, zodiac signs, and the eye of providence. The dialogue between those transcultural symbols aims at settling the first performance of Hendrix in the United States after his success in Britain, as well as to reinforce his Native American heritage.

![Figure 2. Analysis sheet for the Jimi Hendrix Experience, Hapshash and the Coloured Coat, 1967.](image-url)
Cooper & White (2005) argue that transculturality creates an interaction that exceeds the simple combining of cultural elements and the idea of fusion. When applied to graphic design, it potentially provides tools to propose change through multi-channel intersections. For instance, the undulating psychedelic typography and the recreation of light show/LSD visual effects are evident examples of this method, having evolved from experiences made on both sides of the North Atlantic.

Transculturality, in the case of the English and American countercultures, worked overall to capture the audience’s attention to the social causes and the benefits of higher consciousness. As a result, the layouts exploded in color and shapes, drifting further away from the geometrical and functional paradigm of the International Style design. They contributed not only to fade geographical barriers but also those between the author and the public.

Hapshash’s exploration of transculturality continues with Hung on you (1967), where they ventured on elements from far, near, and middle-eastern cultures (Figure 3). The mystic-oriented layout included Krishna figures, Chinese inscriptions, pseudo-Arabic lettering, and lotus blossoms, together with magic mushrooms. OM Tentacle – Mike McInnerney (1944-) and Dudley Edwards (1944-) – carried a similar approach in Jazz at the Roundhouse (1967), where the oriental features reflect a struggle between good and evil (Figure 4).

Figure 3. Analysis sheet for Hung on You, Hapshash and the Coloured Coat, 1967.
The appeal for transcendence carried by Eastern and pre-Columbian American imagery fascinated European and American designers because it emerged as an instrument for introspection and self-knowledge, similar to the effect of psychedelic drugs (Salvatore, 2016). Often close to mystical experiences, the symbology of those cultures was able to transform and empower countercultural messages. Its presence in the 1960s layouts strengthened the search for wisdom and provided new ways of transforming existence itself (Guarnaccia, 2017).

Several countercultural participants, from Allen Ginsberg to the Beatles, went eastward on meditative journeys during the 1960s. However, the popularity of the East, particularly India, grew also from the action of their inhabitants. Masters of mystical yoga and meditation like Maharishi Mahesh Yogi (1918-2008) or musicians like Ravi Shankar (1920-2012), came to Europe and North America to share their culture.

While in the countercultural turmoil, designers explored transcultural processes within the musical and social spheres. Save Earth Now (1967) is an example of a social cause that benefits from this approach (Figure 5). In this poster, the migratory birds evoke the beauty of coming and going, of creating something new by carrying a piece of different places. The intent is to celebrate the planet with all its elements, from fauna to flora, ethnicities, and religions. Waymouth’s early life already reflects this ethos: he was born in India during WWII and spent most of his childhood in Argentina, before going to England.
Towards borderless futures: How transcultural approaches changed the practice of graphic design

The idea of transculturality in the work of this English duo stems from how they seem to be able to use distinct cultural inputs to create new significances, materializing the perspective of Guilherme & Dietz (2015) about disrupting universalist cultural assumptions. Gay Liberation (1970), a combined effort of three authors, reveals that this method makes room for variations (Figure 6). The layout blends a photograph of young American protesters with a mandala, calling for higher consciousness through unity, eternity, and wholeness.

Each element – the mandala, the photograph, and the layout – was made by different people, making this poster an early example of a participatory process, where designers and non-designers work together to develop solutions (Sanders & Stappers 2008; Harder, Burford, & Hoover, 2013). The aim, according to Mouchrek (2018), is the “collective construction of knowledge, mutual learning, prototyping, and iteration” (p. 92).

As Friedman (2000) and Mouchreck (2018) remind us, design, as a dynamic process, includes thinking, planning, and directing actions under specific purposes. Such a mechanism, naturally, is not free from the background of the designers and their own experiences.

In the case of Martin Sharp (1942-2013), an Australian living in London between 1966-68, his overland journey through Asia shaped his vision on counterculture and provided him with new cultural experiences. Legalise Cannabis: the putting together of heads (1967) is perhaps one of his most evident signs of this kind of intersection (Figure 7). Here, Sharp got something all cultures searched at some point in their histories: a deeper state of mind with the aid of psychedelic substances. For that, he depicted a crowd of people from different ethnic groups.
Figure 6. Analysis sheet for Gay Liberation. Peter Hujar, Suzanne Bevier, Su Negrin, 1970.

Figure 7. Analysis sheet for Legalise Cannabis. The Putting together of heads. Martin Sharp, 1967.

Graphic design became one of the essential visual experiences of counterculture, acquiring more and more visibility (McKay, 2005). According to Rubin (2010), it became ubiquitous, surprising minds around the globe, together with music and LSD. The transcultural images...
soon started to interact with the nations’ political processes, representing “impulses for change” (Margolin, 1988, p. 59).

The presence of transcultural traits within artistic spheres is not a novelty per se. Migrations and diasporas have always contributed to cultural exchanges in the sense of connection and of going beyond (Monceri, 2019). As Patrickson & Young (2013) denoted, these visual representations can be mistaken for a form of cultural appropriation. Such a concept involves taking ideas, images, and art styles, subverting its meanings, and endangering its further use (Heyd, 2003).

However, cultures are fluid, able to absorb and provide inputs, thus promoting reciprocity (Imbert & Benessaieh, 2010). Accordingly, transculturality does not provide for closed, fixed, or immutable cultures (Epstein, 2009). It proposes fluidity, diversity, boundary-fading journeys, or a new level of liberation (Robins, 2008; Zhang, 2008; Epstein, 2009). In the end, it is about the aesthetic cosmopolitanism that grows from the increasing flow of technology and knowledge (Zhang, 2008).

Figure 8. Analysis sheet for Indian, John Van Hamersveld, 1968. This poster example of how transculturality can be, at first sight, dangerously close to the concept of cultural appropriation by adopting traits of another culture.

Therefore, no wonder transculturality blossomed outside the American and British countercultures. As the phenomenon expanded, so did the capacity for interactions and intersections. Brazil is an unambiguous example, with its anti-establishment movement, Tropicália, rising against the dictatorship installed in 1964.
Aesthetically, Tropicalists were keen on merging the popular with the avant-garde, as well as foreigner and Brazilian influences (Goffman & Joy, 2005). For them, the way to achieve a new Brazilian expression was to use a strategy of cultural production that ‘cannibalized’ local and foreign styles (Veloso & Dunn, 1996). That is, by creating their form of transculturality, with which Rogério Duarte (1939-2016), Tropicália’s graphic designer, would play within his layouts.

The album cover for **Caetano Veloso** (1968) articulates this process with the ‘digestion’ of American and British psychedelic elements and Brazilian imagery, such as bananas and Amazonian snakes (Figure 9). In this cultural cannibalism, the members of the movement were ‘eating’ everything to produce something new (Veloso & Dunn, 1996).

Tropicália, supported by an active social front, was also a participatory phenomenon in which members from different artistic fields exchanged their views. The Brazilian movement reflected the perspective of Luck (2003) about how these participatory processes turn design into a method of interaction.

According to (Robertson & Simonsen, 2012), “many of the design tools and techniques generated to further this process have become standard practice for the design” (p. 3) from the 1960s onwards. Its importance is related to an uttermost need for transformation and improvements towards a different world.

---

**Figure 9. Analysis sheet for the album cover of Caetano Veloso, Rogério Duarte, 1968.**
4. Discussion

Graphic design, as a rising and ubiquitous visual manifestation during the 1960s, absorbed, contextualized, and transformed impulses coming from diverse cultures through its various fronts. In addition to the multiplicity of influences from different continents, sometimes getting mistaken for cultural appropriations, migrations drove counterculture towards a future with fewer boundaries.

The communication between participants became an essential feature for the upcoming challenges of graphic design by changing its praxis into a more dynamic process. The interactions between participants contributed to transform layouts into mystical and restless protest tools, creating strategies that eventually settled the beginnings of participatory design (Robertson & Simonsen, 2012).

That change had a visual impact, as posters, album covers, and alternative magazines became melting pots of cultural references conveying one message: transformation. The analysis suggests that the designers, regardless of their geographical locations, reconfigured cultural symbols from multiple provenances to strengthen their transcendence, protest, and social purposes. Transculturality, initially associated with religious or mystical practices, worked as a call for active synergy between cultures and their peoples.

When applied to graphic design, transculturality creates a hybrid territory, intertwining latitudes and longitudes, local and global elements, providing access to new cultural perspectives. It contributes to fade mental and geographical barriers by establishing exchanging networks of knowledge, ideas, and techniques. Within the field of design, the mediation between diverse actors is what opens the road towards innovation (Krucken, 2008).

In the contemporary scenario of global changes and uncertainty about the future of humanity and the planet, transculturality figures as a unifying element for the search of cooperative and sustainable design solutions. At the same time, the very scenarios of change encourage the expansion of the field as a process and as a strategic tool (Cassim, 2013).

In the case of the climate change crisis, the adoption of transcultural processes in both design research and practice aims at finding answers to ease the problem, sometimes despite controversial economic and political agendas. This kind of challenge gets stronger, especially when some of the stakeholders are from the most vulnerable areas. This circumstance is in agreement with the perspective of Madge (1993), in which concepts such as equity, participation, and future are all essential components of sustainability.

Consequently, the local and global efforts within this sphere of action integrate participatory dynamics that, according to Robertson & Simonsen (2012), promote investigation, understanding, and development, along with the support of mutual learning processes. Transcultural and transdisciplinary design programs are thus growing to raise awareness for these processes and preparing students to approach the various social challenges. They aim
to reveal the potentiality of design to both foster and develop creative and resilient innovations.

Interactive participatory exercises and games, such as *Cadavre Exquis* or Buckminster Fuller’s *World Game*, may help to foster teamwork and to encourage critical thinking towards today’s challenges. In our digital world, web tools may also play an important role in promoting the collaboration between designers so they can share the different strategies as well as their knowledge on their own communities.

The fights and daydreams of the 1960s not only engaged the *praxis* of graphic design into bursting layouts but also supported the roots of a transcultural strategy directed towards the future and us.

**References**


Towards borderless futures: How transcultural approaches changed the practice of graphic design


About the Author:

Juliana F. Duque PhD candidate with a fellowship at the University of Lisbon. Collaborating member at CIEBA research centre. Former member of Epiwork – Science of complex systems for socially intelligent ICT. Interested in counterculture, transculturality, and participatory graphic design.

Acknowledgements: I thank the support and guidance of my supervisor Emilio Vilar and co-supervisor António Nicolas, as well as my research centre CIEBA and the University of Lisbon, Faculty of Fine Arts. This work is financed by national funds through FCT – Fundação para a Ciência e Tecnologia, I.P., within the scope of my PhD project with the following fellowship SFRH/BD/131648/2017.
Which way to go? Some complicated crossroads facing design culture in Aspen

Elena Dellapiana\textsuperscript{a}, Ramon Rispoli\textsuperscript{b}

\textsuperscript{a}Politecnico di Torino
\textsuperscript{b}Università degli Studi di Napoli Federico II
\textsuperscript{a}elena.dellapiana@polito.it
\textsuperscript{b}ernestoramon.rispoli@unina.it

Abstract | Born in 1951 thanks to the efforts of the businessman and philanthropist Walter Paepcke, the annual International Design Conference in Aspen (IDCA) proved to be a highly influential experience for the development of design culture during the second half of the 20th century. A closer look at its history allows for a better understanding of the ever-shifting directions of the design debate throughout the years, as well as of its connections with other fields of practice and knowledge production such as architecture, visual arts, sociology, and philosophy. This contribution will try to dig into the main issues at stake in the first two decades of the conference, and into the uses and implications of keywords such as technology, business, responsibility, environment. More broadly, the aim is to shed light upon some of the crossroads design culture was faced with in an epoch that proved to be crucial for its own development\textsuperscript{1}.

KEYWORDS | IDCA, DESIGN DEBATE, BUSINESS, RESPONSIBILITY, ENVIRONMENTALISM

\textsuperscript{1} The present paper is the result of a close collaboration between the two authors. However, paragraphs 1 and 2 can be ascribed to Elena Dellapiana, and paragraphs 3 and 4 to Ramon Rispoli.
1. Introduction

In 1949, the Chicago-based industrialist Walter Paepcke (1896-1960) – who had already been involved in supporting and financing the New Bauhaus with the émigré László Moholy-Nagy (Malherek, 2018) – launched the proposal of a series of meetings involving architects, designers, artists, economists, industrialists and businessmen, gathered for a week in the montane environment of Aspen (Colorado) where he and his wife had properties: this is how the idea of the International Design Conference at Aspen (IDCA) came into being. Resembling – albeit in a distinctively non-urban fashion – the European examples of the Deutscher Werkbund conferences, the Darmstadt Artists’ Colony or the CIAM, the initiative also contemplated the presence of the participants’ family members: the intention was to establish an community-like venue where designers and intellectuals from various fields could get together and debate, in an idyllic place surrounded by nature.

2. The IDCA in the Fifties: the business first

Despite its charming and peaceful natural setting, however, the project of the IDCA proved to be rather turbulent from its very beginning. In the preparatory meetings – held in New York two years later, in 1951 – a first controversy emerged, one that would influence the conference at least for its first two decades. Answering to his own company’s art director – Egbert Jacobson, who had proposed to invite as speakers prominent intellectuals and designers (such as Shahn, Burtin, Kepes, Charmayeff, Sert, Eames, Saarinen, Kaufmann) – Paepcke stated that “without the attendance of important businessmen there would be no point to the conference” (Allen, 1983, p. 277). The main purpose of the IDCA for Paepcke was, in fact, to address “once and for all the relation of design to business” in every field “from the graphic arts to industrial design, furniture, interiors, and architecture”. His suggestion was, then, to have two conference chairs: one designer and one businessman; on this premise, the art historian Charles H. Sawyer suggested that the title of the first conference would be Design as a function of management (IDCA Records, 1951a).

After several invitation proposals, the definitive speakers’ panel was mostly made up of businessmen – entrepreneurs and companies’ art directors – along with several independent designers from either Europe (Bayer, Albers, Lionni) or the U.S. (Eames, Nelson, Kahn). Significantly, the list did not feature any member of the Industrial Design Society’s management team (Dreyfuss, Bel Geddes, Teague, Loewy, to name just a few), who had discussed the new functions and directions of design only a few years before, at the MoMA 1946 conference Industrial Design as a new Profession (Poulos, 1988, p. 177).

The market-oriented approach was immediately clear in the introductory speech by Paepcke, the mastermind of the conference. Announcing the speakers’ panel, he stated:
“American business faces a new era and a new phase of competition. Because of the leveling or equalizing processes now generally practiced throughout industry (...) the opportunities for effective competition based on traditional factors of price and quality of product have been greatly diminished” (IDCA Records, 1951b).

The four days also included an exhibit on integrated design: in the intentions of the organizers – “to illustrate the value of design in manufacture, sales distribution and public relation (...)”. Along with several leading American companies, the show also included Olivetti: the graphic art, product design and architecture developed over the years for the Italian manufacturer of typewriters and business machines was already considered “an object lesson in management-designer collaboration for commercially sound and artistic expression” (IDCA Records, 1951c).

Just while the legendary exhibition Olivetti: Art in Industry – held at MoMA and financed by the company itself – was in preparation (Allen, 1983, pp. 279-280), the Italian firm was presented once again as a paradigm for the way it employed art, the work of excellent designers and the dialogue with tradition in order to improve both its products and its marketing tools: an enthusiastic judgement that was already becoming an axiom. It comes as no surprise, then, that during the following IDCA (which kept the same title of the first year) Walter Dorwin Teague – who was already familiar with the Italian design scene, having been involved in the organizing committee of the exhibition Italy at Work: her Renaissance in Design today (Dellapiana, 2018) – made a strong case for why Olivetti should have been a model for American companies too: “Olivetti in Italy has accomplished this identification superbly without any stereotype or repetitiousness whatever, with only an inexhaustible freshness that has become instantly recognizable. We are seeing this happen in a distinguished way with IBM. It is happening to Alcoa and to US Steel” (Teague, 1960).

Teague’s pragmatic position was somehow counterbalanced by the only other designer invited as a speaker at the second IDCA, the already idolized Buckminster Fuller, whose paper Design Today (Banham Papers, 1952) had a completely different focus: the future. Providing that “American production genius was brought about, the ingredients of which were technique and financing”, he made an optimistic forecast concerning technology and the possibility of extending its benefits to all mankind: 26% of the world’s population was already enjoying them in 1952, a percentage that would rise, according to him, to 50% in 1970 and to 100% in 2000.

Apart from Fuller, however, those who made themselves most heard in the conference were the businessmen: Richard Gump, a luxury tycoon, who entrusted designers with the responsibility of making entrepreneurs aware of the need of “good design”, or the printing company owner Alfred A. Knopf, whose argument went along those same lines. Such positions, implying the primacy of companies over designers, pushed the graphic designer and member of the organizing committee Leo Lionni – speaking on behalf of the latter – to
suggest that the presence of industrialists was not that essential for the real objectives of the IDCA.

Figure 1. Magazine page designed by Fernand Léger for Walter Paepcke’s Container Corporation of America (source: Fortune, vol. 6, 1945). For Paepcke, visual arts and graphic design were crucial tools for improving business well before the inception of the IDCA.
And in fact, the following conference – the last with the same title, chaired by Lionni himself – was entirely run by designers. This time, the European presence was strong: the architectural historian Nikolaus Pevsner was the main speaker; Max Bill, dean of the School of Ulm, and Enrico Peressutti – who was already in New York to supervise the construction of the Olivetti showroom – were the main international hosts; but also Xanty Schawinsky (Black Mountain College) and Gyorgy Kepes (Chicago Design Institute, former New Bauhaus) were also European-born, and perfectly in line with Moholy-Nagy’s views. The only “authentic” American was in fact Dave Chapman, president of the U.S. Society of Industrial Design. The registered audience – which also included the panelists – was composed of 65 free-lance designers, 95 companies (represented by executives or art directors, e.g. Pei for Webb&Knapp, Nelson for Magic Chef), 10 journals or magazines, 9 museums, 37 educators, 34 students. New frictions soon emerged during the talks: Pevsner demolished each of the golden rules of American good design, which he saw as “fallacies”. In his contribution – published years later by Banham (1974, pp. 15-18) – he made some ironic remarks about the
other guests, defining Fuller and his geodesic dome (built in a two-hour performance by two of his students) interesting but featuring an “obscure literary style”; Charlie Eames was for him a “youngish designer with a delightful boyish face” and the chairlift the most fashionable thing in Aspen. More seriously, he highlighted the fact that “on the whole the conference was happily free of politics”. Pevsner concluded by shedding light upon what was for him a clear gap between the old and the new world, stating that those who worked in the US:

“take their risks, defend their positions and at the end offer us, the public, a far higher volume of products for the house that are not the least bit hidebound in design. Our best design may be more refined than theirs, but we have less, and certainly too few designs that pronounce frankly what century they belong to” (ibid., p. 18).

Pevsner’s diffidence towards the invited speakers was not isolated: evidently, the drafter of the minutes had not heard of the Ulm School before, nor could he understand the intellectualism of the BBPR monument in the Milan cemetery or Schawinsky’s *Spectrodrama* performance, even though he was clearly “a good person” for him (Banham Papers, 1953). The 1954 edition limited itself to exclusively American speakers but focused on a wider spectrum of disciplines. *Planning: The Basis of Design* involved less designers (strictly speaking) but a larger number of architects, landscape planners, engineers, economists, art historians, biologists, psychologists, writers, specialists in public opinion, TV producers. The point, in brief, was to discuss the value of customers’ needs and how to interpret and answer them through design. This was a recurrent topic in those years: something similar was promoted a few months after for the Ann Arbor Conference in Boston (*Design and the American Consumer*) and it was a replica, in turn, with a more “scientific” approach, of the call launched in Darmstadt during the 1951 *Darmstädter Gespräche*, devoted to *Mensch und Raum* (Man and Space) where the philosophers – among whom Martin Heidegger – tried to envision a solution to the crisis of design. While in Europe the disciplinary issues were tackled with the support of humanities, in the U.S. the same attempt was made with the help of science. 1954 was also the year of the First International Conference of Industrial Design held at the Milan Triennale (Molinari, 2001)\(^2\), in which international designers such as Bill, Pevsner, Kepes, Wachsmann also took part; unlike in Aspen, though, the perspective in Milan was strictly disciplinary. The dialogue with the Milan Triennale went on. The following IDCA, chaired by the graphic designer Will Burtin, was titled *Crossroads*. What are the directions of the arts? The title evoked one of the X Triennale’s main topics, *L’unità delle arti* (the Unity of Arts) (Bassi & Riccini, 2004, pp. 103-119); however, while the Milanese event insisted upon the *mixité* between architecture, design, and art – with the contribution of artists such as Lucio Fontana – the Americans focused mostly upon the crossroad between man and mechanization:

\(^2\) Yet another factor contributing to the *annus mirabilis* of Italian design.
art was just the icing on the cake. On these premises, the board planned to invite Walter Gropius – whose seminal book *The Scope of Total Architecture* had just been published (Gropius, 1955) – who was unable to accept in the end (like Herman Wejll, Einstein’s assistant, due to his master’s death). In his introductory speech, Burtin – after paying tribute, once again, to those companies that had been capable of improving their business entrusting artists, such as the Italian Olivetti and Montecatini – presented a conference framed in various operational fields (Landscape and City, Education, Leisure, Communication) which would be addressed in a multidisciplinary way. Besides this new framework, one of the novelties of the edition was the presence of computer and cybernetic technicians (Bernard S. Benson, Arnold F. Arnold) who, following Fuller, insisted in their optimistic vision concerning the possibilities given by automation, despite being aware of their potential dystopian effects:

“With the advent of automation it is not hard to imagine a system evolving as follows. The work of ten is done by one and the one works to support the other nine in questionable leisure. These other nine are attached to nine sensation-producing television sets and are allowed to ‘wear out’ by a natural process of living, at the end they are junked. (…) automation and the arts are natural marriage partners which can produce happy children, but the marriage will not happen by accident” (IDCA Records, 1955).

In general, the 1955 edition confirmed an increasing shift towards issues that were under the spotlight in the cultural debate in those years, leaving aside the industry and the market. It is worth remembering that some of the most famous dystopian novels – the ones by Burroughs, Asimov, Dick, to name just a few – were published between 1953 and 1956: this cultural mood influenced the following IDCA conferences and contributed to further stimulating the debate about the designer’s moral responsibility. The following three editions, *Ideas on the future of man and design* (1856), *Design and Human values* (1957) and *Design and Human problems* (1958), were consequences – as well as further triggers – of the debate concerning the so-called “human-centered design” (Scodeller, 2019). The designer’s relationship with his own cultural roots was addressed both by European – Alberto Rosselli in 1956 and Ernesto N. Rogers in 1957 – and American speakers – John A. Kouwenhoven in 1957 and Harvey Wheeler in 1958 –, while the impact of design upon the society as a whole was the main issue at stake for the sociologist Charles Wright Mills (Trevino, 2014). In his famous 1958 talk *The man in the middle*, Wright Mills criticised designers for being submissive to the will of the market, one consequence of this being that they often lied to the public: the same accusation launched in those years by the social critic Vance Packard (1957, 1960), and the same that would later recur in Victor Papanek’s seminal book *Design for the Real World* (1971). Wright Mills’ radical attack to the capitalist market economy – something recurrent nowadays, but not at that time – recalled Gramsci’s vision of the relationship between intellectuals and power (D’Orsi, 2001); from this perspective he urged
designers to take responsibility, that is, to be members of mankind and to fully understand what their “membership” meant: (...) what has been lost is the fact and the ethos of man as craftsman” (IDCA Records, 1958). Man and ethics were the new issues at the top of the design agenda; a similar mindset was spreading also on the other side of the ocean, where the debate started focusing more and more upon design’s moral and political values, including in teaching (Stile Industria, 1959).
3. The Sixties: from man to the environment

In the 1960s, in accordance with a cultural climate extending well beyond the specific field of design, the IDCA saw the sudden emergence of environmentally and socially conscious stances.

In 1961, the year following Paepcke’s death, the title of the IDCA – perfectly consistent with its initial optimistic spirit – was Man/Problem Solver: the markedly positive stance emerged from the very first words of the chairman, the design educator Herbert Pinzke, who kept looking at design as an effective way to cope with human problems. But there was also room for divergent visions. In his speech First things First – which would be, quite interestingly, the title of the famous manifesto signed 3 years later by Ken Garland and other graphic designers (Garland et al., 1961) – Bernard Rudofsky provocatively stated that he had never seen man as a “problem-solving animal” inasmuch as humanity’s most fundamental problems were still unsolved, in spite of any philanthropic aspiration:

“Has man achieved the status of problem solver? asks the program committee. Are we able to recognize a problem when we meet one? I should like to ask. (...) Hypnotized as we are with extraneous problems, with conquering even less hospitable properties such as the moon and the stars, we are progressively losing track of our most pressing terrestrial problems” (IDCA Records, 1961a).

A similar disenchantment could be found in the first contribution to the IDCA by Tomás Maldonado, The Problem of All Problems, in which he claimed that the industrial designer might be in fact a problem-solver,

“but seldom a problem-solver who is free to decide which problems should be set and how they should be solved. It is certain that the problems are frequently set for him from outside, and no less frequently the solutions as well. In most cases the designer wants to set and solve problems for human use, but in most cases he feels obliged to set and solve problems for human abuse. This is, without doubt, the problem of all problems” (IDCA Records, 1961a).

Critical stances of this kind gained further momentum in the following editions. In 1962 the IDCA focused upon the environment (particularly man-made) and upon the role played by design in altering and re-shaping it, either positively or negatively. Under attack was, most of all, modern city planning, whose negative social consequences had just come under fierce criticism (Jacobs, 1961): Herbert Bayer voted against the possible invitation of Le Corbusier and Niemeyer to the conference, as their cities were for him “monuments which start with designers rather than with people” (IDCA Records, 1961b). The current state of design was not exempt from criticism either. Arthur Drexler – who had just been appointed as director of the Department of architecture and design at MoMA – said that the world was not merely “a dump heap to be ruined by factories making things”, and the only way to see architecture and design as tools for “perfecting the earth” was to consider the process by which a thing was made “at least as important as the thing itself” (IDCA Records, 1962a). Analogous was the stance of the industrial designer Neal Hathaway, according to whom designers were to
be held responsible for the shoddy artifacts which soon were “broken down, burned out, cracked, faded, rattled, bent, warped, slowed down or stopped” (ibid.).

Within this context, the IDCA 1963 – titled *Design and the American Image Abroad* – constituted a clear exception. At the height of the cold war – less than a year after the Cuban missile crisis – a conference whose explicit aim was to find new *designerly* ways of building international consensus for America was “too strong an invitation for political power plays” (Banham, 1974): any sort of critical stance was, therefore, out of the frame. Already in 1964, however, critique made its way back into the IDCA. The premise of the conference - titled *Directions and Dilemmas* by the chairman Eliot Noyes – was once again the need for an “enlightened materialism”, able to improve the conditions in which human beings live. Particularly interesting, in that context, was the case made by the New York-based writer Ralph Caplan for the development of a more rigorous form of design criticism: “if the nation is to have public awareness of design, we need popular design critics and reviewers. (...)”, people whose voice would help to stop “the flood of superfluous appliances” (IDCA Records, 1964).

*Figure 4. IDCA 1965 attendees gathered in front of the new tent designed by Herbert Bayer, replacing the former by Eero Saarinen (source: cover of the Visual Arts Bulletin vol. 6, n. 8, 1965).*
By the mid-1960s the positions within the IDCA started polarizing and the tones escalating, also reflecting the state of a nation (and of an entire world) in turmoil for the Vietnam war and the emergence of the counterculture. The title of the 1965 conference, *The New World*, was chosen by the chairman George Nelson as an acknowledgement of the “tremendous pileup of changes” (IDCA Records, 1965) occurred on the planet in the preceding two decades, considered in all their socio-political and environmental dimensions (anticipating, somehow, what would be the premise for the foundation of the Club of Rome three years after): it was, therefore, the perfect stage for those arguments that put into question any form of ‘technophilia’. The frightful repercussions of not tempering technology with human considerations – in other words, what Horkheimer referred to as “instrumental reason” – were the main focus of the keynote lecture by the British socio-economist Robert Theobold, whose words resonated with the ones pronounced a few years earlier by Rudofsky: “today we define the problem of going to the moon worth solving, but we do not define the problem of solving poverty as worthy of our attention” (ibid.).

A similarly critical vision of technology was the common ground also in 1966 (*Sources and Resources of Twentieth Century Design*) as well as in 1967, one of the most influential editions in the early history of the IDCA. Within the frame of the thought-provoking title *Order and Disorder*, nearly every participant - except for the artist Ben Shahn and his passionate defense of chaos - stood up for the need of a new form of order, to be re-established in the world also by means of design (IDCA Records, 1967a). The contribution that sparked the greatest interest – as it can be easily deduced from the extensive press coverage (IDCA Records, 1967b) – was the one by the architect Alfred Caldwell: his severe criticism of the lifestyle of modern man, who “through his disorder is poisoning the planet and making it unfit for all life – including his own” (IDCA 1967a), might well have had a significant impact upon Victor Papanek, who was in Aspen for the first time as one of the attendees (IDCA 1967c). Among the paladins of order also stood Max Bill, whose contribution was filled with philanthropic scientism and old-fashioned optimism: “as designers, we can produce examples showing how a problem could be solved” in order to “realize harmonious relations between the needs of the individual and the possibilities of society”, something that “must be done honestly, with responsibility”, the two bases of responsibility being “wisdom and morality” (IDCA Records, 1967).

In 1968 – within the framework of a dialogue between European and American architectural and design culture prompted by the chairman Reyner Banham – what came from the American side was something like a declaration of guilt. In contrast to Europe, where a designed object was conceived as an investment and should therefore be durable, in the U.S. design was seen – as the art historian David Gebhard pointed out – as “an experience, a well-placed maraschino cherry on a dessert to be consumed” (IDCA Records, 1968). Along

---

3 He would return to Aspen as one of the invited speakers four years later, in 1971.
those same lines, the industrial designer Richard Latham admitted that American culture “concentrated too heavily on producing and marketing things” and if there was a way out of that, it should no longer be found in isolated things but in systems (ibid.).

The 1969 edition The Rest of our Lives was probably the one with the gloomiest mood in the whole decade, reflecting “the despair the participants felt at the crumbling of American ideals” (Michaels, 1980, p. 36). Henry Wolf, one of the two chairmen, claimed that the real problem at the end of the century was not “technology, organization, coping with obsolescence and other things”, but “a problem of the fading of belief in something”. From a similar point of view, George Nelson spoke of the necessity to escape from “the perverted offspring of the American dream” brought about – among other things – by the blind faith in technology: an escape that could be found by providing design and humankind in general with “new tasks, difficult tasks”. From this perspective, he also borrowed the famous 1968 French students’ slogan “let’s be realistic, let’s ask for the impossible” (IDCA Papers, 1969).

**Figure 5.** Poster of the IDCA 1969 (source: private archive).

## 4. The storm and its consequences

Quite ironically, the most powerful attack to the IDCA came, one year later, from the very people Nelson had taken inspiration from. In 1970 – as it has already been acknowledged (Scott, 2007; Twemlow, 2009, 2012) – an open protest against the élite of the organizers was launched by students, environmental activists and the so-called “French group” (a delegation of radical left-wing French intellectuals including Jean Baudrillard): which human being was really at the centre of design’s concerns? The IDCA’s already well-established
narrative of responsibility came under fierce criticism for being “too white, male, middle-class”; even the conference format was questioned for being too conservative, as the pre-established sequence of interventions left little room for open and collective discussions. Confronted with such an all-out attack, the philanthropic foundations upon which the conference had stood for two decades proved to be more fragile than expected: what fell under the notion of “designer’s responsibility” was not a common ground, but an outright political battlefield.

As Banham stated, “as a chairman of that stormy last session of the ’70 conference I could suddenly feel all these changes running together in a spasm of bad vibrations that shook the conference. We got ourselves together again, but an epoch had ended” (Banham, 1974, pp. 222). The IDCA took a different path from that moment on: no proceedings were published ever since - so as to do away with anything that could resemble the framework of an elitist academic venue; as for the topics of discussion, the socio-political and environmental agitation gradually faded away, paving the way for the re-emergence of issues and themes more specific to the design field. A crucial edition in this sense was Shop Talk, in 1977, the moment in which “design professionalism began to overpower politics: (…) a watershed year”, according to Jack Roberts, “because we were finally talking about design again” (Michaels, 1980, p. 38).

That said, the tensions and concerns of those first two decades were anything but solved: market-led, technicist, philanthropic, socio-politically engaged and environmentally conscious visions of design kept colliding head on in the IDCA up until its final editions, some 30 years after. In this respect, the main battleground was always roughly the same. Which issues and concerns fall within (or beyond) the scope of design? In a world increasingly flooded with an overwhelming amount of - often useless, sometimes even harmful - objects, how and to what extent are ecological and critical thinking allowed to have their say also in the field of design? The problematic crossroads of those early years at Aspen were yet another expression - a highly significant one indeed - of the most pressing dilemmas and challenges facing design culture during the second half of the 20th century; dilemmas and challenges that resemble, often quite vividly, those of our present time.

References


IDCA Records (1951b). *Conference booklet*. Box 1, folder 5. GRI, Los Angeles.

IDCA Records (1951c). *Flyer 1951*. Box 1, folder 5. GRI, Los Angeles.


Which way to go? Some complicated crossroads facing design culture in Aspen


About the Authors:

Elena Dellapiana is Associate Professor at the Politecnico di Torino. Her current research is concerned with the history of Italian design, its perception and the construction of its image and fortune. Included among her publications is the book Il design degli architetti italiani 1920-2000 (with F. Bulegato).

Ramon Rispoli is Associate Professor at the University of Naples Federico II. His current research is concerned with theoretical issues related to the aesthetic, social, and political dimensions of contemporary design and architecture. He has published in international journals such as “Rivista di Estetica” and “Artnodes. Journal on Art, Science and Technology”.

4767 Cumulus Conference Proceedings Roma 2021 | Track: Design Culture (of) THINKING