“Design is studied and practiced at different parts of the World. While there is a shared understanding of design, there are also pluralities resulting from the realities of various localities and also contexts. The challenge continues for the design community to develop a shared understanding of design enriched and sometimes challenged through hearing and learning about these plural realities.”

“Does design have one or more visions? What kind of process does it follow? Has one or more identities? The multiple and ever-changing aspects of our discipline need to balance the roots with the dispersions, fronting the emergencies.”

“As the territories in which design is applied are growing, the radical changes - ecological, social, economic - that we are facing need interpretative and designing tools that only multiple and original points of view can provide.”

“Design process has to be technically deep and socially wide. With system thinking the track will explore how tacit knowledge can be used for today’s context for better sustainable development. Learning from communities, co-creation, empathy, local ecosystems will be some of the lead for future.”
Architectural Design Education as an Agent of Change: The Case of the Ultra-Orthodox Branch, Jerusalem

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Abstract | Three undergraduate degree programs—in Art, Architecture and Visual Communications—were recently established as satellite programs of the Bezalel Academy of Arts and Design to serve a single, distinctive community: ultra-Orthodox women. This paper examines the unique design culture that has taken root in the “Ultra-Orthodox Branch” of Bezalel’s undergraduate Architecture program through an intense meeting of diametrically opposed worlds. The program is a laboratory for a dialogue that almost never occurs in Israeli society. Through in-depth interviews with students and faculty, this research examines the role of design education as an agent of change in this unique setting of religious women within a traditional community that is currently undergoing social and economic transformation. It also considers the bridging potential of design to advance broader cultural understanding, as well as the limitations of design discourse to cross cultural divides.

KEYWORDS | DESIGN EDUCATION, BEZALEL, HAREDI, ULTRA-ORTHODOX, GENDER
1. Introduction

Three undergraduate degree programs—in Art, Architecture and Visual Communications—were recently established as satellite programs of the Bezalel Academy of Arts and Design in Jerusalem to serve a single, distinctive community: ultra-Orthodox, or Haredi women. Their curricula almost entirely mirror the main Bezalel curriculum, with minor adjustments to accommodate the community's religious mores; courses are taught by Bezalel faculty members (male and female). The first crop of women architecture students graduated in 2019 with a 5-year B. Arch degree.

This paper examines the unique design culture that has taken root in the “Haredi Branch” of Bezalel’s undergraduate Architecture program through an intense meeting of diametrically opposed worlds. The program is a laboratory for a dialogue that rarely occurs in Israeli society. It is one of the numerous experiments in creating new educational opportunities for ultra-Orthodox women, yet, unlike other new programs, for example, in computer science (Genut & Kolikant, 2019) or social work (Baum, et al., 2014) the study of art and design in this community has received no scholarly attention. This research examines the role of design education as an agent of change in this unique setting of religious women and focuses on design education as an agent of change within a traditional community that is currently undergoing a social and economic transformation. It also considers the bridging potential of design to advance broader cultural understanding and the limitations of design discourse to cross cultural divides.

2. The Ultra-Orthodox Community in Israel

The ultra-Orthodox, or Haredi Jews, are fundamentalist Jews that live by a strict interpretation of Jewish religious law that governs all areas of life, from study, prayer, ritual observances, and diet, to family relationships (Baum, et al., 2014). The Haredi community is an enclave community that defines itself as a "counter-culture" that rejects Israel’s dominant secular culture (Davidovitch, 2014) and live in segregated neighborhoods with their own religious, cultural, and educational institutions. The Haredi educational system is gender-separated, and the Haredi lifestyle is characterized by increasing gender separation (Indursky, 2020), rigid codes of modesty for women, and strict rules governing the encounters between men and women.

In 2018, the ultra-Orthodox population in Israel reached one million, or just over 11% of the total population (Malach & Cahaner, 2018). The Haredi lifestyle emerged during the eighteenth century to safeguard traditional Jewish religious practice in the face of rising modernization and secularization. Today, this traditional society has developed a unique social structure. Because of the high value placed on the study of the Jewish religious texts, ultra-Orthodox men typically devote themselves to a life of study and do not participate in the labor force. Women support their families, and they are also expected to marry young
and have many children—today, the average Haredi family includes 7.1 children (Malach & Cahaner, 2018). In 2017, the employment rate was slightly over 50% among ultra-Orthodox men and 73% among ultra-Orthodox women (Malach & Cahaner, 2018).

This reversal of traditional gender roles is reflected in and supported by the distinct educational systems for women and men. Boys learn general studies until the age of 12 and then move on to full-time Jewish study. On the other hand, girls receive a more well-rounded education that includes the core general studies curriculum. Women marry between the ages of 18 to 21 in arranged marriages. Their employment opportunities are often limited by a lack of training and childcare. Ultra-Orthodox women's average wage is only 70% of the Israeli average (Raz & Tzruya, 2017). Traditionally, their employment has been in the fields of education, childcare, and services in their communities. This pattern has begun to shift dramatically in the two decades, as ultra-Orthodox women have become increasingly integrated into the general labor market. Several factors have accounted for this shift. The main factor has been the growing economic pressure caused by the growth of the Haredi population alongside the reduction of government support. Data from 2007 indicated that most families in the Haredi sector in Israel lived under the poverty line (Ouzziely & Ifrach, 2007). More recent data shows that poverty levels are dropping from 58% of the Haredi population in 2005 down to 45% in 2017—compared to 11% in the general population (Malach & Cahaner, 2018). The academization of the labor market has also made higher education a basic requirement for employment, leading to “some acceptance, albeit grudging, among the rabbis that women have to receive higher education that will better enable them to support their families” (Baum, et al., 2014, p. 165). And finally, the teaching market, long considered the traditional occupation of Haredi women, became saturated, so that new career options began to be considered acceptable for the first time, such as computer programming, social work, paramedical fields, and others.

Several government initiatives emerged in the late 1990s in response to these issues to encourage the Haredim to enter the workforce. To this end, Israel’s Council for Higher Education set out to establish academic frameworks that would meet the Haredi community's unique needs (Baum, et al., 2014; Malach, 2014). This led to the establishment of a number of colleges for Haredi women with a focus on practical occupations that could provide gainful employment while avoid challenging the values of the Haredi community (Baum, et al., 2014). Special features of these colleges included an in-house rabbi who was employed to vet the study materials and advise the students and daycare facilities for students who were already young mothers. In the colleges that also admitted male students, strict gender separation was maintained—in classes, in the library, and even in the routes walked through the campus (Baum, et al., 2014).

In 2012, a new model of higher education programs was developed by the Israeli Council of Higher Education (CHE) in which parallel satellite programs adapted to the needs of the Haredi community would be set up as branches of recognized academic institutions. The goal was to provide a broader range of disciplines, greater geographic diversity, and offer a
model in which the Haredi branch campus and its parent institution could share resources. The curricula would be identical to the parent institution from which the academic degrees were awarded, yet social and cultural modifications could be made on the branch campus appropriate to the Haredi needs. (Malach, et al., 2016). Fourteen of these programs were established between 2012 and 2015.

This trend must be looked at within a wider narrative of the “Israelization” of the Haredi community in Israel, whereby some have argued that “recent socioeconomic changes have forced that Haredi community to accommodate itself to Israeli reality and culture” (Finkelman, 2014, p. 286). Various scholars, often referring to the educated “New Haredim,” have maintained that “models of isolationist fundamentalism no longer apply to more Israelized and acculturated Haredim” (ibid.). Yet paradoxically, while certain practices, such as internet use, academic study and participation in the workforce indicate growing liberalization, other realms of Haredi life attest to an opposite trend of increasing extremism (Finkelman, 2014). This is especially true of gender separation. As the activist Esty Rider Indursky writes, “it’s hard to remember exactly when it happened, but suddenly partitions (between men and women) are everywhere” (Indursky, 2020), referring to the growing separation between men and women in the public realm and its effect on erasing and silencing women.

3. The Haredi Branch

As a child, Rivka Vardi dreamed of becoming an artist, but there were no art schools for young Haredi girls like herself. She was lucky to receive private art lessons, and she began her career as a young art teacher at the Haredi school, Oman, which was established in 1992 by the Municipality of Jerusalem. When the director of the school suddenly died two years later, Vardi succeeded her as the school’s director at the age of 21. She developed a rich certificate program to train Haredi women art teachers and extensive community classes and workshops, including mobile art programs that served Haredi children city-wide. The Council of Higher Education’s new policy for new Haredi academic satellite programs led the City of Jerusalem to put out a Request for Proposals in 2012. As Rivka Vardi, the founder and current director of the Bezalel Haredi Branch, tells the story, the call struck a deep chord. For years, she had a vision of creating a Haredi Bezalel, referring to Israel’s prestigious and historic art school, founded in 1906. Vardi worked with Bezalel to submit a joint proposal and did extensive outreach in the Haredi community to prepare the ground and gain support for the programs. In 2014, the Bezalel Haredi Branch opened two undergraduate programs: in Fine Art and Architecture. Today there is a third program in Visual Communications.

Currently, there are approximately 125 students in the three programs. A considerable number of these students did not grow up in the local Haredi community but emigrated to Israel from the United States, France, and elsewhere. Describing the student body, a former
student explained that these women are not “mainstream” but rather “on the edge”; they have all made a path-breaking decision to study architecture, art, or design, a pursuit that is still not fully accepted in their communities. The women typically begin their studies as single women, at age 18 or 19, then get married and have children in the course of their studies. It is very common to see babies in the classrooms. A nursing room has been set up in the school. The other necessary accommodation is the inclusion of a rabbi on the staff whose role is to oversee the curriculum and advise on the myriad conflicts that arise throughout the course of study. Vardi has noted that the rabbi plays a crucial role in community relations and provides the necessary religious stamp of approval for the program.

While the program’s concept is to mirror the parent institution’s curriculum directly, there are some notable adaptations. Students study art history without looking at nudes: library books are bowdlerized. They study architectural history without entering a church or a mosque. As Vardi has said, “Every day and every minute we are questioning where the boundaries are, and who sets them. We are constantly falling down and getting back up” (Riba, 2018). The faculty is drawn from the standing Bezalel faculty, though not all faculty members are willing to teach in this setting. Interestingly, the faculty is composed of both women and men, a mix that is not acceptable in many other Haredi programs. And the peculiar intimacy and informality of design education—the one-on-one critiques, the intense discussions that arise within the studio setting’s group dynamics—occur here too, sometimes triggering unanticipated conflicts. A student described a range of dynamics between the secular faculty and the Haredi students. Many instructors, she claimed, reveal surprising ignorance about the Haredi community. The discourse is filled with stereotypes that do not reflect the complex realities and heterogeneity of these communities, which are often defined more sharply by their differences than their commonalities. But, as she noted, the most vociferous debates occur in the classes where the instructor is open and able to listen. When the instructor does not listen, the discussion simply shuts down. Another student noted that an important advantage of the program’s small size is the access students have to their instructors. The intimate and informal atmosphere of the relatively small classes, she claimed, provided a setting for remarkably open class discussions.

The meeting of the secular and religious worlds can be productive and eye-opening—for both. One student described her sense of colliding worlds through a poignant image that left a strong impression on her: a traditionally-garbed Hasidic man engaged in a heated discussion with a heavily tattooed instructor in the art department. However, in some cases, the division of values between faculty and students has been problematic. Friction of this kind has surfaced, for example, in the students’ choices of topics for their final thesis project. In one case, according to an alumna of the program, a student identified a problem related to a highly specific social pattern in the community, and her choice of topic was rejected by her thesis advisor. She claimed that the advisor simply wasn’t familiar enough with the Haredi community to understood the relevance and significance of the topic.
There is a certain ambivalence among the students regarding their professional roles towards the Haredi society. On the one hand, they have an in-depth knowledge of their communities and a deep moral engagement with them. Their studio projects and their chosen thesis topics tend to reflect a heightened sensitivity to their social environment. Many thesis projects, for example, shed light on issues on social patterns and spatial cultures that are unique to the ultra-orthodox community. On the other hand, some students don't want to "lean into their identities", as one student put it. Many don’t want to be pigeon-holed into designing only for the Haredi community. This problem became evident in a discussion I held with another student regarding a potential thesis topic, in which she expressed her interest in the problems of high-rise living. I advised her to use her unique knowledge to explore the issues that are highly specific to her community, noting how little research exists on this topic. However, she felt that I was clipping her wings and replied, "but that's why I am here! To learn about the world". This tension characterizes the learning process as a whole. As Rivka Vardi notes, “some of the students are looking to open up to new worlds in the course of their studies, while others prefer to maintain their clearly formed identities throughout” (Riba, 2018).

According to one studio instructor I interviewed, the students bring greater emotional depth and complexity to their work than their secular counterparts at Bezalel. Many thesis projects are characterized by their focus on social or community-oriented issues. Several projects addressed the extremely crowded conditions in the Haredi neighborhoods of Jerusalem. Miriam Tznoiret proposed a new elevated circulation system in her Jerusalem neighborhood of Beit Israel, along with the conversion of ground-floor commercial space into public community space when it is closed on the Sabbath. Another student, Malki Kessler Ben-Ze'ev, proposed a light-filled underground system of living spaces in the neighborhood of Romema, based on the existing conversion of many underground parking lots to illegal apartments. A speculative project by Liron Aharonson imagined a new temporary city that could arise around Jerusalem, based on a scenario of mass pilgrimage to Jerusalem during the traditional pilgrimage holidays (Riba, 2018). A project by Rivka Porush addressed the political situation by proposing a series of connections linking neighboring Arab-Jewish villages that have been disconnected by the Green Line (Figures 1 and 2), taking a political position that is hardly mainstream.
A second theme evident in the students’ work is the difficult relationship between spirituality and materiality. This tension—which is perhaps central to architecture as a discipline—has particular resonance here. For example, several projects attempted to grapple with the dissonance between the two aspects of Jerusalem’s dual identity as both a celestial and an earthly city. Yaella Silverman’s project “A Path to Jaffa Gate” creates a connective, liminal space between the city’s commercial space and its holy sites by celebrating its materiality (Figures 3 and 4). The space is excavated to expose its bedrock’s earthly reality, associated with quarries and cisterns, rather than the symbolic meaning of Jerusalem stone. Yael Feldinger-Kalir’s project for a train station that connects Tel Aviv with the ultra-orthodox city of Bnei Brak also addresses the need to bridge these worlds (Figures 5 and 6). Her project introduces diverse programs into the seemingly quotidian space of a commuter train station to speculate on the possibility of overlapping ritual and functional spaces in the city. She develops the themes of the duration of time, its sequences, and the sanctity of the everyday.
Figure 3. Yaella Silverman, A Path to Jaffa Gate, showing the descent to an excavated path along the walls of Jerusalem’s old city where the exposed bedrock can be experienced.

Figure 4. Yaella Silverman, A Path to Jaffa Gate. Stones are reused from a demolished hotel to form a flowing paving pattern.
Figure 5. Yael Feldinger-Kalir, Train Station: Tel Aviv-Bnai Brak—bridging two worlds.

Figure 6. Yael Feldinger-Kalir, Train Station: Tel Aviv-Bnai Brak – section showing diverse programs that occur at different times of the day, including study and prayer.
To date, only three cohorts have graduated from the Architecture program at the Bezalel Haredi Branch. Almost 100% of the graduates are working today in the profession. Although the program is growing quickly, with increasing enrolments every year, it is difficult to predict the long-term impact of the program on the architecture profession or the Haredi community. The broader picture of Haredi integration in the workforce is less encouraging. In 2018, “The Statistical Report on Ultra-Orthodox Society in Israel” stated that “the findings show that the trend towards the rise in the rate of employment and academic studies has come to a standstill” (Malach & Cahaner, 2018).

The problematic relationship between religious and secular cultures is one of the key issues in Israeli society. This program may ultimately have an impact on the Israeli built environment by laying the groundwork for more innovative and subtle solutions to the pressing problems of ultra-orthodox housing and urban form. The Bezalel Haredi Branch is but an intriguing experiment of cultural change that is empowering Haredi women through the study of architecture. Perhaps, in the words of Director Rivka Vardi: “[...] art can be a catalyst for change. Maybe a kind of change that nothing else can bring about”.

References


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“But I’m a lecturer not a therapist”: Educational Coaching – a proposed alternative approach to supporting students through their creative education

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Abstract | This paper argues for the potential of coaching as one element of transforming how we support students. Although limited in scope, there is enough evidence in the literature to suggest that coaching can supplement many of the historic and noble ambitions of creative educational institutions. More research is required to explore the most impactful models of coaching support and how it becomes embedded into the fabric of creative education. Coaching could sit alongside existing teaching models as an ancillary support system (Peng and Wang, 2019). Or it could be offered as training to academic faculty as another instrument from the teaching toolbox. It could also be used to train students as peer-coaches – that in turn could prove to be another powerful competency in their employability portfolio. Whatever models we employ, we should be brave, disruptive and radical in our attempts to address the challenges we face.

KEYWORDS | COACHING, CREATIVE, HIGHER-EDUCATION, STUDENT-SUPPORT, SKILLS
Introduction

We have arrived at a moment where the business world is incorporating the language and utility of creativity and creative education. As Ladkin and Taylor (2010) suggest: “… we live in a complex world, which cannot be fully understood solely by reference to scientific forms of logic and sense-making. The arts, and arts-based practices, provide different ways of both describing and relating to that complexity, thereby offering novel ways of responding to it” (p.235). Conversely, the university sector, especially creative education, is often criticised by both politicians and the corporate world for failing to adequately prepare graduates for the world of work. A 2013 study by the Association of American Colleges and Universities highlighted employer priorities when it stated that a capacity to employ critical thinking, clear communication and problem-solving prowess was more important than a job candidate’s degree subject or classification (Association of American Colleges and Universities, 2013). Alongside this, new thinking on curriculum development and delivery is required to address the rapid transformation of the workplace via the Fourth Industrial Revolution (Schwab, 2017). In 2018 the World Economic Forum published the ‘Future of Jobs Review’ (Bhatti, 2018), which identifies what they consider to be the ‘10 Skills You Need for the Future of Work’. The report predicts that in five years, one third of the skills we currently state as essential for today’s workforce will have changed. The 10 new skills required were reported as: Creativity, Emotional intelligence (EQ), Analytical (critical) thinking, Active learning with a growth mindset, Judgment and decision making, Interpersonal communication skills, Leadership skills, Diversity and cultural intelligence, Technology skills, and Embracing change (Bhatti, 2018). This highlights the challenge universities face in preparing graduates for a future workplace with many unknowns attached to it – including student attributes that are interdisciplinary in nature. As a result, while many higher education institutions may choose to double-down on the ‘proven’ historic classic academic framework of subject-specific: lecture, seminar, and tutorial, others are questioning the ongoing relevance of such pedagogy. As Kosslyn and Nelson 2018 comment on the USA context, “… higher education is facing four overarching problems… students are leaving college woefully unprepared for life after graduation… college is too expensive… more than half of students don’t graduate. And even when they do, they have often been intellectually absent during much of their time in college” (p. 6). It is perhaps ironic then, that this paper proposes the appropriation of coaching methodologies originating from the sports sector, which has in recent times been fully embraced by business, as a solution to some of the challenges that higher education faces. This paper proposes coaching as a means to assist students through their academic journey, impacting positively on their graduate exit velocity and their wellbeing.
1. Historic context

The original meaning of the term ‘coach’ is a conduit that carries someone from one point to another (Evered and Selman (2001). It evolved as a term for ‘instructor’ or ‘trainer’ from a 19th Century Oxford University colloquialism meaning a private tutor who ‘carries’ a student through an exam (Online Etymology Dictionary, 2019). The term ‘coaching’ however, took on its contemporary meaning at the end of the 20th century. The book The Inner Game of Tennis (1974) by Timothy Gallwey is credited with launching the sporting origins, while John Whitmore’s Coaching for Performance (1988) built upon the growing appetite for increased elite sports development. Whitmore introduced the GROW model that is still used in many coaching models today. GROW in an acronym that utilises: ‘G’ as goals and aspirations; ‘R’ as reality or current situation, internal and external obstacles; ‘O’ as opportunities, possibilities, strengths and resources; and ‘W’ as will or actions and accountability (Whitmore, 1988). This legacy has evolved into performance psychology and coaching that dominates contemporary professional and wider sports environments (Mageau, G. & Vallerand, R. 2003).

The corporate world’s adoption of coaching as a management and executive development framework is credited to financial advisor Thomas Leonard in the 1980s (Brock 2014, Grant and Stober, 2006). It is suggested that this came in response to outmoded top-down corporate management models that had constrained rather than supported leadership training (Evered & Selman, 2001). Since then, professional coaching has evolved into a billion-dollar industry in the USA alone (Sherman & Freas, 2004). Contemporary definitions of the term coaching are diverse. Evered & Selman (2001) suggest that coaching is defined by its genuine attempt to develop leadership interventions as ‘trusted partnerships’ as opposed to controlling performance management. Moen and Skaalvik (2009) define it as, “... a method which aims to achieve self-actualization by facilitating learning and developmental processes to promote the resource base of another person. The method is characterized by its active involvement of the coachee through powerful questioning and active listening” (p.31). Most definitions include as their essence, the role of the coach in supporting the coachee to develop to their maximum potential (Brock, 2014).

2. Coaching and education

From this definition of developing human potential, it is not difficult to imagine how such a motivation could be translated into the educational context. However, research into the use of coaching within education is relatively scarce – and even more so within creative higher education. The majority of studies refer to using coaching CPD methodologies to train and support teachers within the school-level contexts (Anderson and Gristy, 2013, Casanova, M. P., et al. 2014, van Nieuwerburgh and Barr, 2019, and Tschannen-Moran & Tschannen-Moran ( 2011) 2011). In the American context the culture of school-level K-12 coaching has been promoted via national and state-level policy pressures to improve teacher training support (Tschannen-Moran, and Tschannen-Moran, 2011). Again, in the USA the driver that
G. Pritchard

has promoted coaching modes in the higher education sector has been via attempts to improve student attrition rates degree attainment figures (Webberman, 2011). Webberman takes care to identify coaching as different from historic ‘academic advising’ which has long been the staple in US higher education student academic support.

Other studies include Australian research that explored coaching to support engineering undergraduates (Puji & Prasad 2013), and coaching in nursing education (Hayes & Kalmakis 2007). In the UK Moore, Westwater-Wood, and Kerr’s, (2016) published an analysis of a successful peer-coaching intervention with undergraduate physiotherapy students. Coaching has increasingly grafted itself into the CPD culture of many universities, raising the question as to why it is not utilised more widely. As Lordanou, Lech, and Barnes (2015) suggest, “Taking into account that coaching is increasingly seen favourably as a developmental tool for university staff of all levels, one might be inclined to consider its usefulness for students” (p.4). Anecdotally, there does seem to be resistance from some academic faculty when the subject of coaching is raised. This could stem from the fact that the root origins sit outside of the academy, or possibly from some of the ‘fist-pumping’ stereotypes of coaching projected via popular culture media. Geber, 2010 points to such scepticism when she states, “… surely well-qualified intellectuals do not need ‘touch-feely’ life coaching…” (p. 64). Arguably there is however, an evolving notion of the teacher role in educational settings away from ‘sage on stage’ to more of a constructivist facilitator role (Griffiths, 2005).

“Mentoring” as a term for an academic support mechanism seems to be a more acceptable label within higher education. However, Showunmi (2014) suggests mentoring is ‘person development centred’ while coaching leans towards a more performance-oriented motivation with students. However, this is not an agreed position. Ramos-Voltz (2018) describes a complex process that students traverse via coaching including self-reflexive motivations as well as deep learning.

She states: Reflecting on one’s own experiences is a powerful method for learning and allows the learner to leverage personal strengths and address critical development needs. The key element of (promoting sustainable learning from experience) is helping the coachee move from awareness to action in order to sustain learning. The process of reflection creates a developmental feedback loop to continually fuel a learning cycle. (p. 143)

In a study of a coaching intervention at the University of Salzburg, Losch et. al (2016) assigned students into four categories: a self-coaching group, individual one-to-one coaching, group training, and a control group. Results showed that group training and individual coaching and were effective in facilitating goal attainment and reducing procrastination in students.

They state: Individual coaching created a high degree of satisfaction and was superior in helping participants attaining their goals, ... Moreover, mediation analysis show that a coach’s transformational and transactional leadership behavior influenced participants’
perceived autonomy support and intrinsic motivation, resulting in beneficial coaching outcomes.” (p.1)

A study by Orr and Sonnadara (2019) on a coaching intervention with medical students (that included faculty training in coaching techniques) concluded that there is evidence of the positive impact on students’ well-being, self-regulation, resilience, self-efficacy and goal attainment. Bettinger and Baker (2014) tracked the performance of 13,555 students, in eight different higher education institutions (HEIs) in the USA, who had been exposed to coaching interventions over two academic years. These students had been enrolled as part of a programme where each of the HEIs had employed the services of an external coaching agency to deliver the training. The coaches communicated with the students via phone and text messages. The project resulted in a 15% improvement of the coached students in their ongoing enrolment over the control group, which led to stronger degree completion. The study also reported a 9 % improvement in student retention, and the overall positive impact persisted even after students no longer received communication from their coaches. In another US study using a coaching intervention to teach biology undergraduates creative thinking, the project group demonstrated increased exam scores (particularly with lower achieving students), increased self-confidence and an improved ability to ‘do’ science.” (p.6) (Chaplin, 2007). Another US-based university undergraduate mixed-methods coaching study had a broader approach that set out to positively impact ‘professional and personal thriving’. The results reported an increased awareness of individual values and strengths, but the largest positive effect was upon student self-confidence (Lefdahl-Davis, et al.2018).

Peng and Wang (2019) designed an undergraduate intervention to develop what they referred to as students’ ‘positive learning dispositions’. A key element of this study was in using mindfulness training as the intervention lever. The study concluded that ‘mindful agency coaching’ and ‘motivational interviewing’ were potent strategies in supporting students to become resilient, mindful, and self-determined learners. Bettinger and Baker (2014) state in their study that, “The coach contacted students regularly to develop a clear vision of their goals, to guide them in connecting their daily activities to their long-term goals, and to support them in building skills, including time management, self-advocacy, and study skills” (p.2).

A study, using PhD students at a London university as its sample group, exposed them to a coaching programme to supplement their research obligations (Lane and De Wilde, 2018). The results concluded that students reported a positive impact as result of the programme, including enhanced self-awareness, confidence and assertiveness. A practical benefit to the ongoing development of the students was also suggested; “Improvements in self-awareness enabled participants to adjust their approach when communicating and working with their supervisor.” (p.63) Other interventions have also focused more specifically on what traditionally might be referred to as study skills. For example, Zeidenberg, Jenkins and Calcagno (2007) noted that coaching support around note taking, time management, and long-term planning, resulted in an 8% improvement in persistence rates. Thaler and Sunstein
G. Pritchard (2008) suggest that coaching in a higher education context does not necessarily need to be delivered as a large-scale intervention. They argue that simple coaching ‘nudge’ techniques, where subtle but directional hints are employed, can make the difference between students becoming motivated to complete academic tasks or not.

3. Creativity, coaching and ‘quality of mind’

As stated above, there is little if any specific published research of coaching within creative education. This may be related to the contested question of whether creativity itself can be taught. In a study of its UK National Teaching Fellows, the Higher Education Academy (HEA) 92% agreed or strongly agreed that developing creativity is possible (Wyse and Ferrari, 2014). In defining the term “creativity”, the group suggested the following categories as useful: ‘thinking’ (solving illstructured problems in ways which show initiative); ‘doing’ (developing, implementing and leading new things); ‘thinking and doing’ (the cerebral and the practical); ‘the arts’ (artistic version of innovative); ‘self-expression’ (ability to express an innate aspect of your psyche); ‘creativity as a continuum’ (acknowledged artists and scientists through to ordinary people); and ‘context’ (contextually-based innovation inspired by responding to specific and challenging problems). Runco and Jaeger (2012) suggest that creativity is ‘an everyday human activity’ that is both proactive and reactive. From such pragmatic definitions of the creative process, it is arguably possible to see how coaching could support some if not all of these processes. Mezirow’s (1998) Theory of Transformative Learning emphasises the importance of another cornerstone of the creative process - critical reflection. Here the coachee reflects on an experience or behaviour, examining carefully what they would like to change in order to transform a situation in a more positive way. Transformation or change involves a process of exploring the old and looking towards the new (Scott, 1997). Mezirow argues that learning to think for oneself involves such critical reflection. From a coaching perspective, thinking for oneself is empowering and this is highly valued in the coaching process.

In sports coaching, one aspect that could be transferable into creative education is problem-solving motivation (Potrac et al., 2000, Jones (2000), suggests in the text ‘Toward a sociology of coaching’, the aim of coach education should be the nurturing in practitioners of “a ‘quality of mind’, so that they are equipped to dynamically engage the problem-solving and dynamic nature of their work” (p.183).

4. Peer coaching

Hooker’s (2011) study of student-to-student academic support suggests that coaching with one’s peers removes the stigma of asking ‘silly questions’ which students sometimes feel when engaging academic faculty. Such coaching also nurtures trusting relationships which
are recognised as foundational in providing the conditions that allow peer coaching to flourish, and includes non-judgemental and unthreatening listening. Anderson, et al.’s (2005) study of peer coaching amongst student teachers helped them “… develop mutually supportive bonds as the peers progress in their development” (p.98). Britton and Anderson (2010) used an online platform to facilitate peer coaching amongst student teachers and created four supportive contexts for the intervention: academic support, technical support, emotional support, and reflective support. This resulted in improved problem-solving and working strategies amongst its cohort.

4.1 Mental health and peer coaching

With universities and government bodies reporting huge challenges around student well-being and mental health (Office for Students, 2019), new strategies for meeting these concerns seem urgent. A Unite survey (2016) found that among students who had strongly considered dropping out of higher education, 76 per cent reported feeling stressed or worried, while 46 per cent reported feeling down or depressed. Apart from the obvious humanitarian crisis that this indicates, it also has an economic effect with student retention impacting university economic securities. In terms of wellbeing, RamosVolz, (2018) suggests that via a coaching paradigm, “Individuals create a personalised map to manage the effects of change and the accompanying emotions as well as to support new ways of looking at challenging situations” (p.143). This is not an expectation that such an approach will lead to a total resolution of student well-being and employability challenges, but that it could offer a methodology that could support and compliment the best historic models of creative education pedagogy.

In a study of psychology students by Short, Kinman, and Baker (2010), a peer coaching intervention was designed to test the impact on levels of psychological distress in the lead up to exams. A control group was also tested and the results revealed that stress levels were significantly lower in the students who had experienced the intervention. The study concluded that the programme had value in supporting students particularly during a stressful period of their studies. A recent wide-ranging literature review of coaching efficacy for medical students, exploring 21 studies, concluded positive outcomes in terms of the impact of coaching on well-being. The review also reported improved resilience, technical skill acquisition, reflective practice decision-making and teamwork. (Orr and Sonnadara, 2019). A mixed methods study at Western University in the USA, targeted postgraduate students over an eighth month period with peer-led coaching.

Participants reported a positive impact on their ability to cope with anxiety and stress levels and an increased sense of resilience (Fried et al., 2019).
5. Neurodiversity and Well-being

Evidence demonstrating the relationship between well-being issues and students described as ‘neurodiverse’ is increasingly compelling. While there is a contested range of definitions that cover this collective nomenclature, there are agreed categories within the more defined ‘Specific Learning Difficulties’ (SpLD) category. SpLD is the umbrella term for a number of conditions, including: Attention Deficit Hyperactivity Disorder (ADHD); Autism Spectrum Disorders (ASD); Asperger’s Syndrome; Dyscalculia; Dyslexia and Dyspraxia. (Kirby, 2013). An example of how one condition can impact a student’s educational experience (in reality it is usually a range of overlapping conditions), with ADHD, the executive functioning (EF) attributes of the individual are often impaired. EF can be defined as the range of skills related to attention regulation necessary when requiring goal-related problem solving. As Zelazo et al. (2016) state, “This goal-directed control in turn is needed for various kinds of behaviour, including persistence, being able to focus on several things at once, shifting easily between tasks, and reflective learning” (p.3). Clearly this would impact with almost any educational endeavour, but more in creative education where there are often students with specific learning difficulties. A small study in a US university used coaches with specialist training in ADHD to support students in this category. Researchers described three themes to emerge from the study: students reported improved goal attainment skills, enjoyment in working with the coaches, and also a greater sense of self-regulation and well-being. They concluded, “It appears that coaching holds promise as an emerging type of academic support for college students with ADHD to promote improved executive functioning” (Parker, et al. 2011, p.115). A larger study of 148 college students over a 5-year period using ADHD coaching was conducted using novice coaches. The interventions consisted of an eight-week coaching course that combined cognitive-behavioural therapy (CBT) and educational support. Executive functioning was the primary focus of the assistance and resulted in improved self-esteem, reduced symptom distress and on overall student satisfaction (Prevatt and Yelland, 2015).

6. Coaching and its potential to increase academic self-efficacy

In an all-female university in Pennsylvania USA, a programme was designed to support students diagnosed as having SpLD and/or ADHD (Singley, 2017). Its focus was to test for increased academic self-efficacy as a result of the intervention, which the literature has confirmed is associated with academic success and increased attainment (Bandura, 1997, Zajacova, Lynch, & Espenshade, 2005; Khan, 2013). Students in the coaching group reported stronger self-efficacy than students in the control group. As Singley states, “… results show that Academic Coaching could be an effective intervention to increase the use and knowledge of learning strategies for students with LD or ADHD, specifically addressing the challenges in executive functioning skills often faced by students with LD and/or ADHD” (p.72). Nurturing academic self-efficacy in students then, seems to a key attribute in
supporting students to thrive. Bandura (1997) defines self-efficacy as “people’s judgment of their capabilities to organize and execute courses of action required to attain designated types of performances” (p. 2). This judgment has a future-oriented motivation which is distinct from confidence with its primary focus on domain-specific historic success as its motivational resource. Confidence is derived from drawing upon successful experiences of past activities, where the ability to execute courses of action supported the attainment of specific goals.

Research has shown that self-efficacy has a positive impact on academic motivation, learning, and achievement (Pajares, 1996a). Although Pajares (1996a) questions some of Bandura’s claims (highlighting, for example, the necessary qualification of other factors in educational success such as effective teachers and resources), he supports the general notion of self-efficacy as a positive indicator of an individual’s potential to succeed in academics. Bean and Eaton (2000) suggest that success in one area can become habitual and promote attitudes that eventually translate into behaviour. As such, students who experience academic success in one area may be more likely to persist with a different task or subject area. This accumulative potential for the development of self-efficacy is particularly pertinent in considering support for students entering university for the first time.

Gore, Leuwerke, and Ladwig (2006) argue that one of the reasons that first year students are vulnerable to attrition is that they tend to overestimate their own abilities and underestimate the requirement for effort and persistence. While evidence suggests that this misperception generally corrects once they progress from this formative experience, the critical context of the first-year college experience remains of crucial importance. As such, using the first-year context may prove to be one possible consideration for any proposed coaching intervention in higher education. Bong and Skaalvik (2003) suggest that individuals who possess strong academic self-efficacy are also more likely to a) set higher attainable academic goals, b) persist longer on challenging tasks, and c) enjoy academic work more than peers who possess a negative self-concept and weak academic self-efficacy.

Summary

The combination of factors forcing creative educators to re-examine how they deliver a strong student experience are considerable: the marketisation of higher education, the breakneck evolution of the Fourth Industrial Revolution, outmoded curricula and student mental health and well-being. We cannot expect academic faculty to become renaissance superhumans, delivering edge-of-the-seat teaching and up-to-the-minute pedagogy on technologically future-proofed courses while offering well-being support to frazzled socially mediated undergraduates. Having said that, the era of the academic whose simple trajectory is to deliver windows of robust research-informed teaching while returning research outputs to the Research Excellence Framework is over – at least in the majority of the new
universities. The time feels right for a radical review of how we deliver creative education, but in order to achieve this, old paradigms will need to be challenged. As McWilliams, E., Dawson (2008) argues, “The resilience of the ‘lecture’, the ubiquitous culture of ‘transmission’, the credentialing process, the hard-wiring of disciplinary boundaries, and so on. It is unlikely that these elements of ‘command and control’ pedagogy will be easily relinquished by those who have been rewarded for decades for what they know and their capacity to instruct as a ‘lecturer’. (p. 641)

This paper argues for the potential of coaching as one element of this essential conversation. Although limited and fragmented, there is enough evidence in the literature to suggest that coaching can support many of the historic and noble ambitions of creative educational institutions. What is required now is more research to explore the most impactful models of coaching support and how it becomes embedded into the fabric of creative education. Coaching seems to be a legitimate and exciting response to some of the challenges highlighted here. Coaching could sit alongside existing teaching models as a supplementary support system (Peng and Wang, 2019). Or it could be offered as training to academic faculty as another instrument from the teaching toolbox. It could also be used to train students as peer-coaches – that in turn could prove to be another powerful competency in their employability portfolio. Whatever models we employ, we should be brave, disruptive and radical in our attempts to address the challenges we face. As Jeroen Chabot, Dean of Willem De Kooning Academy Rotterdam states, “The art school … needs to rise to meet these new challenges, accepting and embracing the fact that knowledge is no longer the property of academies, universities, professors or tutors; nowadays, know-how and skills are increasingly distributed, networked and shared on a grand scale. Today’s art school should serve as a nucleus for these activities, yet it often fails to fulfil this role. Now more than ever, education requires forms of pedagogy and organisational structures that reflect these dynamics.” (Chabot 2019)

References
De-stereotype UX Design:
Discussing and managing issues related to the clustering of users in the design of innovative solutions


De-stereotype UX Design: Discussing and managing issues related to the clustering of users in the design of innovative solutions


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Decoding the birth of transcultural fashion

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Abstract | We have numerous types of attires, or parts thereof that have crossed cultures and boundaries because of immigration and geographical transitions such as the mandarin collar, Nehru jacket or the kimono sleeve amongst others. As designers, the earlier we accept this diversity and pluralism, the sooner we will be able to cater to this new culturally mixed society. Through case studies of the burkini and the Asian Kurta, this paper talks about non-identification of a garment from its social or political construct and its existing labels to look beyond the original cultural significance that it may have (had). There is a renewed need to re-evaluate the existing notions of pluralism and diversity that are not condoned by popular culture and a need to integrate the local with the global so that clothing can be democratised and be more accepted, accessible and made inclusive to this culturally diverse new society.

KEYWORDS | DEMOCRATIC, INCLUSIVITY, TRANSCULTURAL, MULTIPLICITY, DIVERSITY
1. Introduction

Fashion (and clothing), as we know today, has a lot of meanings and connotations associated with it. Within its varied layers, it has a language and a purpose to serve. Historically, garments and costumes have been solving the needs of mankind, as a covering for the body, as protection from the cold and extremes temperatures while, at times, also addressing modesty concerns. While sometimes dress and clothing divides society by class, race and gender; at others, it blends these boundaries via (world) garments such as denims, overalls, business suits etc. Dress, in the sense of clothing, has also been used for religious and ritual purposes, in different cultural contexts.

Fashion and dress have greater power than one can imagine. How one dresses can directly impact one’s chances of getting a job, finding a date, making an impression on an audience and so forth. In the book “Dress & Identity”, Roach-Higgins & Eicher (1995) state:

“Dress helps announce (communicate) identities for persons who are socially situated [...] Dress confers identities on individuals as it communicates positions within these structures” (p.13).

It is thus inevitable that a huge section of the population swears by popular brands and labels, and designers drop new styles on the runway twice or even thrice a year. Every season, new styles are churned out by fast-fashion brands and fashion magazines thrive on these representations with their commentaries. Although these magazines have been in existence for a long time, but in today’s age, as Moeran (2010) said:

“fashion magazines are both cultural products and commodities, that circulate in a cultural economy of collective meanings...they provide experiential and behavioural models — particularly in the realm of fashion and beauty — in which the reader’s ideal self is reflected” (p.207).

In the present scenario of constant social media engagement, the millennials and GenZ are forming impressions from the campaigns and magazine reviews with every passing day. They discover new fashion terminology from fashion journals and existing literature available on the same. Designers and brands play a huge role in helping form these opinions with the fashion vocabulary they use to communicate.

As has been observed, most fashion is viewed so as to be consumed by western audiences with the majority of fashion and trade shows hosted across Europe and the U.S.A, whereas South East Asia is only a new entrant with the participation of primarily Japan and China in the global scene amongst a few others. “However, viewing fashion or dress (as an identity) through a western perspective only interferes with the ability to perceive fashion in other cultures” (Tortora, 2010, p.169). Tortora thinks that people from the Western countries often view local dress styles as “primitive”. With the increasing of global trade, it has become easier for trends and styles to permeate from their local context to a larger global context. She further states that “[...] the fashion industry is constantly looking for inspiration eastwards as well as towards Asia, Africa and lesser explored places. As a result, Western
and non-western fashion designers incorporate elements of the dress of other cultures into the dress that they create/produce. Asian dress has contributed elements such as the standing collar called a “mandarin collar” and the kimono. Designers from India produce Western, ethnic and fusion lines."

If one observes individuals residing in developing countries such as India, Pakistan, Bangladesh etc. closely, they are often seen combining a western silhouette with their traditional attire. A typical example would be pairing a shirt with trousers, with a dupatta or a scarf or stole wrapped around the neck. Individuals have been doing so for years and there are many narratives around how migration has facilitated an intermix of styles, crafts, colours and aesthetics. With global shifts, there have been numerous crossovers such as the sari, the bright Iranian or Turkish scarves that may not necessarily wrap around the head but make a fashion statement when tied fashionably around the neck, bangles, *bindis*, *henna*, *tattoos*, etc. There are innumerable cultural clothing, accessories and visual references that have blended into mainstream (western) fashion scene. Although dress and fashion have largely been standardised to fit specific contexts, for example the business suit is more appropriate for corporate workwear while a looser fitted garment is suitable while working from home. Dress and fashion scholar Joanne Eicher echoed this point when she coined the term “world dress” as a commonly worn high volume clothing of both sexes such as jeans, athletic trainers, sandals, baseball caps and t-shirts etc.

Maynard (almost) on the contrary states “Despite this, a picture of global attire must acknowledge the crucial place of differing ethnic and personal preferences, philosophies and religious and moral attitudes” (Maynard, 2010, p.252). There are many more attires that have been exported from India and Southeast Asia such as the Nehru jacket, Indigo dyeing techniques like tie dye and Shibori, the jodhpurs, etc. Each one of these can become a case to state that it is possible to incorporate this fusion and cross-over of dress and identity while acknowledging a global consumer base.

In her book “Design, the key concepts”, Catherine McDermott, a well-known writer, curator and professor writes:

“Cultural diversity in design involves understanding how people live in different cultural and social contexts. This works on two levels: the first to increase the potential market for products and services; and second to help local economies [...] Any contemporary discussion in design creativity in the 21st century has to take on board issues of cultural diversity [...] Cultural diversity reflects a uniquely rich history of multicultural settlement, immigration and movement in the (UK) society, and understanding and expressing this (cultural diversity) is now seen as a key asset for contemporary design [...]”(2007, p.63).

She further adds that “Cultural diversity helps identify people’s values, aesthetic preferences and lifestyles on a global basis”. Understanding cultural diversity can help make design become truly inclusive and transgenerational. Keeping this as the underlying context, the paper puts forward a case for multiplicity of clothing. This is exemplified via two case
studies, of the *burkini* and the *kurta*, by emphasising the fact that designers need to integrate the local with the global in order to cater to this culturally diverse mix of people across the globe.

It is also important to enquire how dress can be termed as democratic, what are the factors that encourage similarity or diversity of dress within nations and across national boundaries, how clothing styles move from one context to the other, how they affect people’s perceptions with just the use of a certain terminology to label the garment? Using primary and secondary research tools and interviews and data collection, through online surveys as research methodology tools, the paper lends an enquiry into these important questions.

2. Case Study of the Burkini

2.1 The Burkini as a metaphor of freedom and multiplicity

The burkini or a burqini (*Burqa + bikini*) is a “woman’s swimsuit that covers the entire body, leaving only the hands, feet, and face exposed” (Lexico, 2020). Islamic girls have been observed wearing fully covered t-shirts and leggings to the beach long before the burkini was designed. This was seen as a huge gap in the market, which prompted Ahida Zanetti, a Lebanese- Australian designer to create the burkini in the first place.
Following her suit, eminent sportswear brands Speedo and Nike also saw this as a huge business opportunity and launched their modest swimwear targeting this segment, with different names. Speedo launched its “Delight Full Body Suit”, essentially a range of leggings and long rash guards that aren’t as form-fitting as conventional surfer styles. The brand representative stated that “The burkini has even been donned by women who simply seek protection from UV rays or aren’t comfortable putting their bodies on display”. On the other hand, Nike saw this introduction as a more creative pursuit. It’s creative director Martha Moore told the media “We’re excited to inspire more women to see themselves in sport by thinking creatively and designing inclusively.”

Aheda Zanetti, who designed the first burkini posits:

“I wanted to do something positive – and anyone can wear this, Christian, Jewish, Hindus. It’s just a garment to suit a modest person, or someone who has skin cancer, or a new mother who doesn’t want to wear a bikini, it’s not symbolising Islam”.

At a global level, the burkini has made it to “The Sports Illustrated” an American magazine, in its annual swimsuit issue (2019), with famous Somali-American supermodel Halima Aden gracing the cover page. This drew positive attention to the campaign as well as severe criticism. While many readers and viewers were thrilled, that inclusivity was finally coming of age, there were an equal number of respondents who felt it defeated the purpose of modesty, by posing in a magazine that has more male readership as known. Halima herself felt this was a huge step in normalising the burkini, as a freedom of choice. Before her quitting the fashion industry quite recently she had told the BBC (2019):

"Young girls who wear a hijab should have women they look up to in any and every industry […] We are now seeing politicians, business women, television reporters,
and other successful hijabi women in visible roles and that is the message we need to be sending."

2.1 Modest Swimwear in India and the Burkini

On a typical beach in India, it’s possible to find girls and women across different age groups in a certain assortment of swimwear, mainly consisting of t-shirts, shorts, cover ups and very rarely in a quintessential beachwear (the bikini or a swimsuit). They are dressed fully covered, the reasons for this are associated more with culture than religion. If provided with the alternative of a covered swimwear, like burkini, they are likely to sport this modest swimwear that is giving them the ease of a water-resistant fabric and that has less lag in water as compared to being fully clothed. This may be the case in a lot of countries where modesty concerns are still relevant. For the scope of this paper however, the primary base for the survey has been India, which deems itself as a secular country allowing freedom of speech and expression.

A survey was conducted with girls and women, in the age group of 18-30 years, who frequent beaches during vacation or holidays, usually Goa or further south of India. It is important to note that from over 50 people interviewed in Delhi and the nearby regions, most of them fall in the middle economic segment consisting of fashion-conscious individuals, young professionals and students who dress fashionably, spend mindfully and use public transport like rickshaws, buses and metros for daily commute. Most of them live independently, away from their families or with friends in a shared apartment and all respondents belong to either the Hindu or the Christian faith, which is an important factor in this survey to separate religion from functionality and requirements. Two important insights were drawn from the survey, as explained below:

- 50% of the respondents said they would be happy to wear a fully covered or a partly covered swimwear especially in India where modesty concerns are a major deciding factor when a woman dresses up to go to the beach.
- 36% of the respondents either did not know of the burkini or did not want to wear one, despite wanting to be modest, because they associate it with the hijab and burqa.
Thereby, it is pertinent to note that burkini, as a modest swimwear garment, has a demand but perhaps a little more knowledge about its name would have served a wider consumer segment and could have made this much-required garment more inclusive and transcultural. If perhaps the first garment had not been called burkini, there would have been a better chance of its acceptability in the market at large, as was the intention and the primary motive behind launching it in the first place. There is a case for its use which is not necessarily confined to a religious obligation.
Although sports, and in this case swimming, as recreational or competitive, has been practised for long time and in general there has been research and debate on sport’s relationship to class, race, gender and sexuality, a cultural study of sport begins to emerge only in ‘80s led by feminists who sought to explore the male domination of sport in the construction of gender and sexuality (Edgar & Sedgwick, 2008, p.332). When we look at the burkini or a covered swimwear in this context, where it is trying to liberate rather than dominate, perhaps there is a renewed need to re-evaluate the existing notions of pluralism and diversity that are not condoned by popular culture.

3. Case study of the Kurta

3.1 The Kurta as a global symbol of versatility – The historical context.

The timeless Kurta, or the tunic, as it is known in the west, is defined as a loose collarless shirt worn by people from South Asia, usually with a salwar, churidar, or pyjama (Lexico, 2020). A late eighth century Sanskrit-Chinese dictionary gives the word Kurti for the chinese shan, shirt, although Kurti is not a Sanskrit word (Dhamija, 2010, p.21).

Krishna (2010) writes that while some of the scholars believed that stitched garments were introduced into India by central Asia tribes early in the Christian era, others maintained the view that they arrived when the Mughals invaded the Indian subcontinent (p.129). There are varied points of view, but what’s important to note here is that the “History of the kurta in the Indian subcontinent goes as far back to the Shunga rulers as in the era 184-72 B.C.E, followed by the Sakas and Kushanas, central Asian peoples who wore stitched garments” (Krishna, 2010, p.129). He further adds,

“By the end of the twelfth century, Muslim rulers had occupied Delhi, bringing with them traditions from other Islamic courts [...]There are references of nimcha or a short tunic, and a jabah which is an upper garment made of fine muslin” (p.130).

There are numerous other references from Akbar’s time until the mid-eighteenth century when these garment adaptations continued in their original or modified versions, with some variations getting renamed in order to accommodate both Hindu and Muslim sentiments that were prevalent in those times. With the advent of colonisation during the nineteenth century, some Western influence on dress and clothing was evident, with sleeves being tailored and the kurta morphed into a simpler form with straighter cut becoming more popular than the previous angarakha/jaba/peshwaz, which have been versions of the kurta with more volume, length, details, etc. Apart from the Indian subcontinent, there is also evidence of the stitched garment in other South East Asian countries such as the Kimono in Japan and China.
3.2 Present day Kurta

Moving forward, the 20th century dress style evolved across the varied terrains of the country in myriad ways, adapting to different climes, from a cooler climate in Kashmir and Ladakh to the extreme heat in Rajasthan and Gujarat or the tropical climate of Chennai and Kerala. Despite these variations, the kurta has managed to stay as a staple garment in addition to other draped garments specific to the Indian subcontinent, notably the sari, dhoti, etc. The sari however, has been observed to be slowly losing out to the kurta as an everyday garment, because in addition to the latter’s functionality, there is more scope for contemposing and variations.

![Figure 5. Some modern-day versions of the kurta in India. Style courtesy: Saumya Pande, New Delhi, India.](image)

In present times, the kurta is seen as the daily attire of women in India, Pakistan, Afghanistan, Nepal and neighbouring countries. It is a common sight to see women wearing kurtas with salwars (loose pleated trousers that are fitted at the ankle) or churidars (close fitted bottom gathered at the ankles). But the most common pairing is with ankle-grazing pants, styled with a stole or a dupatta for a traditional look or without one for a more contemporary style, more like a sort of dress. There are kurtas or tunics worn across the western part of the world and it is not unusual to find Americans or Europeans wearing longer shirts or dresses with pants, closely resembling the look of the kurta as seen in India.
3.3 Global comparison and contemporising in fashion

Another modern interpretation of kurta, as observed in the last few decades, has been a beach wear in the form of kaftans or loose slip on. Some of the famous designers who have used the kurta as an inspiration in the form of a tunic are Tory Burch, Johnny Was, Gucci, Kate Spade amongst others (Figure 6).

Figure 6. American chain of luxury department stores stocks designer swimwear & cover ups that replicate a kurta (Neiman Marcus, 2020). Image source: https://www.neimanmarcus.com

Japan has been on the forefront of innovative fashion and use of technology for a long time and some of the renowned designers, notably Rei Kawakubo, Issey Miyake and Yohji Yamamoto, amongst others, have done some ground-breaking work in bringing Japan’s cultural context and aesthetics to the global fashion scene. While drawing inspiration from the East and the West, Japanese brands and designers have managed to bring the traditional and the ultra-modern together in mainstream fashion.

For their launch in India, Japanese brand UNIQLO tied up with Indian designer Rina Singh, from the label Eka, for an all exclusive kurta-dress range, to serve the Indian demographic. The kurta line was not only launched in India but also in Japan, Singapore, Malaysia, Thailand, Indonesia and the Philippines, thereby moving beyond a purely “Indian”
connotation of the same. Rina says “The kurta has been India’s daily dress for years now. It is timeless, democratic and functional - aligning it perfectly with the UNIQLO LifeWear philosophy. Through this partnership, we have pursued a contemporary version of the kurta as an elegant essential for women of all backgrounds, regardless of age, culture or belief” (IANS, 2019).

In a detailed telephonic interview with her, she talks about how the kurta has been one of her key silhouettes, how she sees it and why it is virtually the go-to garment for her and many of her clients. One of the reasons for the kurta’s popularity, as she identifies, has been the society’s shift to a more global outlook, which would require the wearer to switch between an everyday sari to a completely western outfit. This however has not happened in India which is still quite deeply rooted in its strong textile and handloom traditions. The kurta, as a tunic or a dress, offers more options of keeping this tradition alive, and yet can be perceived as a global silhouette. One of the reasons why Rina’s brand Eka (Figure 7) does so well globally is its mass appeal and versatility, everything the kurta symbolises.

Figure 7. Eka’s Spring summer 2020 collection at Ogaan, New Delhi. Image source: www.ogaan.com
Globally, while scanning through the western fashion scene, the tunic has been spotted across the spectrum. It has been seen on the streets across the world, outside fashion weeks, in resort collections, amongst others. Scott Schuman of “The Satorialist”, who is a street style photographer, has numerous images of people wearing the tunic, or a tunic as a dress across the globe. (Figure 8 and 9).

WGSN, the renowned global forecasting site has shown the kurta as a trend forecast for many seasons across product categories (Figure 10).
To gain a more personal insight, the author interviewed some of her friends and acquaintances across the UK, U.S.A and Australia. These women are mainly between the age groups of 35-50 years. They have been to India many times and are seen donning the tunic or kurta back home occasionally. I asked them how it got into their wardrobes back home, how many versions do they have and how often do they wear it.

Julie Lantry, a designer and an academic in Sydney, Australia, has a very quirky, experimental dressing style and through her many trips to India in the past two decades, four tunics arrived in her wardrobe back in Australia. She says:

“I generally wear them in India. When I first started traveling to India, I noticed most people wore them and I started wearing them as it felt more comfortable both physically and culturally[…] I do wear a tunic in Australia, but more as a resort wear (over swimmers etc).”

Niki, in Brighton, U.K who has been a senior designer for the brand Monsoon in the U.K, had a kurta that she wore till it fit her, and then she had to give it away. She says:

“For me the kurta is a specific cut, not ever low cut. I think of it as made in cotton and a certain length with splits at the side and it has sleeves. Brands like Monsoon and East do tunics and use prints that come from India so these are so close to traditional Kurtas.”
It would be safe to conclude that the kurta or the tunic is a widely known form of clothing which has had various adaptations across a western clientele.

3.4 Kurta in the context of dress and sexuality

In the book “Clothing: A global history” (2008), Robert Ross in the chapter “The emancipation of Dress” says:

“There was, and remains, a complicated balance that has to be found between women overemphasising their sexuality, so that they are not taken seriously, on the one hand, and women dressing in such a masculine fashion as a threat to male egos” (p.147).

He said this in reference to the work and business environment, but in a patriarchal society, where women are still finding their space outside of their homes, this may be true in other areas of social and cultural life too. A kurta is versatile enough to seamlessly go from home to work to convert to a dress when required to go out for an evening. It also does not seem overly modest, with the way it is styled, it can be made contemporary when worn with trousers, linen pants, or leggings. A lot of younger office-going women wear it as a dress which is longer and less revealing. It has many ways of getting styled and there are multiple variations able to create a very traditional or a very contemporary look.

In the survey conducted with the young lot of girls and women in India, not surprisingly, over 50% respondents stated that they find the kurta “cool” and they would wear it, if styled interestingly. It would be important to note here that a majority of these young girls dress up in denim, shorts and dresses for their everyday college wear.

Appendix 3.
4. Conclusion

If fashion has to be truly represented as a global, vibrant, all-inclusive entity it is important to look beyond what we see at present as inclusive. While it is important and relevant to have body, gender, racial diversity represented in Fashion, and that it shouldn’t have taken this long to come about; It is equally important to show diversity of garments that cross borders and boundaries just like the brand UNIQLO did.

It can be concluded that designers and brands are endowed with the larger responsibility of perpetuating this essence of integrating the local with the global. There have been many designers who have integrated this philosophy in their work, as discussed in the paper, but there is a huge scope for more such interventions. If brands could take up more local clothing examples such as the Asian kurta or the burkini, we would see a lot more diverse and multicultural fashion on the streets. Maybe some clothes need to be dis-identified from their existing labels to be democratised in order to be more accepted, accessible, used, inclusive. It is time for designers and its recipients to resist from identifying a garment only from its social or political construct and to look beyond its original cultural significance it may have (had). There is an even bigger need for designers to look at it afresh and to build on a culture of multiplicity and materiality. There would be more blending of people and identities, and certainly a lot more fun, amalgamating cultures using fashion as a medium.

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Design as a medium for an informal learning. INDICOlearning from the interface to the activity

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Abstract | Digital technologies and social media frame an unprecedented scenario for learning, which is featured by simultaneous experiences, spontaneity, creativity, and action. In this learning context, the design approach is vital fostering communication and new technologies, self-production, and manipulation options, which provide new forms of knowledge. The design of wayfinding and information, play an important role in making any concept accessible, shaping diversity of stimuli in a network of tools, signs, and symbols, which enhance the learning process and make it more inclusive. This paper presents the research and development of a variety of visual, tactile, and acoustic elements to be part of an online platform, designed for learning different architectures. The aim of this project is to develop resources for hands-on learning, using different technologies more adapted to a diversity of learners and targets. During the learning process, the design engages different possibilities to build objects that gather amazement, satisfaction, curiosity, and inquiry. The next step will be, once this platform will be implemented, to validate the effectiveness of its design to provide active learning and, what is more, its possibilities for inclusive purposes.

KEYWORDS | DESIGN FOR LEARNING, ARCHITECTURE MODELS, TOOLS AND TECHNOLOGIES, HANDS-ON LEARNING, LEARNERS DIVERSITY
1. Introduction to autonomous learning

Last decade, digital technologies and social media have been and are still the protagonists of an unprecedented scenario for learning, which is featured by simultaneous experiences, spontaneity, creativity and action. The trends identified in learning and development (Haagh, 2017) show the crucial role of technologies and disruptive methods (learning paths, affinity groups, learner-contributed content, and coaching) (Dyger, 2017). There have been so many changes in both work and leisure, that it seems absolutely necessary for education to redesign most of the processes and contents generally used till now. This new educational panorama requires to involve the individual (de Jong, 2014) providing assorted resources and media elements developed with detail and rigor. These elements are mostly supported in drawings, graphics, and other elements that provide a variety of experiences by demand of the customers. The design approach is vital in this learning context, where communication and the discovering of other technologies concerning the self-production and manipulation options, are constantly providing new forms of knowledge (Puyuelo, et al., 2018).

Furthermore, is a consequence for individuals to develop at the same time, their digital abilities (Jennings, et al., 2017) and the awareness of their own possibilities for learning autonomously (Olmos-Raya, et al., 2018; Puyuelo, et al., 2019).

Another critical factor in current education is fostering creativity as a sort of knowledge that has to be nurtured though learning experiences. So, design for education faces the current challenge of enhancing new inspirational ambiences. In fact, user experience is absolutely related to useful interfaces and design, where also counter intrinsically, the aesthetic dimension of visual design (Bollini, 2017). It is agreed that in any digital or real world context, design of information and wayfinding plays an important role in achieving the goal of making them accessible (García Moreno, 2011). In the case of an interface, which offers learning activities, the design of a diversity of stimuli can comprise an efficient and dense network of tools, signs, and symbols, which in one hand, enhance the learning process and make it more inclusive (Fernández-Villalobos & Puyuelo, 2018), but in the other hand, can make it more difficult. What is proposed is the research design of a website where you may get different elements representing a building. There you may experience as a maker, technologies such as 3D printing, blue prints, laser cutting maps etc. that can be used for producing other learning resources for people with special needs such as tactile surfaces for the blind.

This paper presents the research and development of a variety of visual, tactile, and acoustic elements to be part of a digital resource, an online platform designed with the purpose of fostering informal learning about different architectures. The aim of this project is to develop resources for “hands-on” learning, using different technologies that might be appropriate/suitable for a variety of targets. A gallery of architecture-based models provides both intrigue and educational opportunities for different stakeholders. These resources give them tools for improving inclusion and, at the same time, accessibility to potential learners and visitors.
Both the elements designed to be the contents of use and the platform itself, aim to offer simple, direct and interactive experiences for the user. Following the idea of Kort et al. (2001) on the relation of learning and emotions, during the learning process, the design proposal engages different possibilities to build objects that gather amazement, satisfaction, curiosity and inquiry: good emotions which were associated with a higher level of learning.

O'Brien and Toms (2010) suggest to examine multiple factors of experience concurrently related to each other. These factors can be clustered into groups which include: affect, cognition, context, engagement, experiential learning, interactivity, narrative, self-concepts, and usability. Their co-presence during individual experiences will require design guidelines and addressing validation strategies in the future.

The first part of the paper presents the main ideas that guided the previous research, the objectives for modelling an ideal platform, followed by the methods, techniques and materials employed at the conceptual design. The second part, shows briefly the result as a prototype, which can be used in an open way, obtaining material and visual representations of the architecture presented. Finally, we discuss our findings from the design process point of view. The next step will be, once this platform will be implemented, to validate the effectiveness of this design to provide active, effective learning and what is more, in particular, for inclusive purposes.

2. Looking for an Ideal Model of Learning by Doing platform

Design surrounds us by shaping the way we live and communicate with the world, so design is somehow, a medium for a constant learning process and a tool to promote cultural knowledge. The evolving role of the cultural identity of places is reinforced most strongly by mediatisation, rather than through active and inclusive communication. Design spans boundaries and is shaped by disruptions, it continually evolves as it responds to the context in which it operates.

From the perspective of education and learning, to approach the representation of architecture in an autonomous way, should embrace thought processes, motivation, construction of spatial view, and a sense of flow in the activities proposed. As argued by Allen, a key to creating flow is matching challenge to skills, along with well-defined goals and rules (Allen, 2004). Thus, it is necessary to bring clear results and communication between unique features of the image of the building in our case, and the material results you will be able to reach doing the activities. According to Hennes, “constructing activity with continuity of experience in mind demands that we find a way to provide learners with a means of constructing the present experience out of what is already meaningful and important to them” (Hennes, 2002, p. 113). From this point of view, some of the activities proposed are simple objects that we can easily identified as desirable products that can be customized. Hennes also noticed that participants play an active role in a valuable way when they design
facing open-ended proposals. These sorts of hands-on activities trigger emotional experiences because they have not absolutely pre-defined outcomes (Hennes, 2002).

The main results are the open-ended enrichment and pleasure that discovering through action can provide. Following Leapers argument, some important factor groups to be included at any educational proposal will be fun, cognition, context, engagement, experiential learning, interactivity, narrative, self-concepts, and usability (Leaper, 2012).

These activities will bring motivation from a set of cognitive and emotional factors that are also suitable for educators, information designers and interaction designers when it comes to proposing informal learning experiences in interactive environments. In a typical human-centred design approach, designing experiences that trigger out affect and affinities in hands-on learning can be very challenging (Jordan, 2010, p. 8). Thus, around each building a variety of contents are displayed (Table 1) to give different inputs of information, activities, and also degrees of complexity and participation for the learner.

Table 1. General scheme of the proposal around a particular site (Peñíscola Castle); phases of approaching the contents proposed, and the models that can be obtained. Own elaboration.

The design proposal tries to explore the Sense-of-Coherence (SOC) theory and its concepts of comprehensibility, manageability, and meaningfulness claimed by the sociologist Aaron Antonovsky:
“a global orientation that expresses the extent to which one has a pervasive, enduring though dynamic feeling of confidence that (1) the stimuli, deriving from one’s internal and external environments in the course of living are structured, predictable and explicable; (2) the resources are available to one to meet the demands posed by these stimuli; and (3) these demands are challenges, worthy of investment and engagement” (Antonovsky, 1987, p. 19).

Since the point is to show relevant architectures, we raised three types of approaches, which are essential for a global comprehension: the contextual presentation as part of a particular landscape; the organization as a space to discover by moving around rooms, levels, etc.; and the volumes as in a building site. A repertory of representations designed and given as contents inserted at the platform, are the models to learn about the place experiencing while producing them. In all the cases, for the sake of simplicity, the different elements are presented using pictograms representing the sort of results to be achieved (Figure 2).

A specific work system has been designed for each building focused on implementing hands-on based teaching concepts and particular experiences. Looking for simplicity, all them are presented using pictograms connected with the result to achieve and its relationships with the human experiences as explained by the Gestalt Theory.

2.1 Objectives

The aim of this learning platform is to encourage the general public to enhance their knowledge for architectural items, designing and personalizing products and things, building models and resources, suited for them.

The design and development of this interface should reasonably accommodate a broad range of diverse users, favouring levels of appropriate training, including individuals with learning difficulties. Following this idea, a preliminary scheme with four layers/areas is proposed (Table 2), where each tool is independent from the rest, allowing the use of its deliverables and actions separately. Different action types within the inputs given and the object manipulation bouts proposed, are passive (video, audio), functional, sensorimotor, and social bids with objects. In this platform, only the video is completely visual and shows a short itinerary composed by five watercolours and drawings painted by hand, creating an effective result in a quite vivid style. As argued by Lunger and Scheiber (2010), film is a relatively flexible means of applying information to a substrate offering a variety of qualities to suit different requirements and purposes. In this case, in a simple way, this itinerary allows to entry this place that in reality, is not accessible.

From the design perspective, this education platform provides a sort of “cultural goods”, that trigger experiences for the learner in a creative performance mode. In that way, the user is able to produce or re-produce elements that look like museums shops products, which usually generate desire among end consumers. This sort of performance is highly appreciated by certain publics or users such as designers, artists, architects, interior and fashion designers and engineers.
Table 2. Relations Inputs-Outputs and Phases of the learning platform proposed. Own elaboration.

<table>
<thead>
<tr>
<th>Inputs</th>
<th>Learning Process</th>
<th>Activity</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audio/Texts</td>
<td>Selection Pictograms and Wayfinding through the platform.</td>
<td>Attention and focus</td>
<td>Listening, storytelling, Pdfs and technical indications</td>
</tr>
<tr>
<td>Tables of contents/Video</td>
<td>Listening and reading</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Draws</td>
<td>Understanding scale and representations</td>
<td>Printing and hand-cutting</td>
<td>Flat simple elements</td>
</tr>
<tr>
<td>Blue prints</td>
<td>Building and producing paper models</td>
<td>Folding and making</td>
<td>Pop-up displays and fan formats</td>
</tr>
<tr>
<td>Engraved surfaces and volumes</td>
<td>Building and producing tactile reliefs and models</td>
<td>3D printing and building</td>
<td>Tactile floor plans, cut-out pieces, 3D volumes</td>
</tr>
</tbody>
</table>

Du Gay et al. have a broad understanding of the study of a cultural issue, text or artefact, and suggest that is significantly relevant taking together a sort of circuit around its representation, identity, production, consumption and regulation (du Gay, et al., 2013). Following this idea, most of the images and activities provided at this platform, invite the user to do things because they know the actions previously, and also understand the expected results. We are taking advantage or their informal social knowledge as explained:

“Our heads are full of knowledge, ideas and images about society, how it works and what it means. Belonging to a culture provides us with access to such shared frameworks or ‘maps’ of meaning which we use to place and understand things, to make sense of the world, to formulate ideas and to communicate or exchange ideas and meanings about it” (du Gay, et al., 2013, p. 2).

The results invite the user to experience with and to use and evolve these designs for their own creations. Practitioners can obtain kinetic experiences of the space when they flip, pull or fold the paper in different directions. These models challenge the user’s capacity to understand the place and the way to produce the model at the same time, conveying a range of spatial concepts, such as in/out, up/down, and high/low (Puyuelo, et al., 2019).

2.2 Methods, materials and techniques

Specific tasks were studied to design hands-on elements that could show relevant aspects of the architecture presented. We follow the guidelines proposed by Pappas (2018) for developing experiential knowledge and learning resources with AR/VR technologies, to make learning more productive, innovative and fun. We took this idea forward into the analysis of particular representations of each building, designing models related with their unique features. Fourteen hands-on activities and a visual animation are proposed. Some of them, such as the maps and layouts, are particularly suitable to help the user to identify routes and
Design as a Medium for an Informal Learning:
INDICOlearning from the interface to the activity

to know about a site or building, in terms of distribution, proportions and wayfinding. Others, guide hand-made paper models ready to be used, painted or sized. The small book of sections requires more concentration for constructing and analyzing the space.

The designed elements aim to work and produce some models:

- Printing in 2 or 3D
- Cutting (scissors, laser cutting tech)
- Folding
- Assembling and building parts
- Moving to see and understand

![Figure 1. Screenshots. The activities are identified next to the pictures displayed in different materials, to give an open idea of the possibilities. The downloaded files might be produced in different techniques or materials (wood as relief or carved, 3Dprinted...). Own elaboration.](image)

A previous pilot survey (n = 10) was conducted with a group of seven teachers and three professionals, to ensure the relevance and interest of the technologies proposed to allow new experiences about the topic. The data collected have the focus in some pedagogical
aspects and the utilization of the types of technologies and activities proposed (i.e. laser cutting and 3d printing).

After a short presentation of the learning platform, the technologies and the materials available at the workshop, the participants were asked to choose, between four of the activities, to produce one of them by themselves in one hour. Depending of their background, some of them were more attracted by the final result they can produce in that time while others were more interested in experiencing with the technologies. Broadly speaking, it was a satisfactory experience when, finally, the participants got their own product to bring home. After the exercise, participants were asked to delve into the cultural identity of this particular building, and were also asked to investigate their own perceptions about these designs, identifying in case its value as societal representations of that place.

3. Results and discussion

This preliminary discussion explores how cultural identity of a site/architecture, could be communicated and better understood using a hands-on approach to reveal its qualities and foster their image. This website prototype underlies through design, the educational value opening extensive opportunities for both traditional and distance education. It will be necessary to work step by step producing flexible developments that need time and research in their effectivity.

The interface enables the user to face a significant amount of easy-to-do activities and a wide range of interactions while allowing the tailoring to different learning needs. The impact of positive reaction on the user’s engagement and what is called "multidimensional construct" (Reschly, 2008) is high.

The activities are described and included in an on-line system, where experimental models are made available on the WorldWideWeb. So, it can be used in an open way, reaching different publics and purposes, where obtaining material and visual representations of the architectures presented, might be useful. Users can choose their speed of action creating products (maps, layouts diagrams to identify routes and to know about a site or building, bookmarks, presents...) about the place, learning by doing.

According to the references selected during the research, design stakeholders should consider a range of interconnected, influential factors when facing informal learning experiences in different environments. As explained before, users can decide which of the proposals could fit better to their work, learning objective or simply what they feel like to do. From this perspective, this learning module is a means to create a flow situation and to experience the concept of “proprioception” (Mine, et alt., 1997), which has been recorded in different immersion and learning experiences (Puyuelo, et al., 2019). As explained before, manipulating an emotion effects on the participant motivation, accessibility and learning.
The possibility of self-producing our learning contents adds a value in the emotional scope for the stimulation of curiosity, focusing attention on the object.

This website prototype is in phase of verification of accessibility requirements, errors found, and warnings. Once the prototype will be completed, it will be possible to verify its success online using evaluation tools that are web applications that allow to obtain an assessment report of different items. Experimental methods will also be used to address its usability with the different groups of potential users and also in formal and informal learning contexts.

The contribution of this project is stated since all its components give priority to the open design: from the interface, the elements that the user might produce, and the creativity of producing these challenging resources for different users and uses. The findings demonstrate important perspectives of cultural design and how to better understand places, motivation, and autonomy.

This ongoing platform gives an approach not solely to the issue of architecture design education, but of how to learn and teach experiencing design in a world of cultural silos, change, and diversity. The scalability of this prototype will be developed firstly, with the
stakeholders in the scope of the Comunitat Valenciana (Spain) to offer a panorama of buildings and singular sites.

References


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De-stereotype UX Design – Discussing and managing issues related to the clustering of users in the design of innovative solutions

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Abstract | In UX Design, research about user provides design hints orienting the creation and development of innovative services and systems. The outcomes of these studies are postprocessed and transformed in maps and diagrams, such as the Mental Model and the User Journey maps, and in the description of paradigmatic users to act as reference in the phases of the project process. This work develops a discussion on the potential effects of cultural bias and stereotypes on the reliability and accuracy of the design-oriented user studies. The authors, being involved in UX Design research and practice, provide here a strategy to prevent bias effects especially in tests with users.

KEYWORDS | UX DESIGN, USER STUDIES, STEREOTYPES IN DESIGN, ENVISIONING EXPERIENCE
1. Introduction

The design of innovative services and systems is based on user studies providing insights on needs, requirements and values of the target users, and orienting the development of meaningful and usable solutions. In the years, user centered methods evolved giving rise to UX Design approaches, that are now vastly employed in every field of design (Hassenzahl, 2010; Garrett, 2011).

User studies provide a great amount of information and data that, in order to be suitably employed in the design process, need to be synthesized and transformed into convenient forms of envisioning and representation. UX Design tools such as the Customer Journey Maps (Følstad, 2016), the Mental Model Diagrams (Pillan et al., 2018), and the popular Personas are vastly employed to transform the outcomes of research on users into design hints and opportunities (Kalbach, 2016). Research on users includes primary research, i.e. investigation performed by observation activities, interviews and ethnography conducted by the researchers on field, and secondary research (also called desk research), (Buxton, 2007; Stickdorn et al., 2018; Tullis & Albert, 2013), based on data extracted from literature, reports and surveys previously conducted for other purposes. Primary research also includes experiments with users based on instrumental monitoring of biodata by eye-tracking, EEG, ECG, and others, aimed to collect evidences about the engagement of users in their interactions with applications, cyber-physical environments, digital services (Reali et al., 2017). These experiments provide insights about the cognitive efforts, the perception processes, the pleasure of use and the emotional involvement experienced by the people while they interact with the solutions under analysis; the outcomes of the tests support the analysis of usability, accessibility, engagement and the investigation of the variability of human responses and reactions (Plassmann et al., 2015).

In UX Design, the outcomes of the research on users need to be processed and condensed so to be effectively employed in the design and validation activities. Information about users are usually summarized in maps and diagrams representing the technological and organization system; the value proposition related to the user jobs, needs and expectations (Newbery & Farnham, 2013); and the timeline of the service delivery from the point of view of the users in their interaction with the system touch-points, also including pain points and design opportunities. Chronological maps - such as the User Journey Maps – report the logical sequence of activities performed by a person who is considered as emblematic of one typology of users to which the product or service is addressed, and provide paradigmatic storytelling that becomes the reference for the value proposition (Følstad & Kvale, 2018; Kalbach, 2016).

In fig.1, we represent the expected outcomes of the research on users within a UX Design approach. Methodologies for research on users, data collection and post-processing, have been amply investigated in the last decades, but, in the knowledge of the authors of this paper, little attention is paid on the importance of recognizing and managing potential bias.
that could influence the researchers investigating on users and, in most cases, the studies concerned specific issues (Marsden & Haag, 2016; Cabrero, et al., 2016; Cabrero 2014).

Figure 1. The outcomes of the research on users in UX Design.

The authors of this work are scholars and professor on UX Design methodologies, and members of a research laboratory at PHEEL - (PHysiology, Emotion, Experience Lab, Politecnico di Milano); the focus of the researches on users at the laboratory is the evidence-based investigation of user experience with respect to their interaction with services, interactive solutions and digital applications; the investigations employ different research methods, such as desk research, ethnography on field, interviews and experiments with users also involving instrumental facilities for the monitoring of physiological parameters, i.e. eye-tracking and others. The authors collaborate with companies in UX Design researches for a variety of application fields, such as digital media and services. With this work, they intend to give a contribution to the development of suitable approaches for the extraction of design hints from the user studies. The focus here is on how to prevent the potential influence of the cultural stereotypes on the outcomes of the investigation on users. Regarding this, the authors discuss in the following some issues related to the impact of stereotypes in design and present the strategy they have elaborated in order to reduce bias effects in their UX Design activity. The paper aims at offering a contribution to the complex topic of social prejudices and stereotypes in design, and strategies to be adopted in the design practice.

2. Clustering and definition of types in design

In UX Design, researches are aimed at providing a holistic understanding and modelling of the experience of users regarding a product, a service or a brand, a company or an
institution; the research investigates cognitive, emotional, cultural dimensions of the personal experience since all these factors play a role in shaping attitudes and decision processes. Studies on users are notably important in Interaction Design and in Service Design; the aim is the analysis and understanding of the How and Why of human activities, as an essential requisite to design meaningful What of novel solutions (Benyon, 2014). In Service Design, the investigation of the experience also aims at reducing the misalignment between the proposition of value offered by the service provider and the perception of value as it is perceived by the final user. The basic assumption is that “Organizations are out of sync with what the people they serve actually experience” (Kalbach, 2016). The purpose of user research is to orient the design and development of new solutions toward the most useful and advantageous implementation from the point of view of the final users. User studies in UX Design need to be vast and inclusive in order to be effective; on the other hand, in order to effectively orient the design process, data and information need to be synthesized and transformed into clear and easy to grasp guidelines.

The design of services and digital/physical systems focuses on the dynamic description of activities in terms of typical journeys, jobs and paths (Benyon, 2014). Human beings are all different but with respect to some specific characteristics or tasks, from the industrial point of view it is convenient to classify the members of a target group in types or cluster of people that present some similarities. In the fashion industry, as an example, the production of clothes of different sizes represents a good compromise between the standardization of the products and the variety of the dimensions of the human bodies. The same happens in the design of services for all application purposes and the identification of suitable clusters of users is a way to cope with the complexity of the human diversity. As an instance, in health care services (Moody et al., 2018; Kokorelias et al., 2019) the investigation of the variety of human physiological and cultural characteristics is a key issue in the development of person-centered approaches to medical treatments and services. In marketing, the identification of recurring paths of behaviors and attitudes is carried on together with the quantification of segments of populations so to produce the market segmentation and the consequent strategies for value proposition and communication (Fonseca, 2011; Arora, et al., 2008).

The definition of types of users is a tricky task and it depends to the object of the design process. As an instance, in the development of a new operating system for smart phones, in order to effectively evaluate the relative impact of the new on the potential users, it could be convenient to consider groups of users that are familiar with different existing operating systems. In the test of a new driving control system, it should be important to make user tests involving drivers with different expertise and styles of driving.

In some cases, the clusters of users also share some similar social or anthropologic characteristics, such as age, gender, or the belonging to an ethnic group. In other cases, there is no tight correlation between the elements of social identity and the specific attitudes and behaviors that are the focus of the design. As an instance, in a previous work
De-stereotype UX Design:

Discussing and managing issues related to the clustering of users in the design of innovative solutions

(Pillan et al., 2019), the authors reported the research performed to develop a sustainable system for home automation; this study identified three main cluster to be taken into account in order to provide suitable personalization of the interfaces: i) users requiring a full automatic system; ii) users willing to have a total control and understanding of the system; iii) users willing to adopt a behavior apt to minimize the consumption, provided that the interface is very usable and efficient. The study also demonstrated that the correlation between the three group and the social characteristics of the users, especially in terms of age and gender, are not simply correlated. As an instance, group i) included both ageing people with scarce abilities in the use of digital interfaces together with young residents with interest for sustainability and cost reduction.

The identification of reliable types of users, effectively representing the variety of attitudes and needs of the users, is a delicate task that could be affected by simplified interpretation of the information provided by the research.

The most common way to synthesize knowledge on users is Personas. More than twenty years ago, in his book ‘The inmates are running the asylum’, Alan Cooper presented his Personas (Cooper, 1998) as an effective way to summarize the knowledge about the potential users of innovative solutions. Personas work “because a persona gives us an operational mental model of a particular kind of user.” (Floyd, 2008) The success of Personas and of the more recent envisioning tools and maps corresponds to the need of designers to have an agile tool to use in the project process that take into account the needs, preferences, attitudes, and ways of thinking of the prospect users.

“It is difficult to design for another person. One must develop an empathetic internalization of their understanding of the world, their experiences in it, etc. It is even harder to design for a collection of other people with all their subtle variations. Thus, designers revert to designing for themselves without really thinking about it, which is facilitated by humans' natural tendency to assume that other humans think exactly like they do, until there is evidence to the contrary. At best, designers may design for their personal stereotypical conceptualization of the “user”. Personas help avoid this tendency because they make a group of users concrete in the form of a fictional, single user for whom the designers are designing; thus, they are a handy tool to facilitate user-centered design.” (Floyd, 2008).

These characters are not real but should be realistic, so to allow a prediction/projection of behaviors and preferences; when they are not realistic, the design can fail the goal of providing a satisfactory solution due to functional or cultural inadequacy. Turner & Turner (Turner & Turner, 2010) discussed the limits of the approach that has become so widespread:

“Despite placing the user at the center of the design process, UCD by necessity must involve at some stage a representation of the different aspects of users and
what they want. And, a representation is, by definition, less rich and detailed than the thing itself.

... Despite simplified representation of users is a necessity in the design process, designers should always be quite aware of the limits of these descriptions”.

The two authors reconstruct the history of user studies in Interaction Design, and pointed out the complexity of user studies in design without involving prejudices and stereotypes; they discuss the intrinsic biasing of design research pointing out that “we call people users, which implies that we are primarily, and perhaps only, concerned with those aspects of their psychology and behavior which is directly relevant to the use of interactive technology.”

As these authors point out, Personas, as all the other envisioning techniques based on the identification and description of types, can reflect stereotyped thinking.

A stereotype is a convincing or a ‘fixed idea that people have about what someone or something is like’ (Cambridge Dictionary). Stereotypes, therefore, can be based to knowledge that is not necessarily false, but that can be used in a misleading way and producing fake assumptions and projections. Typical socio-cultural stereotypes involve gender, age, culture, technical capabilities, economical availability. Having simplified cognitions is natural for human beings, also responding to the need of an efficient use of the limited capabilities of human mind and operation memory. The problems with stereotypes arise when limited knowledge is employed as absolute truth, and when phenomena and characteristics associated to some samples of a human group are extended to all the members (Bordalo, et al., 2015). Furthermore, bias in judgement and research arise when a limited knowledge about a group of individuals sharing some specific characteristics (as an instance, gender, age or belonging to an ethnic group) is considered as capable to predict trends, behaviors and attitudes, so producing prejudices, biased judgement and rejection. On the contrary, empathy with users feeds creativity (Van Boeijen & Hao, 2015).

3. Tricky activities in managing tests with users

The researches on the user experience that we perform at the XXX lab integrate a variety of methods, including traditional ethnography on field, focus groups and interviews, tests with instruments such as eye-tracking. Tests are aimed at an in-depth investigation of the user experience during their interaction with physical environments, digital services and applications or while performing complex activities such driving a car. Usually, we perform investigations on existing solutions or on prototypes of innovative ones, within collaborations with companies and other institutions. Our approach is based on the triangulation of information about behaviors with those obtained by the monitoring of biological parameters, and the self-reported experiences collected through interviews.

In figure 2 we represent the main steps of a typical experimental process at XXX; it includes four phases. In phase 1, the team in charge on the experiment collaborates with the external
partner to define the goals of the investigation and the methods to employ in the tests with users, depending on the expected outcomes and on the characteristics of the artefacts under analysis.

Phase 2 is dedicated to the detailed organization and assessment of the experiments with users; to the definition of the characteristics of people to be involved in the test and of the consequent criteria for recruitment; the creation of the experimental protocol, including the context and the tasks. Such activity is based on the access to the artefact to be tested and the performance of a deep study of its structure, interaction paths, and possible action options, that is a simulation of the concrete context of use. The artefact is then tested by researchers as experts of technologies and provides a sort of baseline on modalities and time of interaction. Defining possible criticisms and bottlenecks in the interaction support the research path in the estimation of an effective set-up, allowing to direct the definition of the sample and the recruiting features. The aim is to identify small but very representative selected groups of users, opening the way to a deeper understanding of the delivered experiences elicited by the interaction with the artefact under test. Furthermore, we perform a pre-test, involving the participation of 1 or 2 users in line with the target audience. This process supports the development of the whole project, and the identification of possible further bias and stereotypes that could have missed the previous study phases.

While phase 3 is dedicated to the recruiting and experiments with users, phase 4 is for the processing of data and the extraction of design insights and opportunities.

![Diagram](image-url)  
**Figure 2.** The main phases of the process adopted for tests with users.
With respect to the possible influence of cultural stereotypes on the outcomes of these experiments, we consider all the four phases as crucial.

In phase 1, the team collaborates with representative of the external partners (UX designers, interaction designers or marketing experts) so to define the reference population and share previous knowledge about the target users with its relative segments or clusters; this produces a common ground of assumptions that will orient all the following phases. As a case study, in our collaboration with a television broadcast company, the research aimed at developing a new platform for web-tv broadcast. The initial inputs by the company indicated the minor availability and technological skills for elder generations and assumed a correlation between type of contents, age, gender and attitudes toward digital solutions. In the collaboration with a company that produces sports cars requiring advanced driving skills, the involvement of female drivers in the tests was not initially taken into consideration. In the studies commissioned for innovative services for banking and payment, the attention of the company collaborating with us was focused on GenZ and on younger users, since they are considered the trend-setters for future behaviors and attitudes. The preliminary information provided by companies that have a long term relationship with users is certainly valuable and provides a strategic start for research, on the other hand, the role of UX designers is to offer a refreshed and hopefully more realistic representation of the target users, and research activities should also be capable to provide new perspectives and interpretation of information.

With respect to phase 1, we consider the importance of detecting conviction and assumptions that could be related to stereotyped representation of the reality instead on sound knowledge. As stated by Floyd, we believe that

“Our social intuitions consist of many parts; some are hard-wired, some are developed from the experiences we have in our life, some are developed from our conversations with others about how other people think and act, and most are some combination of all three.”

In order to manage the risks related to the influence of potential stereotypes, we consider the importance of recognizing all the explicit and implicit assumptions and to make them emerge in the collaboration so to challenge them either to verify their reliability or to rebut it since

“It is important to be cognizant of the stereotypes which are selected, and the implications of selecting them, in order to avoid ethnic, gender, or status profiling. Properly used, however, they can still serve as a powerful mental "subroutine" encapsulating a significant amount of shared intuitive understanding of the world between designers.” (Floyd, 2008).

About phases 2 and 3, we remark the delicacy of the activities dedicated to recruiting. The search and selection of the people to involve in the tests is based on a description of the target users and on his preliminary segmentation into clusters created to represent the
variety of the people included in the target, so to cover with the tests all the types that appear as relevant for the research goals. The recruiting is therefore performed by preliminary interviews aimed at verifying the affinity of the interviewed subjects with the types that we intend to focus on during the analysis. During the tests the different types of users can be involved in different experimental protocols, depending on the goals and topic of the investigation. As an instance, in the research focused on different technological solutions for tv-broadcasting, the company asked us to focus on younger users while analyzing the interactive experience with more recent solutions as Google Chromecast. Our experiments revealed that the acceptability and desirability of a specific technology is not trivially related to social characteristics such as age. Test with users are expensive and time consuming; in most cases, these analysis aims at providing qualitative insights, while quantitative data are collected with more traditional methods on a statistical base.

Generally speaking, we consider recruiting as a very tricky activity, since a wrong selection of the people involved in the tests can evidently influence the outcomes of the study, and it could produce a mirroring or bubble effect, reflecting cultural stereotypes instead than creating objective knowledge. A further check is performed during the test sessions, adopting non-participative observation techniques. Such activity allows researchers to perform an in-time evaluation of the correct labelling of each user, and their belonging to the specific group she/he was assigned to. In fact, even when the recruiting phase is performed with strong care and attention, people can lie or mislead a self-evaluation of their own characteristics or level of familiarity and proficiency. For this reason, the further validation performed during the tests supports a correct interpretation of the data gathered through the experiments, and a final check of possible bias and stereotypes to be considered in the results interpretation.

3. Strategies to manage bias in research with users

In UX Design, the integration of information provided by different research methods is constantly evolving, also including approaches based on data mining for design. On the other hand, we point out the importance of developing techniques apt to extract design hints out of data, also capable to prevent misjudgment and interpretations conditioned by cultural stereotypes. As a contribution to this purpose, we propose here the strategy we take now as a reference in our UX Design activity and teaching.

In our approach, we consider that the interpretation of data for design purposes should be based on a suitable framing of the complexity of human mental processes; from brain sciences, we extract models and theories about perception, cognitive and emotional processes that provide a framework for the interpretation of the data and the limits of the methods of investigation. Furthermore, we point out the importance of recognizing those results of the tests that are strictly related to the evidences based on the experiments, making a difference with abductions and intuitive interpretation of the phenomena.
We point out the importance of developing awareness about personal prejudices and stereotypes in the team engaged, in the preparation and deployment of the test with users and in the data-analysis. To this purpose, we include in the test process some discussions on possible bias that could influence the test preparation and the data-analysis so to recognize implicit stereotypes and bring them explicitly in the conversation. In an analog way, in the collaboration with a company, we list and discuss the validity of the preliminary assumptions on users and on the context under analysis; the validation of this assumption can become one of the issues to be investigated in the analysis.

In the definition of the test protocols, we take into account possible interferences produced by the environment (due to the artificial characteristics of the test context) with the suitable development of the experiments.

We constantly discuss the limits of the knowledge about users that can be extracted from the experiments. We refrain from abductive extraction of information, from generalization of results, and from deduction that are based on a limited sample of users; this is done by collecting insights and crosschecking them before generating design hints.

In the postprocess of data, we base the extraction of clusters of users on the patterns of their interaction with the product or service under test regardless to their demographics. We assume that the correlations between the results of the experiments and the main characteristics of the users recruited in the test, such as demographic attributes, education, social status, gender and others, can be accidental or produced by bias effects in the recruitment.

We also assume that motives for personal behaviors, preference or attitudes are never trivial and should always be derived ex post the research with users.

In the case experiments show consistent correlations between some socio-demographic characteristics of users and the patterns of their experience, we suggest further inquire for a deeper understanding.

### 4. Conclusions

While UX Design is becoming pervasive, we point out the importance of developing a critical discussion on the possible influence of cultural stereotypes on the researches that are supposed to provide the design hints and indicate the space of opportunity. Clustering users into types is considered now as a common activity, we argue that designers adopting a UX Design approach should be capable to manage the creation of the reference types with sense of critics and awareness of the potential consequences of dealing with bias effects.

The design of products/services based on clustering of users produces and promotes new social stereotypes capable to broadcast and influence cultures. In order to obtain knowledge suitable to orient the development of innovative services and systems, user studies should
be performed having well in mind the limits of the existing tools with respect to their capability of representing the human needs and convenience.

In our opinion, user studies should always consider humans as evolving entities, and we consider this as ethic assumption of design as a discipline. The envisioning tools we currently use to describe the virtual scenarios we are designing should be interpreted as a means of social and political conversation on their desirability and not just as mere guidelines to ensure the success of memes.

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Framing diversity: designing hearing aids from a deaf culture perspective

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Abstract | Deaf people are proud of their culture and not being able to hear is secondary to the positive experiences created by their social lives and 250-year-old history and culture. This reality is often misled by the adoption of medical criteria which regard Deafness as a medical condition measured against the “norm” of hearing people. This paper presents a research-through-design project which developed smart jewels to counteract the stigma of disability addressing functional and cultural needs of Deaf people. Workshops were organised involving Deaf people, makers/engineers, designers and Italian sign language interpreters who were engaged in a Thinking-through-making process where the experience of Deaf participants was exploited to drive embodied explorations of future hearing aids. The design case calls for a participatory design model in which designers and users can co-create solutions addressing not only the (dis)abilities of the body but and more importantly, the human experience.

KEYWORDS | DIVERSITY, DEAFNESS, HEARING AIDS, SMART JEWELS, PARTICIPATORY DESIGN
1. Introduction

According to the World Health Organization (WHO) (WHO, 2018), 466 million people worldwide, over 5% of the world’s population, have moderate to profound hearing loss (HL) in both ears (Tucci, et al., 2010). Disabling hearing impairment in adults refers to hearing loss greater than 40dB. It is estimated that by 2050, over 900 million people will have disabling hearing loss.

The numbers are impressive, and reflect a very complex and nuanced reality where deafness and hearing impairment are often misunderstood.

First of all, it is necessary to distinguish between the terms physically deaf and culturally Deaf. A small ‘d’ is used when referring to people from a medical perspective, while a capital ‘D’ is used when referring to people culturally defined as Deaf (Woodward, 1972).

Deaf people (with a capital “D”) have little or no hearing ability. They use the Sign Language of the country where they live as their primary language. Even if some of them may hear environmental sounds and understand some speech, they identify themselves as a linguistic minority.

Deaf people feel that they belong to the “Deaf Culture”, an ethnic minority with a defined language composed of verbal (signs) and non-verbal elements (facial expressions and postures), communication and social protocols, forms of artistic expression, entertainment and recreational activities (e.g., sports, travel, and Deaf clubs). Being part of a cultural community means that they do not feel impaired or disabled.

Oral and late deafened deaf (with a lower case “d”) also have little or no hearing, but, unlike Deaf people, they typically do not use Sign Language as their primary language. Oral and late deafened people do not identify with the “Deaf Culture”.

Despite the benefits that people with HL can obtain from use of hearing aids and assistive technology, many of them refuse to use them (Vernon & Pratt, 1977). The main reasons for not owning/using hearing aids are the denial of the problem, discomfort, a sense of foreignness, and aesthetics (“it is a foreign object deep in the ear”, “it pinches”, “it hurts”, “it is too big”), shame, social rejection and stigmatisation. This suggests that the hearing aids address HL in a way that is technically efficient but does not take the user’s experience into due consideration.

Considering deafness from a sociocultural perspective, rather than a medical problem or insufficiency to be compensated, implies addressing a complex tangle of needs of D/deaf people that go beyond hearing compensation. We argue that disability should not be regarded as a problem to solve or a lack to compensate but as a design opportunity (Pullin, 2009).

In this paper, we introduce the design case, describing the methodological approach that resulted in development of an interactive jewellery system composed of interactive modules.
which continuously sense the acoustic qualities of the environment and notify the wearer of
the occurrence of specific sounds through micro-movements, vibrations and light patterns
(Marti & Recupero, 2019). The paper concludes with a set of recommendations that can
support designers of future assistive devices in engaging vulnerable stakeholders, in
particular Deaf people, as equal partners in the design process.

2. The Design Case

Quietude (www.quietude.it) is an EU project which develops assistive devices for people
with hearing impairment and HL. It was funded within the H2020 WEAR Sustain
(https://wearsustain.eu/) programme.

The project adopts a participatory design approach (Bjerknes, et al., 1987; Smith & Iversen,
2018) to learn about inspirational and actionable insights into the socio-cultural practices
and expectations of D/deaf people.

Participatory approaches to design (Sanders, et al., 2008) engage stakeholders in co-creating
artefacts destined for them, ensuring that their viewpoint and interpretations are
considered in research throughout the design process. These methods are pursued
throughout the entire research project with the goal of not just empirically understanding
the problem at stake, but also envisioning, shaping, and transcending it in ways users find
satisfactory (Spinuzzi, 2005).

2.1 Workshop series

The project included two workshops which were adapted to respond to different forms of
expression (Sanders & Stappers, 2008). Activity based on visual expressions, material
exploration and hands-on techniques intertwined with verbal discussions mediated by Italian
sign language interpreters.

Workshop 1

The initial inspirational workshop took place over six days in the Fab Lab of the University of
Siena (Italy), with the involvement of four women who had been Deaf since birth, two sign
language interpreters, an ethicist and a mixed group of designers, technology experts and
makers (Marti, et al., 2018). The group of Deaf participants was composed of an architect
(40 years old), a psychotherapist (41 years old), a special education teacher (30 years old),
and a university student (21 years old). A free and informed consent form was signed by all
participants.
The aim of the workshop was to inspire each other, encourage empathic understanding of Deafness and HL, and start developing concepts of hearing aids to address some concerns of the current devices.

On Day 1, participants were prompted to reflect on feelings of Deafness which were mapped on body maps using simple post-it notes (Figure 1).

*Figure 1. Body maps.*

For example, embarrassment and shame were located around the ears and referred to hearing devices. Originality was located on the hands to underline the unique features of sign language.

Day 2 focused on selecting forms and materials (Figure 2) and experimenting with simple vibrations motors (Figure 3). Deaf and hard of hearing people are familiar with the use of vibration. Though not all participants perceived the vibration in the same way, the neck, the bones around the ears and the wrist seemed to be the parts of the body most sensitive to vibration.
Framing diversity: designing hearing aids from a deaf culture perspective

Figure 2. Exploration of materials.

Figure 3. Experimenting with vibration motors.
Day 3 focused on developing concepts; Days 4–5-6 were devoted to materialising ideas and developing low-fidelity prototypes (Figure 4):

- A bobby pin with parts that move according to the ambient sound detected by directional microphones embedded in a brooch. This object signals deafness to others and notifies the wearer of crucial sound events.
- An armband that translates different sonic qualities in the environment, including range, volume and direction, into vibrations.
- A 3D shape-change necklace that expressively enacts live or recorded sounds, translating the sounds into micro-movements.

In this activity of thinking-through-making (Ingold, 2013) the prototypes served as a vehicle for generating research questions and collecting complex needs/requirements in a research through design process. Discussion topics included:

1. Awareness about personal sounds (e.g., doorbell, name, etc..) and public notifications, such as alarms, announcements in public spaces, and more.
2. Safety to prevents sounds requiring a quick response from going unnoticed.
3. Personalisation according to individual preferences and sensitivity.
4. Cross-modal experience of sound through sight, touch, on-body vibrations.
5. Aesthetics: hearing aids should be beautiful, smart and comfortable to wear.

Workshop 2

The second workshop was hosted by Mason Perkins Deafness Funds Onlus, a non-profit organisation which provides services and training for the deaf community in Siena (Italy). The organisation supported the project, facilitating contact with the local deaf community and providing interpreters. In this second workshop, we tried to balance the number of Deaf
and hearing participants and also to propose a place that was familiar to the Deaf experts, to give them more confidence in their ability to contribute. The workshop lasted 1 day, in consideration of the difficulties that the Deaf participants had encountered participating in the previous workshop for several days.

Five participants who had been deaf since birth and used the Italian Sign Language participated in the session: 4 women from 20 to 50 years of age and one 17-year-old boy. A free and informed consent form was signed by all of them. The group of hearing experts was composed of a psychologist, a designer and two technology experts. Two design researchers facilitated the workshop, supported by a sign language interpreter.

The aim of the workshop was to reflect on the needs and desires that emerged during the first workshop, engage the participants in a thinking-through-making activity and evaluate the prototypes developed during the first workshop.

**Thinking-through-Making**

After a card sorting activity aimed at identifying desires and prioritising the needs emerged during the first workshop, participants were involved in a making activity based on a desire selected from the previous phase. Various materials including textiles, paper, cardboard, tape, pens, glue and hooks were put on the table. All participants were encouraged to fabricate their own personal accessory, give it a name and present it to the others. The idea was to transform what had been discussed verbally in the previous phase into design probes, moving from abstract to concrete, to invite all participants to be kinaesthetically engaged and to reflect together (Luck, 2018).

One Deaf participant made an accessory named “Alive”, a shape-changing jewel that moves like a living object in response to sounds (Figure 5 left).
Another Deaf participant developed “Stella”, a bright necklace that looks like a shining star to underline how important it is for hearing aids to be able to express a personal sense of style (Figure 5 right).

The young boy developed an armband, explaining that he would like to wear an accessory that can notify him of sounds that would otherwise go unnoticed (Figure 6 left). A Deaf girl developed a belt to be placed around the shoulders or chest. The belt acts as an undergarment that allows the wearer to feel sounds through vibrations (Figure 6 right).

Other probes were developed by the hearing participants to underline equality in the participatory process.
Evaluation of prototypes

The third part of the workshop was devoted to presenting the prototypes developed during and after the first workshop, trying them out and collecting feedback. The evaluation regarded both the jewellery and an early prototype of the App. The bobby pin, armband and necklace were put on the table along with other prototypes developed at the Fab Lab after the first workshop, including an interactive ring which translates sounds into lights in continuous listening mode (Figure 7).
Participants were free to try out the jewels and comment on them. One of them who had participated in the first workshop was amazed to see that most of the comments raised previously had been integrated into the prototypes. These included the aesthetics of the jewels, the possibility of exploring the sonic qualities of environmental sounds and therefore addressing Deaf people’s curiosity about sound, and the possibility of choosing the accessory that best suits their preferences.

The ring was criticised because it interferes with the use of sign language, in which the hands must be used only to sign. The light could confuse the interlocutor.

The hair clip was discarded because the vibration produced by the embedded motor could interfere with a hearing aid located behind the ear.

The necklace and the armband were considered the most interesting accessories. Deaf participants stressed the importance of being aware of the environment (quiet or noisy) and of recognising specific sounds of interest.

The last part of the workshop was devoted to the evaluation of an early prototype of the App. Before the workshop, the App had been demonstrated to one of the participants who usually plays a leading role in the group. She drove the evaluation session by explaining the functionality and performing a live demonstration of the service. Her mediation was essential. She was able to create an atmosphere of trust and empathy which greatly
facilitated engagement of the other participants. No major defects were identified in the App. The participants appreciated the ease of use, the possibility of customising the intensity and type of feedback on the accessory, and the idea of creating a personal library of sounds to be recognised by the jewels, alerting the wearer.

In summary, the two workshops marked important milestones in the design process in terms of exploration of the complex needs of Deaf people, elicitation of requirements and preliminary evaluation of early prototypes.

3. The jewellery system

After the second workshop, a suite of jewels was designed as a modular system to allow different types of formal configuration and personalisation of use. The modules embed sensors and actuators allowing self-actuation and kinetic modifications in the presence of particular sounds.

The suite of jewels includes three necklaces which notify the wearer of incoming sounds with different behaviours: dynamic light (Figure 8), vibration (Figure 9) and a change in shape (micro-movement of the modules) (Figure 10). A video of the system’s behaviour can be viewed at: http://www.quietude.it/wp-content/uploads/2018/03/ Quietude_DemoHD.mp4?_=1.

Figure 8. Necklace with dynamic light
Figure 9. Necklace with vibration

Figure 10. Shape changing necklace
The formal design of the modules was inspired by a powerful metaphor that emerged during the first workshop. One of the participants used the expression “feeling under water” to describe deafness as hushing of the perception of sound.

Drawing on this metaphor, the suite of jewels was inspired by the undersea world. The modules resemble sea urchin shells, and the colour palette reflects images of sand, deep oceans and coral. The jewels were conceived as modular structures which can be assembled to create the wearer’s own personal jewels. Modularity addresses the need that emerged during the workshop for placing and playing out the jewellery on the parts of the body which are most sensitive to vibrations and micro-movements.

The jewels are handcrafted: modules are sewn by hand, connectors are fabricated by recycling flat connectors from obsolete computers, and, most importantly, no glues or adhesives were used. In this innovative design, modules are connected through 3D-printed interlocked supports. The system’s behaviour can be defined and fine-tuned through a smart phone app that works with the accessories.

Modules are made using laser-cut eco-leather, felt or fabric petals which are folded and sewn to create a shell-like shape (Figure 11).

The electronic components are placed in an octagonal PCB that keeps the modules fixed and stable in a horizontal position (Figure 12). Some modules contain electronic boards and sensors (e.g. the Bluetooth communication board and microphone), some contain actuators (e.g. LEDs, servo-motors, vibration motors), and others are empty, simply used as part of the
aesthetic value of the system. This modular system permits creation of a variety of fashionable jewels, including necklaces, armbands, brooches, etc.

Figure 12. Laser cut module, electronic components and final seam

The jewels can sense sounds in two different ways: through real-time continuous monitoring, to notify the wearer of the frequencies and amplitudes of sounds in the surrounding area; or upon occurrence of certain specific sounds, defined by the wearer using the mobile app.

The necklaces with light and vibration behave differently. Instead of using simple on, off, and blinking behaviours, we have adopted a richer vocabulary. Drawing on Harrison’s study (2012) of what kinds of information are typically communicated by point lights, we designed light and vibration patterns that follow the spectrogram of the incoming sounds (Figure 13).

The 3D shape-changing necklace performs micro-movements in response to external sounds. The actuators embedded in the three necklaces are directly mapped to the intensity and amplitude of incoming sounds bending them towards the lower centre of the module.
The combination of the micro-movements of the petals of different modules results in a coordinate and expressive movement of the overall structure (Figure 14).

Figure 13. Embedded electronics

Figure 14. Micro-movements of the shape-changing modules
3.2 Smartphone application

The jewellery system is connected to a smartphone application (Figure 15) permitting personalisation of sound recognition in input and kinetic transformation and shape change in output. The jewels and the smartphone communicate via Bluetooth.

![Image of a smartphone app](Figure 15. Smartphone app)

The app permits customisation of both input and output, with construction of a personal library of sounds that can be monitored and replayed on demand through the accessories (Figure 16). The key feature of the application is the management of the kinetic, light or vibration output on the basis of a comprehensive sound recognition process.
The user can create a library of sounds by recording personally meaningful sounds through the microphone embedded in the jewels. These sounds are then labelled and stored in the app, permitting real-time sound monitoring and on-demand playback.

4. Conclusions

This paper moves from an analysis of Boys’s (2014) research calling for a shift in the attitude toward disability from a medical model to a sociocultural model.

Transforming hearing aids into fashion accessories is an attempt to stimulate reflection on diversity and provoke a cultural shift, reconsidering the continuous entanglement between disability and ability beyond the tendency to standardise or normalise human skills.

The design case described in the paper highlights the importance for the designer to understand the sociocultural context of use as well as the meanings people give to the designed artefact. In the project, this led to adaptation of participatory design methods that engaged with the community and allowed people with diverse auditory skills to contribute and co-design solutions.

The proposed approach poses several challenges, due to cultural differences and understanding of experiences of the participants, and due to suitability of methods and techniques that may not be appropriate or need adjustment as highlighted also by Slegers et al. (2014); Hendriks et al. (2015); Tucker (2015); Marti & Bannon (2009).

The challenges that emerged during the project are summarized in the following.
Prior knowledge of the deaf culture

Researchers and designers often have limited knowledge of deaf culture which is sometimes confused with hearing impairment. They often rely on the reported experiences of their stakeholders that are individual and sometimes fragmented or conflicting due to the specific level and typology of deafness. To minimize this problem, some researchers suggest to assign to the impaired participants the role of experts, hiring them as paid team members (Hendriks, et al., 2015). In our project, we learned the importance of forming a solid prior knowledge of deaf culture before involving deaf people in participatory design. Deaf culture includes practices related to a suitable arrangement of the working space that hosts the co-design activities. In the DeafSpace project (https://www.gallaudet.edu/campus-design-and-planning/deafspace) Hansel Bauman developed a catalog of architectural elements to design built environments for deaf people (Hope, 2017). These include: ensuring proper sensory reach (visual and tactile) in 360 degrees to extending Deaf people’s awareness and making spatial orientation easier; arranging space and proximity to allow signers maintain enough distance to accommodate each other’s signing space when conversing; maintaining clear visual communication while walking and conversing; avoiding shadow patterns and backlighting that disrupt visual communication; preventing acoustic reverberation that can be only distracting and also painful to deaf people use hearing aids or cochlear implants. All these architectural elements have to be accommodated in any comfortable co-design space for deaf people.

Choosing appropriate spaces for participation

Spaces of participation should not only comply with the guidelines reported above. They should be also familiar to the deaf participants. The second workshop worked much better than the first one since it was hosted at the Mason Perkins Deafness Fund Onlus, a familiar place for the participants where the deaf community is used to meet and socialize.

Using the appropriate language

“Hearing impaired” is an equivocal term which mixed up people with different levels of hearing loss, communication modes and cultural identities under one definition. Some deaf people don’t like to be defined as “hearing impaired”, some others object to the word “impaired,” which implies, for them, that a person is flawed, deficient or imperfect. Using an appropriate language is quintessential.

Choosing the right methods

In the project, we experimented with different methods for engaging deaf people in the design process. However not all of them were equally successful. Activities involving abstract
thinking were less engaging, like the one focused on reflection on ways of accessorising the body performed in the first workshop. Drawing from this experience is advisable in order to avoid situations distant from the Deaf participants’ experience and imagery.

The mediation of interpreters

The co-design team has to include professional sign language interpreters to bridge the communication gap between the deaf/hard of hearing and the non-signing language users. The sign language interpreters are fundamental intermediary to create an atmosphere of empathy and collaboration. They have to be professional, skilled and certified.

Equivalence in participation

All stakeholders have to be equal partners in participatory design. In our project, some methods proved to be particularly successful in achieving equality like thinking-through-making during the second workshop. This stimulated creativity and joint reflection.

Encourage the role of leader

Even if in the co-design team there is not an assigned leader and the group dynamics are free-flowing, leaders can show up in different ways. In our project, a deaf person spontaneously took the responsibility of stimulating the activity showing integrity, empathy for others, and promoting joint reflection. This happened in particular during the second workshop, where a deaf person accepted to take the responsibility to drive the evaluation of the App. She was able to understand the main goal of the activity and act accordingly. This was tremendously successful. It is advisable to let deaf people drive informal evaluation activity to facilitate the participation of the other deaf participants.

Ethical challenges

Beside practical ethical issues concerned with co-designing with vulnerable people (e.g. managing the informed consent), there are other challenges related to the fact that researchers and designers may feel insufficiently prepared for dealing with disable participants. In our project we involved an ethicist who supported us in facilitating the activity by ensuring an appropriate use of time (sessions were in total not longer than two hours with several short breaks), selection on the sign language interpreters and space set up. This turned to be a precious support.
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Gazes and Gatekeeping: Reconceptualising the entrance portfolio in the post-colony

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Abstract | In South Africa, entrance portfolios and tests are widely used in student selection, as academic proficiency is considered an insufficient predictor of success in Design studies. These socially constructed conventions are powerful components of Design Culture and their frequently tacit criteria serve as invisible gatekeepers to the knowledge field.

Understanding these conventions require prior knowledge of Design. However, due to the distributive injustice of apartheid, many of the “born free” generation, who apply to study design at the University of Technology where this study is based, have had little or no formal art education. This paper describes recent interventions made to facilitate a more inclusive and socially right student selection processes within the context of, and in response to, student protests demanding free and de-colonised higher education. Legitimation Code Theory provides the ‘conceptual toolkit’ to uncover and contest the knowledges and gazes most valued in entrance portfolios and tests.

KEYWORDS | HIGHER EDUCATION, DECOLONISATION, ENTRANCE PORTFOLIOS, LEGITIMATION CODE THEORY, GAZES
1. Introduction

In South Africa, where this study is based, entrance portfolios and tests are widely used to select students applying to study Design at university. These selection instruments are considered necessary, since academic proficiency alone is not considered a sufficient predictor of success in design studies. The socially constructed convention of the entrance portfolio is a powerful component of design culture and is widely used throughout Europe and North America (O'Donoghue, 2009). Its gatekeeping function determines which students are provided or denied access to instruction in the knowledge field and ultimately to the field of practice.

Prior to the dismantling of apartheid in 1994, the validity of entrance portfolios was premised on applicants’ familiarity with these conventions, since art or design were part of the school curriculum for most white learners. The distributive injustice of apartheid ensured that the majority of black learners were denied this privilege. Twenty-five years later, the long shadow of this injustice still haunts the selection process. Many of the “born free” generation who apply to study design at our university, have had little or no formal art or design education.

This paper discusses recent interventions to address the unequal distribution of formal design knowledge amongst students applying to the Foundation year of an Extended Curriculum Programme (ECP) in Design, based at a University of Technology (UoT). The aim of these interventions was to make the selection process more transparent, inclusive and socially right. They were made within the context of country-wide student protests demanding free and decolonised higher education, and in direct response to criticism of the selection instruments by members of the Student Representative Council (SRC) at the time of the protests. The SRC criticised the selection instruments of all the design courses, which they viewed as exclusionary instruments that discriminate against black students with little or no formal art or design education. This paper is a reflection on, and a response to, their question: How can you test knowledge that has not been taught?

To respond to this question, I will contextualise the ECP entrance portfolio and test within the discourse of decoloniality. I will then use Legitimation Code Theory (LCT) to establish what knowledges, which knowers and whose gazes are most valued in the ECP selection instruments and processes.

2. Context

This study is based at a UoT that offers vocationally oriented diplomas in Fashion, Jewellery, Product and Visual Communication design. It has deep roots in colonial- apartheid history.
and racist ideology and is the result of a post-apartheid merger of two previously segregated Technikons, both established during the height of apartheid (CPUT, n.d., b). Unlike the predominantly middle class constituency served by research-intensive historically white universities (HWU), UoTs tend to attract students from middle, to low, income families (Badat, 2016).

Between 1994 and 2013, the number of black students enrolled at universities increased to almost 75% of the total student population (Cooper, 2015). However, graduation rates lagged far behind increased participation, largely due to the entrenched inequality of the school system inherited from apartheid. To address the articulation gap between school and university, Government-funded Extended Curriculum Programmes (ECPs), which extend three-year qualifications by a year, were tasked to provide “underprepared” students with “epistemological access” (Morrow, 1993) to disciplinary knowledges and practice (Luckett & Shay, 2017). Prior to the de-colonial student protests, the coloniality of many of these knowledges and practices, and of ECPs themselves, were not closely scrutinised by many academics working within ECPs (Luckett, 2019), myself included.

The multi-disciplinary Design ECP, in its current form, dates from 2018, when two discrete Design ECPs merged. It accepts about 80 students annually. Most applicants apply directly to the ECP foundation year but some unsuccessful applicants from the mainstream first year design courses are referred. According to statistics obtained from student questionnaires from the past 2 years, 68% of ECP students have no formal art or design education, 85% rely on Government scholarships to study and only 35% consider themselves proficient in English, the official language of instruction. The selection instruments for ECP, as for all four mainstream design courses, include a prescribed entrance portfolio and, in some cases, a practical test. All applicants thus respond to the same set of assignments, ostensibly to promote equality of opportunity. These are the selection instruments that student leaders found exclusionary and unjust.

At this UoT, no statistics are available to prove a positive correlation between entrance portfolios and first year scores. According to O’Donoghue (2011), the predictive validity and continued relevance of this widespread selection practice is under-researched. His longitudinal studies of entrance portfolios found that the strongest predictor of success in first year was the school-leaving certificate art/design score rather than the portfolio score. Since less than a third of successful Design ECP applicants have art as a school graduation subject, the validity, fairness and contextual relevance of the entrance portfolio and test take on increasing significance.

Between 2015 and 2017, students from this UoT joined country-wide protests demanding free and decolonised higher education. Although the Government met the students’ demand for free higher education in 2017, the process of decolonising curricula and other forms of institutional culture is a work in progress, to which this paper hopes to make a small contribution.
3. Decolonisation

When student protests ignited around a statue of an arch imperialist on the campus of an elite historically white university (HWU), 20 years after political liberation, the entrenched coloniality and whiteness of the institutional culture of this university, and many other like it, were unmasked. According to Mbembe (2015), the real question was not about whether to remove the statue of Rhodes, but why it took so long to do so. The slow pace of transformation at South African universities is indicative of prevailing attitudes amongst many academics, whose arguments in defence of “academic excellence” and “equal opportunity” frequently mask entrenched racism and coloniality (Luckett & Shay, 2017). Coloniality and colonialism are not the same:

“Coloniality ...refers to longstanding patterns of power that emerged as a result of colonialism [and survives in] books, in the criteria for academic performance, in cultural patterns, in common sense, in the self-image of peoples, in aspirations of self and in so many other aspects of our modern experience” (Maldonado-Torres, 2007).

Students responded to these “patterns of power” in different ways, but common demands were for the decolonisation of the predominantly Eurocentric curriculum, for a pedagogy that embraces the diversity of students’ life-worlds, for the transformation of skewed staff demographics and for the dismantling or re-structuring of many institutional practices and spaces experienced as alienating, exclusionary, racist, demeaning, and oppressive by black students and staff. “We can’t breathe” became a much repeated refrain and alluded to the “suffocating” institutional culture of HWU in particular, where success for black students is premised on assimilation into an institutional culture that does not recognise or affirm the plurality of other languages, cultures and ways of knowing, doing and being (Badat, 2016).

To articulate their demands, students drew from a rich tradition of Black Consciousness and anti-colonial literature. Within the constraints of this paper, I shall foreground only those most salient for reconceptualising the ECP selection instruments from a de-colonial perspective.

Key for de-colonial scholars is how to epistemically re-frame hegemonic Eurocentric epistemic disciplines, canons and interpretive frames that constitute the curricula and institutional culture of post-colonial universities (Heleta, 2016; Mbembe, 2015). In Africa, these universities and their curricula were modelled on the modern 19th century European university, imported to the colonies as part of the colonial “civilising mission” (Mamdani, 2016). Thus, for Ngugi wa Thiong’o (1981), de-colonising the African university requires “re-centring” marginalised indigenous knowledges, knowledge practices and vernacular languages in contextually relevant curricula. This process of re-centring African epistemic traditions does not entail “closing the door” to epistemic traditions from Europe, but their de-centring in favour of a more diverse, epistemic pluralism (Joseph Mbembe, 2016; Ngugi, 1981).
Furthermore, the Western epistemic tradition is premised on the separation between the knowing subject and the object of knowledge. From this ostensibly neutral position, the knower claims to generate objective, “universal” knowledge (Mignolo, 2009). Castro-Gómez (2007) describes this position as the hubris of the zero point, a position from where, according to Mignolo, the knower “controls the disciplinary rules and puts himself or herself in a position to evaluate and dictate” (2009, p.4). To de-link from this hegemonic interpretive frame, Mignolo proposes engaging in epistemic dis-obedience by shifting the focus from the known to the knower, whom he assumes is always implicated geo-and body-politically in the known.

As is well documented, Western models of art education have their roots in Renaissance Europe, when the art academies wrested power from the craft guilds as centres of teaching and learning (Macdonald, 2004). This development marked the start of a separation between art and craft and between the conception of the artist as genius, superior in social status to the skilled craftsman, and requiring an education that the craft guilds could not provide. What is lesser known is that these novel concepts of art and the artist arose concurrently with the colonisation of the Americas in 1492, followed by the colonisation of the East end of Africa, heralding a modern world driven by capital accumulation and progress.

Colonialism therefore constitutes the “darker side” of this modernity, which includes the violent dispossession, racist negation and enslavement of colonial subjects. Seen from a de-colonial perspective, modernity/coloniality are two sides of the same coin (Dastile & Ndlovu-Gatsheni, 2013; Grosfoguel, 2013).

The Rome Academy, established in 1633, remained the leading centre of art education in Europe for 300 years. During this time the academic model of art education spread from Europe to England and its colonies, followed in the 20th century by the teachings of the Bauhaus (Macdonald, 2004). Imported along with these pedagogies were hegemonic conceptions of art and design, of beauty, of the canon and of ways of visualising and representing the world. This euro-centric cultural heritage was and still is “pervaded with by the inequalities of class, gender, race and ethnicity” (Wolff, 1990). The entrance portfolio, with its gatekeeping function, is part of this heritage.

In order to conceptualise the “disciplinary rules” or knowledges and gazes privileged in the entrance portfolio/test I turn to Legitimation Code Theory (LCT).

4. Conceptual framework

LCT is a social realist sociology of education, developed by Karl Maton, which builds on Bernstein’s code and Bourdieu’s field theory (Maton, 2013). From the global north, LCT nevertheless provides useful conceptual tools for analysing socially constructed knowledge-
knower practices, including design (Dong, et al., 2015; Giloi, 2017; Shay & Steyn, 2016). In this paper I draw on one dimension of LCT: Specialisation.

Specialisation is used to determine the basis of achievement in knowledge fields and practices, the “rules of the game” (Bourdieu & Wacquant, 1992). According to Maton (2006, p.58) “knowledge is always about something and by someone”. All knowledge fields consist of both epistemic relations to the object of knowledge and social relations to the knowing subject or knower. These knowledge-knower structures combine to create four specialisation codes, determined by the relative strength and weakness of the social (SR) or epistemic (ER) relations of knowledge: The specialisation codes thus enable the analysis of what counts as legitimate knowledge (ER) and who is affirmed as an ideal knower (SR) in a field of practice (Maton, 2006).

A Knowledge code (ER+/SR-) legitimates specialist knowledges of an object of study. What you know is valued more than who you are. In design, knowledges that can be communicated and evaluated reasonably explicitly conform to this code. A Knower code (SR+/ER-) legitimates who you are and privileges attributes and aptitudes, such as gaze. A designer’s gaze is integral to the design process and to professional identity and refers to the designer’s “voice”, values and “eye”. An Elite code (ER+/SR+) legitimates social and epistemic relations in equal measure whilst a Relativist code (ER-/SR-) privileges neither (Maton, 2013).

Acquiring a “gaze” enables the recognition of the legitimate evaluative criteria and the ability to realise these in legitimate texts (Bernstein, 2000). Maton (2013) extends the conceptual reach of Bernstein’s understanding of gaze by distinguishing between four knower gazes: the born, social, cultivated and trained. These gazes are generated by the relative strengths of their subjective relations (SubR +/-) and interactional relations (IR +/-) to knower practices. Simplifying, gazes are social practices that specialise kinds of knowers in terms of both who they are and how they know through interaction with significant others. This study does not use the trained/blank gaze.
Gazes and Gatekeeping:
Reconceptualising the entrance portfolio in the post-colony

Figure 1. The social pane – gazes (Maton, 2013). Relative positions of the SRC, ECP lecturers and applicants, with and without formal design education.

A Social gaze (SubR+, IR-) is determined by social category such as race, class, gender or sexuality, where they are socially constructed as categories. Which kinds of knowers can claim legitimacy to this gaze matter more than their ways of knowing? The social gaze, within the context of this study, is shared by the SRC whose question challenges the “whiteness” of selection instruments that discriminate against black applicants with little or no formal design education. Cultivated gaze (SubR-, IR+) is an acquired disposition that strongly privileges legitimate interactions between significant others or ideal knowers (ways of knowing), but minimizes who you are (kinds of knowers). It is inculcated by an “ideal knower” through participation in communities of practice or acquired through sustained exposure to canonical works. Maton describes this gaze, which “resides in the mind’s eye”, as a “canon introjected” (2013, p.99). This gaze is shared by design lecturers responsible for student selection and applicants with formal art or design education. A Born gaze refers to inborn, “natural” talent and is a result of a genetic deposition. However, all gazes are socially constructed. This gaze therefore equally legitimates kinds of knowers and ways of knowing (SubR+, IR+). The ECP entrance portfolio requirements call for “some evidence of visual aptitude/ability... to study design”(CPUT, n.d., a), a born gaze. However, the legitimate “ways of knowing” attributed to the born gaze remain tacit in these entrance requirements.
5. Methodology

The practical component of the ECP portfolio, including recent interventions, provided the data for this study. Being a multi-disciplinary course, lecturers responsible for choosing the portfolio requirements, myself included, eschewed discipline-specific tasks in favour of observational drawing, to assess students’ visual aptitude, visual communication skills and level of technical proficiency. These drawings included a self-portrait, a simple still life, a view of an interior, and a six-frame storyboard. For example, the self-portrait required that students “look in a mirror and make a carefully observed, freehand drawing of your head and shoulders (do not draw from a photograph or from your cell phone)”. The still life, described as “an arrangement of objects on a surface”, called for making “a freehand drawing from direct observation of three objects on a table top” (CPUT, n.d., a).

The ECP entrance test, to which local applicants were invited to attend instead of doing a portfolio, consisted of a still life drawing, paper construction exercises and an exercise to assess the imaginative use of colour and pattern. After a detailed briefing, students were left to work un-aided.

During the selection of students for the newly merged ECP in 2018 certain common misunderstandings of the portfolio and test requirements came to light:

- **Portrait**: Drawings were either too small or too large for the page, stylised or lacking in closely observed detail, or they were drawn or traced from photographs.
- **Still life**: Lack of familiarity with the still life genre was evident in drawings where objects were either randomly placed on the page, arranged alongside each other, or drawn individually on three separate pages. Many applicants erroneously privileged the table/surface on which very small, out of scale, objects were arranged, devoid of closely observed detail.
- **Interior**: Poorly proportioned drawings of furniture, flat or floating in space, revealed lack of familiarity with canonical convention and the basic rules of perspective. Some interiors were evidently copied from the internet or invented with or without the aid of technical drawing.
- **Storyboard**: Ignorance of the conventions of storyboarding was evident in drawings depicting a continuous narrative instead of the required six-frame format and the use of text to explain the story.

Misunderstandings such as these are familiar to selectors and some of these admittedly indicate genuine lack of aptitude. But within the context of de-colonial protests, and the SRC’s critique, they could no longer be ignored. This led to the three interventions aimed at making the gazes, valued in the entrance portfolio and test, more explicit.

The first intervention involved turning the entrance test into a lesson. Instead of the customary practice of leaving students to complete assessment tasks un-aided, lecturers remained in class to teach after briefing the students. This created an opportunity to make
the tacit conventions of drawing, composition, and construction more explicit. It also broadened the customary merit-based assessment criteria to include students’ capacity to respond to being taught. To improve comprehension of the portfolio requirements, the second intervention entailed translating the entrance portfolio requirements from English into two vernacular languages widely spoken by students. The third intervention, aimed at making the tacit rules of portfolio more explicit, was to use visual examples of past applicants’ work to illustrate desired criteria and mistakes to avoid.

Figure 2. Poor and average examples of past applicants’ drawings of a self-portrait included in the ECP portfolio.
Figure 3: Poor and average examples of past applicants’ drawings of a still life included in the ECP portfolio.
6. Analysis

Analysis of the data starts with unpacking the SRC’s question: How can you test that which has not been taught?

One possible answer to the SRC’s question is that entrance tests and portfolios do not assess prior design knowledge but evidence of visual aptitude: a born gaze, that you either possess by way of birth, or not at all. This a-social and a-historical understanding of a born gaze places all applicants on an equal footing, regardless of their access to a cultivated gaze, to
ideal knower practices or whether their cultivated gaze is shared by the selectors. This position is not unique to South Africa. O'Donoghue’ (2011) describes how, by appearing to privilege inborn talent over familiarity with and access to the cultural capital valued by art and design schools, the entrance portfolio creates the illusion of equal opportunity whilst maintaining the status quo. What is significant in this familiar response, is that the born gaze is associated exclusively with a biological disposition and that the social construction of this gaze by means of interaction with significant others is ignored.

The SRC’s question is rhetorical. Implicit in it is full awareness that “which has not been taught” refers to a cultivated gaze that assumes familiarity with the hegemonic Euro-centric canon and ways of visualising and representing the world. Adopting social gaze, the SRC’s question thereby challenges the coloniality and exclusionary whiteness of selection practices that discriminate against black students with little or no formal art/design education. Their question exposes a discriminatory practice masquerading as equal opportunity, a practice that downplays the significance of a cultivated gaze by claiming that a born gaze is all that matters.

The first of the three interventions, made in response to the SRC’s question, was to turn the entrance test into a lesson. Significantly, this is an acknowledgement by selectors that using a born gaze to justify withholding instruction is an exclusionary practice. It is also an attempt to address the unequal distribution of formal design knowledge amongst applicants attending the test. By acting as ideal knowers, the lesson provides lecturers with an opportunity to engage with applicant and to make the legitimate ways of knowing, that structure the test, more explicit. It strengthens interactional relations (IR) of the gazes of applicants with and without formal art education (Figure 1).

Using examples of past students’ work similarly attempt to “teach” applicants which kinds of knower and ways of knowing are considered legitimate by the ideal knowers who evaluate portfolio submissions. Visual examples provide some access to the tacit conventions imbedded in the portfolio. As with the taught test, they strengthen the interactional relations (IR) of the gazes of applicants.

Although it is too early to quantify, these interventions appear to have increased the number of successful applicants. Unfortunately, the values of these interventions are limited by their failure to address the hegemonic canons and interpretive frames that constitute their content. The portfolio’s capacity to elicit evidence of visual aptitude is particularly constrained. All three drawings and the storyboard assume some exposure to the hegemonic canon and call for very particular and culturally specific forms of visualisation and representation. Furthermore, the choice of prescribed portfolio content doubly disadvantages applicants without formal design educations, since they lack familiarity with the legitimate gaze, and they are denied of the opportunity to demonstrate their aptitude to study design in more diverse and contextually relevant ways.
Re-centring marginalised vernacular languages are key to the decolonisation project. Considering that English is the mother tongue of only 35% of applicants, it is not surprising that the portfolio requirements are frequently misunderstood. Translating the portfolio into two widely spoken vernacular languages is therefore a significant act of decolonisation that affirms the life worlds of applicants.

Finally, by recognising that more than 60% of applicants to ECP have little or no formal art or design education, these interventions de-link the ECP selection instruments from the ideal student (Luckett, 2016) of the past, middle class, English-speaking, probably white and in possession of the privileged cultivated gaze.

### 7. Conclusion

The analysis of the ECPs selection instruments, with the help of the specialisation codes, makes visible how the gatekeeping function of this this socially constructed knower practice is constructed and maintained.

From a decolonial perspective, the analysis demonstrates how hegemonic patterns of power, brought from Europe during the colonisation of South Africa first by the Dutch and later by the British, can persist, uncomfortably and at times unnoticed (like the statue of Rhodes) in “common-sense” practices of design culture like entrance portfolios and tests. Common misunderstandings of entrance requirements demonstrate the marginalisation of applicants who are not familiar with canonical genres and practices and for whom English is not their mother tongue. The analysis reveals how conceptualising portfolio from a point zero position can mask cultural bias and negate the life worlds of applicants who do not conform to the normative, “ideal” student, well versed in the “right” kinds of design knowledge. Finally, the analysis shows how the narrow forms of visual representation favoured by the prescribed ECP portfolio exclude other, more diverse ways of demonstrating aptitude for design studies.

In conclusion, the interventions discussed in this study can be understood as examples of a social realist perspective, intent on providing applicants with “epistemological access” to disciplinary knowledge. Providing epistemological access to the cultivated gaze of the discipline is a valid response to the SRC’s question. But from a de-colonial perspective, these interventions, with the exception of the translations, could be viewed as an erring on the side of assimilation into the normative euro-centric gaze (Luckett & Shay, 2017). Decolonising the selection instruments require de-linking from this gaze, re-reading the canon, re-centring marginalised design practices and ideal knowers, and affirming plurality of expression. Such a de-linking does not entail doing away with entrance portfolios and tests but rather provides an opportunity to re-imagine more diverse, inclusive, and contextually relevant ways of predicting success in design studies.
For me, as a white academic involved in student selection, this study is both an admission of having been implicated in a discriminatory practice and an act of abandoning the hubris of the zero point. This study was motivated by a question, and I conclude with another, which may have resonance beyond the post-colonial South African context: how can we further re-frame an exclusionary and under-examined practice of design culture?

References


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Hybridity as a culture of making

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Abstract | Using an experimental design course for industrial design undergraduate students as a case study, this paper explores which new approaches towards design education can be applied to foster a contextually-based practice. Understanding design as a fundamental trait of being human (Heskett, 2002, p.4) and a key factor influencing the quality of life, the authors argue for design education informed by both practical and theoretical research in order to encourage cultural hybridity.

KEYWORDS | DESIGN EDUCATION, EXPERIMENTATION, HYBRIDITY, INDUSTRIAL DESIGN, DESIGN METHODS
1. Introduction

In the second decade of the 21st century, Design education poses multiple challenges, especially on the undergraduate level, that is still perceived “as a means to achieve financial security and upward mobility” (Ilhan, 2017, pp. 17-21). Given the background, the industrial design field has been in a turning point for many years and is in the ongoing process of defining itself anew between rapid technological, environmental and societal changes (Richardson, 1994). Within this context, we believe that design education must move beyond skills-based one and service-oriented, in which the role of the designer is mainly defined as problem-solver, towards a more manifold approach, fostering a contextualized practice (Abdulla, 2018). We understand contextualised practice, as one that is connected and relevant to the milieu (Abdulla, 2018, p.156). In order to achieve it, the content of design education has to be connected to the reality of the students and has to encourage them to look for their narratives and contribute to the plurality of design expression. Consequently, to challenge the outdated epistemology of design practice and distort – as decolonising design (Abdulla, et al., 2018) puts it – “a hegemonic discourse of design centred around functionality and the rhetoric of neutrality”, we must develop new ways of teaching, learning and thinking about design that explore “other ways of worlding” (Escobar, 2018, p.65). This paper examines how hybridity can contribute to developing practice-based design curricula that foster experimentation, interdisciplinarity and dissolve the polarity of theory and practice (Findeli, 1994). “La Cultura del Fare” (from Italian: the culture of making) a course in which we have taught, serves as a case study, opening a wider reflection upon design education. In this text, we do not want to offer a universal solution, or a recipe, we rather describe the method and structure, as part of our ongoing practice-based research on design education. The course was held as a one-semester main long studio class within industrial design undergraduate course for the fifth-semester students.

2. Hybridity as Approach

Conceptualising the syllabus for the course, we use hybridity as a starting point. Perceiving design as a modality, we explore hybridity as an inherent part of cultural expression. Even though, as stated by the Palestinian philosopher Edward Said, since the Enlightenment, the West has been trying to separate “cultural and aesthetic realms from the worldly domain” (Said, 1993, p.68), we believe that they have to be rejoined. Within this context, design education, as an intrinsically cultural practice, offers an opportunity to explore the ways of developing practices beyond current boundaries of methodology and aesthetics employed in the field of product/industrial design. We understand hybridity not only as merging of different and contradictory entities (Davendorf & Rosner, 2017), rather as a fluid category that allows exploring new ways of making design, as well as transcending the static idea of product identity. Here we draw from Jamaican cultural theorist Stuart Hall, and his idea of fluid identity that is never-completed, always in the “process of becoming – a process of
Hybridity as a culture of making

shifting identifications, rather than a singular, complete, finished state of being” (Hall, 2017, p.16). Within the course, we wanted to see how we can encourage students to reflect upon their diverse identities, the cultural, historical identities of used materials and technologies, and product identity in general. Therefore, unlike many industrial design courses, we decided not to work with a product-brief or established guidelines that limit and hinder experimentation, rather we explored and developed methods fostering reconfigurations, blending modes of designing and producing. Drawing on Paola Antonelli’s concept of “thinkering”¹, we focus on maker experimentation as a device for innovation, encouraging hybridity. Within this framework, we understand hybridity as inherent cultural expression, questioning universalism and modernist tradition, that still form some of the most important references of design. Hence, we wanted to explore how this way of working can contribute to different ways of thinking about products and teaching design.

Believing that “it is impossible today to act without knowledge, or to know without doing” (Maldonado, 1967, p.12) as stated by designer and educator Tomas Maldonado, we examine how to unify the theoretical and the practical framework within the course, in terms of both what we design and how we design and teach. The how is as important— in our approach— as what. Within our model, we are researchers and, according to design educator Danah Abdulla, the test theory in practice, studying and evaluating our work, in order to refine our understanding and improving it (Abdulla 2018, p.89).

In assuring that students know exactly what this course builds upon, we created a structure that was presented to them at the beginning. Defining a structure and methods was also crucial, on the one hand, to organise our aims and goals, on the other to be able to analyse the process. As an educator, Johanna Lewengard eloquently puts “Focusing on methods that help us to identify gaps between intention and outcome, and using a broad set of tools for analysis […] creates a more holistic view (of design)” (Crippa, et al., 2019).

Traditional design methodologies, especially within a market-oriented field as industrial design, use applied science as main logic and involve working with a product-brief that predefined a set of questions and problems inquired and looks to find solutions. Within this model “good design is the outcome of an inspired syllogism” (Antonelli, 2012) and design education often aims at ensuring that this linear process takes place. Questioning this approach, as it limits design outcomes and aiming at educating reflective practitioners (Schôn, 1987), we focus on fostering situated, relevant, research-informed design practice.

So, hybridity also refers to our pedagogical outlook. On the one hand, we have the transformation method, the starting point for experimentation, on the other, we examine to what extent the design research, conducted in parallel with the practical hands-on one, makes it possible to contextualize projects regarding their historical, social, and

¹ Thinkering – «combination of design thinking and tinkering that involves strategic disruption, realistic application and maker experimentation». (Walker, 2015)
technological dimensions, thereby supporting the development of the concept and the making of design decisions. Within the course, we analysed how choosing an integrated educational approach, instead of separating design history from design theory and research from praxis, extends product development through varied dimensions and perspectives, opening up a forum for discussion on the future of design within the industrial design field.

3. Conceptual and theoretical principles

3.1 Background

The research on hybridity as a method started in 2002 with the project “If we could knit wood: Transformation in arts and crafts.” The project analysed the processing techniques in the traditional craft workshop and formulated new approaches using digital processing methods. The idea was to pair processing methods with materials that are not processed this way (e.g. knitting wood). Further iterations included different workshops and enabled to quickly test the pairing method and see its potential for further application. The formal results were promising, but due to time restrictions, they stayed on the stage of the material experiment as a sample, rather than becoming a product or an object. Therefore, it was clear that, to fully explore the possibilities behind the method, a longer project was needed, ideally within a design education framework. This was possible in the “La Cultura del Fare”, a course offered as the main studio to the fifth semester undergraduate students, that we discuss in this paper.

3.2 Method

Traditionally design is understood and taught as a problem-solving practice (Abdulla, 2018; Escobar, 2018; Findeli, 1994), in which designers choose from a set of practical methods and procedures that adapt to the problem. Designers often rely on their visual and cultural memory, that guide them exploring possible solutions. Traditional methods and processes are deeply embedded in the designer’s tacit knowledge and can be therefore limiting.

Aiming at challenging the implicit solutions and normative visual and form languages, we developed a new approach to tackling product development. The rationale behind was to enhance the experimentation beyond the known ways of making and its visual, tangible representation. This approach poses particular challenges as people generally prefer to choose familiar systems and procedures that give them security rather than face new, unfamiliar ones. Even though designers pride themselves to be innovative, design still reproduces consciously or not “universal” norms and adheres to specific Modernist aesthetics. (Ahmed 2019; Escobar 2018).

“The culture of making” course explores the notion of cultural hybrid, through hands-on research of materiality, tactility and fabrication processes, going beyond the generic
understanding of what “making” and just “experimenting” means. Instead, it focuses on cultural and historical narratives embedded in processes, materials and their visual, formal, utilitarian manifestations as products of industrial design. In this context, the emphasis of the course was on hybridity, using advanced digital manufacturing methods and the transformation of traditional production modes, in order to create culturally and technologically determined hybrid artefacts. Introducing “Hybridity as a culture of making” we believe to facilitate the design of products, that go beyond only formal considerations and rather are rooted in the cultural experiences of the students. It also brings a framework for expanded creativity and experimentation and enables a disciplined way of working.

The developed design method applied in the teaching process separates material and processing method, by the unorthodox pairing of ubiquitous materials (metal, wood, clay etc.) with action verbs (baking, blowing, weaving, melting etc.). The term “sawing wood”, for example, implies a clear image of the material and processing/treatment of the surface, without the students having ever had sawed wood themselves. This tacit knowledge is based on memories, experiences, and personal value systems. In contrast, the term “knitting wood” cannot be assigned to a stereotype. It has to be interpreted through a creative process or reframing. This approach allows students to avoid their processes becoming restricted by culturally conditioned or stereotyped strategies, during experimental phases.

Working with digital production modes played an important role in the process, as with the help of computer-aided design and production, we can radically question the basic typologies that have emerged in the history of design and work with new ingredients, often using form languages and expressions (e.g. ornamentation) countering dominant visual narratives. We do not employ “hybrid craft” as a way of mixing analogue and digital modes in order to extract “the best aspects” from both processes (Davendorf & Rosner, 2017), rather first we immerse ourselves in the experimentation phase, allowing to fully explore the creative possibilities of different fusions and this implies that the mixed categories are not fundamentally opposite. Therefore, we envision the hybridity as a culture of making, being a process of binding categories together, instead of emphasising the differences. The beginning of the process should be playful, without rigid rules on what is right or wrong, and be an interaction between media and experimental techniques.

3.3. Course

The starting point of the course was an intensive one-week long workshop “Transformation 01” that set, in many respects, the groundwork for further explorations in the studio class.

In a series of 1:1 design exercises, students experimented with familiar materials through challenging, unorthodox operations (e.g. baking, knitting, cooking, weaving, melting etc.). Through surprising pairing (material – action verb, see Table 1), the goal is to provoke the students to go beyond their familiar perception of materials, traditional manufacturing/processing methods and to reinvent the notions of known and familiar to produce unexpected results. Students worked in pairs or small groups defining together
hypotheses and goals, moving fluidly between making activities that allow releasing of thoughts and rational calculations of ideas to be tested by making. The interchange between intuitive response (hands-on modelling) and conscious assessment (discussion and analysis within the team), creates the crucial balance that enables to progress to new findings.

**Table 1. Transformation 01**

<table>
<thead>
<tr>
<th>Action Verbs</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sawing, bending, folding, embossing, knitting</td>
<td>Metal</td>
</tr>
<tr>
<td>Binding, cutting, casting, moulding, scrolling,</td>
<td>Wood</td>
</tr>
<tr>
<td>layering, weaving, embroidering, carving, cooking,</td>
<td>Paper</td>
</tr>
<tr>
<td>impregnating</td>
<td>Casting Materials</td>
</tr>
<tr>
<td>Pressing, stretching, spanning, knotting,</td>
<td>Leather</td>
</tr>
<tr>
<td>perforating, breaking, heating, cleaning</td>
<td></td>
</tr>
<tr>
<td>Milling, binding, boiling, splash, coloring, peeling,</td>
<td></td>
</tr>
<tr>
<td>wrapping, chopping, melting, soldering</td>
<td></td>
</tr>
<tr>
<td>Bloating, cutting, carving, etching, sticking</td>
<td></td>
</tr>
<tr>
<td>Refining, welding, shrinking, grinding</td>
<td></td>
</tr>
</tbody>
</table>

The inherent qualities and properties are experienced on a 1:1 scale, stripped of their conventional context, and set within the new framework of knitting, casting, dipping, coating, blowing, coiling, revolving, pleating, weaving, spinning etc. Through experimentation with surfaces, volumes, colours, states of matter, students translated the given material, through their lens, and transformed to three-dimensional units, specimens and objects (not yet necessarily functional), following the logic of the assigned operation/action verb (e.g. knitting).

After this intensive experimentation process, a common “bank” of experiments was created, out of which students could freely choose those for further development. Within this process, it was important to dissolve the individualistic, possessive approach towards the work and to open it for everyone. Consequently, students could engage in collaboration and co-creation of knowledge in a more horizontal way.
Hybridity as a culture of making

Figure 1. *Folding + Casting Material: an example of experiments from Transformation 01 exercise.*
Figure 2. Cooking + Wood: an example of experiments from Transformation 01 exercise.
In the following steps of the process, students had to translate the experiment into an object/product. In order to achieve it, students were asked to develop a research question, rooted in the chosen experiment, to guide them through the process. They were also encouraged to research the history behind materials, production processes and to locate and relate them to their own positionalities and identities. This process, working with a research question and investigating instead of just “simply” making, was challenging for undergraduate senior year students, who in the course of their design education got used to working with a product-brief, responding to clearly defined problems. Suddenly, we asked them to completely change their way of working and designing, as well as we required a research layer to inform their projects. Informing their practice through research, not focusing on solving problems, rather infusing with knowledge and at the same time interrogating their own position, culture and identity, opens diverse possibilities for the
pluriverse (Escobar, 2015). Below we will describe two projects that in our opinion show how this method is useful for creating contextualised design practices.

4. Projects Examples

Both examples show two radically opposed design approaches that emerged within the course and informed pluriverse way of designing, enabling students to find their voice within the practice. One informed by a historical research, the second by material and form research through designing and experimenting. We believe that this way of teaching design, applying hybridity in the process, enables a lot of flexibility and at the same time provides students with a structure fostering contextualisation of their practice.

4.1. Knitting Metal – an example of creating a history-informed practice

Starting the experiment with metal and the verb “to knit”, one group of students created a myriad of different samples, knotting, twisting, weaving wires, cables, rods, eventually achieving surfaces very similar to the actually knitted wool. In order to continue further with the project, they stopped the process of experimenting and researching by designing and focused on the history of knitting. By reading the history of this craft, they observed how the position of knitting shifted due to the industrial revolution. Before, hand knitting was a
Hybridity as a culture of making

highly valued craft performed by trained craftsmen part of a guild, often performed in the public space. The mechanisation of knitting, changed craft’s status, and hand knitting became mostly a feminine activity bound to the domesticity. This information was interesting for these two students, as they looked at the internal hierarchies within design and how some forms of making are highly valued, and therefore categorised as design, while other practices are made invisible and excluded (knitting being one of them) (Buckley, 1986). They analysed the transition of knitting from the public to the domestic sphere and then its re-claiming by the feminist movement and the Women’s March in form of a “pussyhat”. Studying the history of knitting they formulated a question “How to bring knitting from the domestic to the public? How do we let the emotional to influence the mobile character of the object?”. These questions guided their further design process. Aiming to bring knitting to the public sphere, they decided to work on a structure that could be implemented outdoors. Therefore, they chose a thicker metal rod that they knitted, to create both stability and flexibility. Knitted meshes enable bouncing back and forth and the rocking and its playfulness, induce an emotional response and become part of the project. At this point the function is defined as a rocking stool for outdoors. Trying to blend between the domesticity of knitting and the material landscape of urban space, the designers decided to use cast concrete, that got reinforced with the metal knitted rods, to create a sitting surface of a rocking stool. The project goes beyond the dualisms of public/private, urban/domestic, soft/hard, feminine/masculine, rather focuses both/and. Using hybridity as approach enables to dissolve the dichotomies and to mesh the categories together, creating a playful object, which identities are narrative, rather than pre-defined. Looking at the design process, we can also assert that theoretical considerations directed experimentation and the other way around, so the proposed methodology enabled both theory and history-driven exploration as well as free material-based experimentation. This helps add another layer of knowledge and allows students to use their positionality and their lived experiences as women to influence the design process.
Figure 5. Knitting metal: work in progress.

Figure 6. Knitting metal: a stencil to knit a metal rod.
Figure 7. Knitting metal: the final result, a rocking stool for a public space.
4.2. Printing textile – sustainability in experimental context

We believe that this method can also help to enhance the sustainability of the production process. While conventional design methods create products and this dictates lifestyles, the experimental phase inherent to hybridity enables deeper comprehension of manufacturing processes. Speaking about sustainability we are not interested in the superficial understanding of the term as “green materials”, avoiding production waste or separating product parts at the end of the life cycle, rather we explore the possibility of redesigning the whole design process in a sustainable way.

Printing textile was a starting point for one of the students, who after the experimentation phase in which he worked with textiles, focused on merging printing with felt. The student who was a 3d printing tutor during his studies, challenged himself working with fabrics, material not necessarily present in industrial design curricula. He explored what happens when we 3d print directly on felt, creating joints connected to the material, without any additional elements or adhesives. In the process, he developed joints 3d printed with the PLA filament on felt. Their geometry enables to insert easily wooden legs and therefore shaping felt into a three-dimensional ergonomic seating surface of a stool. He drew from his technical pre-university education as draftsman and his experiences as 3d printing tutor. In the process, he defined his visual background as a technical one and let this aspect inform his design. Instead of working hands-on with materials, he sketched using a CAD software different possibility, and then printed them and tested out. A multimaker printer was used in the process, which shows how this design could be easily reproduced using home or semi-professional 3d printers, opening the accessibility and production for a wider group of users, avoiding transportation costs and its environmental footprint. The concept can be also scaled on the commercial scale, enabling a producer to manufacture the stool at the retail points, without being bounded to a specific production facility, producing the furniture in-store on demand, rather than having a stock. So, applying hybridity, the student discovered new potentials for the design and included sustainability as an inherent part of the process, thinking as well about potential business models for the further development of the project.

5. Conclusions – towards a contextualised design practice – why is there a need for new methods?

Traditional design methods focus purely on solving pre-defined problems, leaving some possibilities unexplored, and limit design practice. We argue that methods, focusing on the strategic role of experimentation in the design process, informed by theory, history and research, open up alternatives to the solutionist understanding of design and foster innovation, outside of the established traditions. Experimentation and research, in this view, are not contradictory, polar categories, rather mutually shaping ones.
Design education is in our opinion a crucial framework to research and explore new design methods for industrial design, that is difficult to achieve within the industry-based structure, driven by free-market considerations. In this respect, the undergraduate studies are fundamental as they give the first insight and lay the ground for future design practice. Therefore, within our course, we wanted to create an environment in which students can explore their respective cultural identities, their memories, their experiences, their backgrounds not in a theoretical way, but in a practical one. Reflecting on how who they are, what they know, influences what they do.

Even though reflexive design practices are fostered in many other design courses (Levengard, 2019; Abdulla, 2018; Escobar, 2018; Ahmed, 2019) industrial design education is still very service and market oriented. The contribution of “Hybridity as a culture of making” methodology sheds light on how we can shift the ways of teaching design practice, creating a framework that is student-centered, history and theory informed and experimental at the same time. The novelty of the course, within the industrial design undergraduate studies, is the way of how this pedagogical approach, together with the developed design method, foster enquiry and innovation and enable students “to become active learners who engage with the world around them” (Abdulla, 2018, p. 292).

The presented approach is not an easy one, it demands from the educators and from the student’s commitment to contribute to the process. This way of teaching is also much more time-consuming as students were challenged by the new way of working, radically different from what they have learnt so far. As the example of two students who looked at knitting shows, using their positions as women and their experiences working with male-dominated discipline (one is a carpenter), motivated them to inform their project through gender perspective. Investigating the history of this production method, helped them to contextualise the project and ultimately guided further design decisions. Offering a space that merges theory and practice, examines to what extent the design research conducted in parallel with the practical hands-on one, makes it possible to scrutinise projects regarding their historical, social, and technological dimensions, thereby supporting the development of the concept and the making of design decisions. Within the course, we analysed how, instead of separating design history from design theory and research from praxis, choosing an integrated educational approach extends product development through varied dimensions and perspectives, opening up a forum for discussion on the future of design and design education, within the industrial design field.
References


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Hyber-Contextual Futures in Mexico City

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Abstract | This paper focuses on the activities undertaken by the Global Futures Lab Observatory in Mexico City (GFL/MX). The Observatory aims to provide hyper-contextual future visions through techniques and methodologies that range from critical design and traditional future forecasting to speculative anthropology. The core of the initiative is the will to address the lack of diversity within the speculative design field, heavily based on Northern European and North American perspectives. Since the start of the GFL/MX initiative in 2017, different cohorts of Mexican students have been invited to develop future scenarios in which identity and cultural factors have priority over technology and the dominant ideas of progress. In these pages, we will analyse the pedagogical model of the GFL/MX workshops. We will also illustrate some best practices for culture-based future thinking and finally, we will reflect on the students’ outcomes and how they relate to specific cultural nuances.

KEYWORDS | SPECULATIVE DESIGN, DESIGN DECOLONIZATION, SPECULATIVE ANTHROPOLOGY, MEXICO
1. Introduction

Critical design, speculative design, design probes, and design fiction are some of the interchangeable terms that describe a particular type of design that merges product design, future forecasting, and scenario building to create fictional but credible/plausible objects, presuming certain technological, sociological, political or economic hypotheses were confirmed. The lack of diversity of most of the future visions depicted in the last decade is one of the main problems associated with these specific design disciplines. “Do we really want to foist our hates and fears on the rest of the world? Aren’t there many alternative futures out there, in the hearts and minds of silenced cultures worldwide, that we should seek out and nourish?” (Dator, 2019, p.162).

The Global Futures lab Observatory in Mexico City is a spin-off of the research project Global Futures Lab (GFL) started in 2016 by Rhode Island School of Design, Professor Paolo Cardini. The GFL aims to collect “souvenirs from the futures” from different parts of the world, celebrating different dreams, dreamed through the lens of deeply contextual and subjective speculative design exercises. The implied universality of most of the speculative design proposals produced between northern Europe and the United States in the last two decades, together with an omnipresent western technological determinism, failed in creating a pluralistic dialogue around different cultural identities and their ideas of the future.

The specific relation between temporality (time) and cultural context (space) applied to future thinking defines the boundaries of the research framework analyzed in this paper. The future can relate to space and time in four different combinations:

- **Undefined time and undefined space**
  When either time and place are unknown, we usually observe the presence of Utopias and Dystopias. Whether they picture idyllic green skyscrapers or dark underground worlds, those representations tend towards stereotypical ideas of future, often lacking cultural representations and always too far from any tangible reality.

- **Defined time and undefined space**
  Future scenarios in which the timeframe is set but lacking of any contextual information, could give birth to dominant perspectives. Different cultures have different perceptions of time and this eventually leads to different definitions of progress. The linear perception of time, for instance, is merely a Western position, while in many cultures time has a cyclical form.

- **Defined time and defined space**
  When we work within a defined time/space dimension, we usually observe a more rational exploration of implications, risks, and opportunities related to plausible future events. This is the case for foresight methods which have been used since
the first half of the twentieth century and utilize systematic and pragmatic analysis of data to extrapolate credible future projections.

- **Undefined time and defined space**
  Finally, when we have an absence of time constraints but within a defined space, we are dealing with concepts like Eutopias or Eupsychias. The first ones are attainable futures in the real world while the second is an aspirational state or inner “utopias”. In the presence of a clear context definition, “If we release future from its temporal constraints, we can open a fruitful analytical path that demonstrates the role of “future” in creating everyday social worlds” (Salazar, et al., 2017, p.127).

Global Futures Lab Observatory in Mexico City (GFL/MX) is based on the last two concepts. The clear definition of the “place”, or more specifically the cultural context, has been set as an indispensable condition to the various design briefs. Time, on the contrary, could switch between determined, as in traditional future forecasting methods and undetermined, as in critical design practices.

Together with Future Studies and Critical/Speculative design, speculative anthropology is the third discipline completing the pedagogical framework of the GFL/MX. In particular, the study of societies’ material culture is of great interest in this research context. The creation of fictional artifacts, or diegetic prototypes (Kirby, 2010), belonging to specific future cultural contexts, can help the understanding and familiarization with those scenarios, often very difficult to grasp without any tangible representation: “Objects and tools represent a particular field of investigation; they land themselves much better to be used as keys in the interpretation of complex relationships” (Poli, 1973).

The creation of “new and fantastic” artifacts rooted in a strong cultural framework is a key element to mitigate a ruling capitalist technological determinism. Objects and products, as well as technology, when not indigenous but adopted, can be dangerous imperialistic and colonizing entities. Across design history many projects, like Papanek’s low-tech radio receiver for “underdeveloped” countries (Clarke, 2018), or Negroponte’s One Laptop for Child project, have sent the problematic message that everyone can’t wait for the blessing of the Western culture and technology to start envisioning their future (Srinivasan, 2017, p.3).

The central concept of the GFL/MX is the search for hyper-contextual futures and the rejection of universal concepts as “commonality” or “humanness” being historically tools of white, European epistemological and territorial colonialism (Valentine & Hassoun, 2019, p.245). Moreover, fostering the creation of future visions strongly connected with specific cultural identities will encourage the passage between the passive condition of “waiting for” a pre-packed universal future to the active condition of “waiting to” the one locally thought and built (Appadurai, 1990, p.127).
2. The Global Futures Lab Observatory in Mexico City

In 2017, students from the CENTRO Advanced Design Institute in Mexico City have been invited, together with many other international institutions, to take part in the Global Futures Lab initiative participating in a series of workshops titled “Souvenirs from the Futures”. After that first collaboration, Paolo Cardini, Professor at Rhode Island School of Design, and Karla Paniagua, director of Centro’s master program in Future Studies (Diseño del Mañana/Design of Tomorrow), decided to establish a permanent Observatory in Mexico City and to include the Global Futures Lab workshops as an integral part of master’s curriculum.

CENTRO Advanced Design Institute has a Futures Studies graduate program since 2015. The framework of this program provided an adequate territory for this experience, considering “The purposes of futures studies are to discover or invent, examine, and evaluate and propose possible, probable and preferable futures. Futurists seek to know: what can or could be (the possible), what is likely to be (the probable), and what ought to be (the preferable). In the words of Toffler, futurists try to create new, alternative images of the future —visionary explorations of the possible, systematic investigation of the probable, and moral evaluation of the preferable.” (Bell, 2003, pp.73-74)

The Futures Studies program consists of 2 semesters during which students learn and practice methods and techniques including Futures Wheel, Trend Impact Analysis, Structural Analysis, Causal Layered Analysis, and Personal Futures, among other pathways (Glenn & Gordon, 2009). Students learn how to choose and combine these resources, taking advantage of each one to accomplish the different tasks of the professionals futures studies (Bell, 2003, pp.80-95): the study of possible futures; the study of probable futures; the study of images of the future; the study of the knowledge foundations of futures studies; the study of the ethical foundations of futures studies; interpreting the past and orientating the present; integrating knowledge and values for designing social action; increasing democratic participation in imaging and designing the future; and communicating and advocating a particular image of the future.

The idea of setting a permanent observatory of speculative design futures at Centro, came from the interesting possibility to overlap the traditional Future Studies education offered by the program with speculative design practices and methods that usually belong to art and design environments. Although speculative design has roots in traditional forecasting techniques, it diverges substantially in means, tools, and intention. Forecasting methods, characteristic of Future Studies, use systematic and pragmatic analysis of data to extrapolate credible future projections. On the contrary, speculative design practices typically utilize a less scientific and more humanistic approach, their messages are less affirmative and more critical. Moreover, through this long-term collaboration, we aimed to use the Global Futures
lab approach, which forces the focus on local identities, to help students to avoid future stereotypes and inspire deeper attention to the Mexican context.

2.1 Activities and Pedagogical Model

Before going through any process or pedagogical strategy, it is important to highlight the profile of the students involved in the workshops. The Future Studies program at Centro is highly multidisciplinary and only some of the students have design skills or capacity to use design tools. Their background can vary from marketing and strategic consultancy to design or governmental administration. This factor was crucial in planning and crafting the workshops' activities in a way to allow students to include design as part of the creative process but without limiting their visions to their actual design skills.

The Global Futures Lab workshop, led by Paolo Cardini and Karla Paniagua, takes place at Centro once a year for three days. However, after the end of the workshop, the students keep developing their design proposals with the support of the program's faculty. Each workshop is organized into three main phases: Stories, Scenarios and Products.

During their first session, students are challenged with the writing of a short fictional story. Everyone is invited to write about a hypothetical situation happening in Mexico, in an undefined future. The frame of the exercise is intentionally kept very loose and the only constraint is about the fact that the stories shouldn’t talk about major systems or society at large but rather focus on everyday events in someone’s life. Within this exercise, it’s fundamental that the students use their first language to populate their stories with words, expressions, and behaviors, typical of their culture.

The second session is based on the exploration of details and nuances from the short stories, to better define their scenarios. This process starts with the reading of everyone's text and subsequent debate. The stories’ conciseness leaves plenty of blank spaces to be filled by the creativity of the rest of the group who contribute to expanding each scenario with new and unexpected elements. Future casting techniques, as Glenn’s Futures Wheel, can be utilized to help students navigate all the implications and consequences related to their future visions.

The third and final session focuses on the ideation and materialization of the diegetic prototypes. Students are asked to populate their future scenarios with fictional objects or services. Students design what the products do, how they work, who they are for, and where they exist. The final goal of those fictional artifacts is to carry the essence of their narratives and act as facilitators for conversations around students’ future speculations.
2.2. Pedagogical guidelines

All the activities developed during the workshops are crafted in a way to foster original thinking and avoid pollution from pre-built ideas of future. In the following paragraphs, are listed a few pedagogical guidelines to facilitate the creation of hyper-contextual futures.

- **Preference for a loose methodological framework.**
  Nor Critical/speculative design or Future Studies methodologies are set as a rigid frame for students’ creativity. The information provided about this kind of practices is mostly around their conceptual meaning and the illustration of future stereotypes created by non-contextual thinking. Students are left free to adopt whatever tool they feel comfortable with for the development of their design proposals. The soft methodological approach also helps mitigating any instructor-pupil power dynamics that can influence students’ ideas.

- **Development of future visions starting from micro individual narratives.**
  Future scenarios are often a representation of system thinking and they help us understanding the complexity of the “big picture”. Differently, in the GFL workshops, students start their speculations at an individual scale, they are invited to reflect on very subjective future experiences and look first at changes in people’s lives rather than what we can find in the macro structures of our society. This approach promotes a human-centric perspective and alleviates the risk of cultural homogenization (Hugenberg & Sacco, 2008).

- **Use of dialectics as a tool to unveil contextual clues.**
  Group debates are crucial elements to build a solid contextual framework. Before engaging with any tangible design or forecasting activity, students are invited to “talk” about their scenarios. The conversation happening around the students’ short stories represents a rich exchange of opinions about the current status of their society and it enhances reflections on identity and culture; as mentioned previously, language is a strong cultural element and one of the purest expressions of someone’s identity (Bucholtz & Hall, 2004, pp.369-372).

- **Use objects as representations of identity.**
  Once the students start engaging with the creation of their artifacts, is extremely important to facilitate a semiotic and anthropological analysis of the objects. The goal is to identify the cultural elements that informed their functional and aesthetic decisions, and to detect alien features that reveal themselves to be “too generic” or “imported from other cultures”. Students are invited to see objects as a direct representation of human behaviors and to culturally locate the artifact within the cultural context of reference.
3. Results: Looking for patterns

In Table 1 we present a breakdown of the results achieved by the first three cohorts of students who took part in the Global Futures Lab workshops. It should be noted that, as mentioned above, not all the attendees are designers, so a consultant on design and fabrication is assigned to accompany the process during and after the workshop.

Is fascinating to observe the variety of topics selected by the students who, let free to express their creativity beyond any rigid framework, gave voice to hopes and concerns about their future. Technology and its new dilemmas; magic, religion and spirituality; memory and identity; scarcity of resources, constitute the focus of interest and concern.

Table 1. Artifacts breakdown

<table>
<thead>
<tr>
<th>Project &amp; Authors</th>
<th>Description</th>
<th>Prototype</th>
<th>Main topic</th>
<th>Subtopics</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Arc of Life, Matilde Breña</td>
<td>Individual use box containing pill to assist voluntary suicide</td>
<td>Jewelry Box, Cardboard and fabric</td>
<td>Technology and new dilemmas</td>
<td>Civil rights</td>
</tr>
<tr>
<td>Ovotril (patented egg), Alan Sáenz</td>
<td>An industrial version of the chicken egg remedy used in traditional Mexican medicine to cleanse the body from the &quot;evil eye.&quot;</td>
<td>Packaging Design, printed paper, cardboard and plastic</td>
<td>Magic and religion</td>
<td>Cultural heritage</td>
</tr>
<tr>
<td>Anima 1, Ana Gutman &amp; Lizah Pesah</td>
<td>Synthesis of the &quot;digital being&quot; of a person condensed in a resin cube. The cubes are spiritual mementos of digital deaths.</td>
<td>Epoxy resin cubes containing various personal belongings</td>
<td>Technology and new dilemmas</td>
<td>Identity, memory, permanence</td>
</tr>
<tr>
<td>Anima 2, Alejandro Ruiz</td>
<td>Synthesis of the &quot;digital being&quot; of a person, 3D printed version.</td>
<td>3D printed ring</td>
<td>Technology and new dilemmas</td>
<td>Identity, memory, permanence</td>
</tr>
<tr>
<td>Spiritual fluid, Édgar Flores, Lourdes Serrano, Vicente Martínez</td>
<td>An application that allows practicing any belief at any time, with the corresponding rituals and paraphernalia.</td>
<td>UX/UI, Digital prototype</td>
<td>Magic and religion</td>
<td>Identity plasticity</td>
</tr>
<tr>
<td>Memories scavengers, Abril Chimal &amp; Julián Flores</td>
<td>Plant and pot with computing device that, activated with water, tells stories about the traditional neighbourhood of Tepito.</td>
<td>3D printed vase and physical computing interaction</td>
<td>Memory and identity</td>
<td>Cultural heritage</td>
</tr>
<tr>
<td>Name</td>
<td>Description</td>
<td>Model Type</td>
<td>Technology and New Dilemmas</td>
<td>Cultural Heritage</td>
</tr>
<tr>
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</tr>
<tr>
<td>Seed ring, Alejandra Rosillo</td>
<td>Jewelry piece inspired by the poison rings containing seeds able to conservation the genetic heritage of the traditional Mexican chinampas (floating gardens).</td>
<td>Digital model</td>
<td>Conservation of genetic heritage and sustainability</td>
<td>Cultural heritage</td>
</tr>
<tr>
<td>Pro-Pelle scrub, Mariana Alcocer</td>
<td>Cleaning and skin care system for a scenario in which there will be no water available for personal hygiene.</td>
<td>Digital model</td>
<td>Scarcity or lack of resources</td>
<td>Hygiene, domestic rituals</td>
</tr>
<tr>
<td>Emergency kit, Carlos Shelley</td>
<td>Emergency system for cases of security fail of the iris reader.</td>
<td>Hand-illustrated model</td>
<td>Technology and new dilemmas</td>
<td>Identity, security</td>
</tr>
<tr>
<td>Books reader, Arturo Rossier</td>
<td>AI algorithm that converts books into tweets</td>
<td>Digital model</td>
<td>Technology and new dilemmas</td>
<td>Learning</td>
</tr>
<tr>
<td>Mexican nationalism manual, Camila Anaya</td>
<td>Cultural heritage Guidebook containing all the mandatory precepts to be and live like a “good Mexican” within an ultra-nationalist scenario.</td>
<td>Book design, printed and bound</td>
<td>Memory and identity</td>
<td>Cultural heritage</td>
</tr>
<tr>
<td>Interior planter for malls, Sofía Menchaca</td>
<td>Indoor nature, Bio domes and Indoor gardens for the built environment</td>
<td>Hand-illustrated model</td>
<td>Technology and new dilemmas</td>
<td>Sensory perception</td>
</tr>
<tr>
<td>Itinerant empathy pavilions, Sophia Arrazola</td>
<td>Ubiquitous learning experience that fosters an emotional and empathetic connection with the urban environment</td>
<td>Cardboard model and illustration of the learning system</td>
<td>Technology and new dilemmas</td>
<td>Emotions</td>
</tr>
<tr>
<td>Universal voting system, Mauricio Hernández</td>
<td>New post-political parties' election system based on goals-based anonymous electoral programs</td>
<td>Cardboard model of the voting booth and ballot’s material</td>
<td>Technology and new dilemmas</td>
<td>Democracy and civil rights</td>
</tr>
<tr>
<td>Talent assessment system, Mariana Nuñez</td>
<td>Talent self-assessment system to facilitate the hiring and training of human resources</td>
<td>Cardboard model</td>
<td>Technology and new dilemmas</td>
<td>Human talent management</td>
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<td>Indigenous genetics bank, Jesica Bastidas</td>
<td>Institute that preserves the genetic heritage of the indigenous people of the country.</td>
<td>Cardboard model of an ultra-safe DNA bank</td>
<td>Memory and identity</td>
<td>Cultural heritage</td>
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Powder food display, Fernanda Rocha

Speculation on the future of food in which synthetic powders will replace traditional meals.

Cardboard model of food packaging and distribution unit.

Technology and new dilemmas

Sensorial perception

Dictionary of gestural and somatic terms, María Eugenia Cué

Emotional Thesaurus to help navigating human feelings during social interactions.

Cardboard model

Memory and identity

Communication

Internal tourism system, Carlos Buenfil

Experiential tourism kit for a scenario in which psychotropic consumption in Mexico is legal.

Cardboard model

Technology and new dilemmas

Sensorial perception

Transcultural tour, Diana Espinosa

Digital simulator for tourism in traditional Mexican villages

Cardboard model

Technology and new dilemmas

Cultural heritage

Pocional, Elena Cruz

Emotional experience enhancers. Psychoactive remedies to restore our ability to “feel”.

Blown glass prototypes

Technology and new dilemmas

Emotions, Alternative medicine

Through the analysis of the available data, we can cast a few observations. The discourse around innovation and technology, and its long-term consequences, represents a recurring concerning theme in the students’ work. The preservation of identity, heritage and memory are also critical and recurring topics, mostly fostered by the fast and vertiginous changes of the Mexican society, especially in consideration of the richness of the local cultural heritage.

Interestingly, some of the projects express political concerns, specifically the work produced during the workshop held in 2019. This data is pertinent if related to the social climate at the time of the activities. The workshop happened just after the latest presidential elections, a political tide that clearly permeated students’ future thinking and their models: challenges about how to achieve transparent and democratic elections or concerns regarding a totalitarian state, were central topics.

Although present in a smaller quantity, magic, religion, and scarcity of resources are other significant speculative subjects. Both are well tight with the Mexican context and they represent strong cultural reflections. Magical and spiritual thinking still holds a particular place in the present society and they represent a tangible connection with pre-Colombian beliefs. The latter, together with the present environmental crisis, has been also the input for a reflection on the detriment of nature and its consequences.
Below we refer to three particular projects that we consider deserving special attention.

**The Arc of Life (Cohort 2017)**

The artifact in Figure 1, entirely hand-made with silk by fabric designer Matilde Breña, corresponds to a future scenario in which suicide is no more a taboo. In Breña’s future, when citizens turn twenty, parents give their children this personalized jewelry box-like little cabinet. The box has small drawers for the storage of personal memories such as the first tooth or the first strand of hair. Through a fingerprint reader, the young adult has also access to a suicidal pill, a single lethal dose to be used at personal discretion. The speculative context of the Arc refers to the normalization and legalization of euthanasia.

![Figure 1. The Arc of Life](image)

The event, during which the box is given to the children, is also part of the author’s speculation and it is inspired by the Mexican folklore’s rituals. The presence of the family as the core emotional element of the narrative, together with the aesthetic of the objects, far from any techno-dystopian image, provide the project strong cultural references and matches perfectly with the local context.
The Mexican Nationalism Manual (Cohort 2018)

This heavy and thick book, leather-bound, with sewn folios, presents a design inspired by authoritarian and ultranationalist regimes (Figure 2). In all its elements, from typography, iconography, to the colour palette, the manual suggests the presence of a dictatorial power with the agenda of preserving and protecting the Mexican heritage. Created by Camila Anaya, and assembled by a local bookbinding master, the book is illustrating all the rules that the future citizens of a totalitarian future must observe for living, thinking and behaving as “proper” Mexicans.

Figure 2. Mexican Identity Manual

The dystopian tone is evident in this speculation but there is also a laud invite to reflect and discuss the relation between tradition, identity and cultural evolution. At a time when there is a lack of identities in the global context, the author explores the opposite side of the spectrum where the noble intention of cultural valorization turns into a repressive system of cultural homogenization.

Pocional (Cohort 2019)

The term "pocional" results from the fusion between the words "potion" and "emotional". This scenario, developed by Elena Cruz, merges traditional esoteric practices, psychotropic
drugs, and mainstream medicine. This project forces the attention to the increasingly complicated relationship between humans and their feelings. In Elena’s vision, the predominance of digital interaction, the loneliness and individualism characteristic of the present society, will result in humans’ limited capacity to experience and feel. When the time will come for artificially induced emotions, everyone will receive a bottle for each major emotion: joy, anger, surprise, disgust, and fear (Figure 3). Those bottles will represent our life-long emotional capital which everyone will have to manage and use wisely.

![Figure 3. Pocion al Bottles](image)

4. Conclusions

To conclude, the archive of future visions created within the Global Futures Lab Observatory in Mexico City offers a rich framework for some reflections.
Hyper-Contextual Futures in Mexico City

From a methodological and pedagogical perspective, the overlapping of critical design practices with traditional forecasting technics and speculative anthropology allowed students to move with a certain agility and unleash their creativity. Critical design and speculative anthropology, through the use of highly subjective micro-narratives, made possible to keep the focus on the specific cultural context. From a more pragmatic perspective, according to Wendell Bell’s tasks for Futures Studies, we observe that the workshops contribute to some of them, including the study of possible futures, probable futures and the study of images of the future. We also observe that while some of the projects are deeply rooted in the fictional/speculative realm, they could be developed further towards more plausible solutions.

From a content standpoint, while the different themes selected by the students precisely capture the zeitgeist of the current century, they are also extremely contextualized representations of global concerns. Is worth to be noted that the conversation around progress and innovation that happens in the students’ proposals is not following the traditional path of blind technological determinism; it is rather leaning towards a more interesting cultural determinism in which the contextual framework informs the use of certain technological opportunities.

Finally, reflecting on the challenges fronted during the GFL/MX program, we can identify sometimes a discrepancy between the quality of the students thinking and the quality of the produced outcomes. Physical artifact offers a valid opportunity for communicating and debate around future scenarios otherwise difficult to communicate. However, the limited design skills of most of the participants can make difficult the passage from the concepts to their representation. This problem has been partially mitigated by the help of Centro’s support faculty and external design experts who assist the students in the creation of their artifacts.

The Global Futures Lab Mexico City Observatory will continue to collect students’ hyper-contextual visions and report on the cultural significance of those contributions.

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**About the Authors:**

**Paolo Cardini** Paolo Cardini is Full Professor in Industrial Design at RISD and his work ranges from product to interaction design with a particular interest in discursive and speculative design. His research mostly focuses on the interaction between artifacts, identities and globalization.

Abstract | Imagine the feeling of successfully transmitting/sharing your wildest ideas with others, when communication is one of your largest hurdles. Over the past decade, the King George Elementary School (KGES), a private K-12 school that serves children with learning differences, including autism, dyslexia, anxiety, and ADHD, has worked in collaboration with second year industrial design students from ADU (ADU). This participatory design project that includes mailed creation kits, generative activities at KGES, user testing, and presentations within the KGES community, investigates how co-design could help K-7 students with learning differences. This paper focuses on the evolution of the annual design collaboration process and its residual impact on both students and faculty. In both institutions, individuals are given means to express, communicate and envision in ways they never expected. Design is shown to support embodied learning, using making, movement, and sensory cues to foster students’ expression and agency.

KEYWORDS | LEARNING DISABILITIES, PARTICIPATORY DESIGN RESEARCH, AGENCY, EMBODIED LEARNING, CHILDREN
1. Project Overview

Over the past decade, the King George Elementary School (KGES), a private K-12 school that serves children with learning differences, has worked in collaboration with undergraduate and graduate design students from (ADU). The partnership, seeded in 2010 through an initial project that investigated how textile-based objects might help grade 7 students with learning differences, now supports a range of projects on an annual basis. For members of this K-Masters studies level community, it provides valuable sites for change and agency. Students and faculty from both institutions are given means to express, to communicate and to envision new unanticipated outcomes. Within the collaboration, there are three annual projects, and over its ten-year lifespan the project partnership has included approximately 150 KGES students; 170 ADU undergraduate students; 9 ADU graduate students; 15 KGES faculty and staff; 5 ADU faculty and staff.

For the purposes of this paper, the project discussed is the KGES and ADU classroom collaboration. Annually an elementary class of KGES students engage in a participatory design process with a second-year Industrial design studio from ADU. ADU students are tasked with developing a prototype that supports the learning of their KGES participants. Through this collaboration KGES students, also referred to as co-creators, explore self-expression through the design of tools for their own learning (Figures 1, 2, 8, 9).

2. Research Methodology

This document is a retrospective review of the classroom collaboration over the past ten years. It pulls insights from two main sources, including:

1. Six Interviews with project stakeholders, on both the KGES and ADU faculty.
2. Review of reflections on ADU student process, which was completed for all years of the study. Each year is its own cross section.

These lived experiences are relational and strong interconnected themes emerge from the data collected. Insights in this paper are based on human experiences and feelings, carrying valuable reflections for the design community. It shows that design research itself can be a vessel for community building and collaboration. That health through design takes a committed effort over time, and that design can envision itself in longitudinal studies. Following KGES or ADU students, after they have engaged in collaboration, would be helpful in furthering this research.
Learning and Differences reciprocally shared and validated

3. Contribution from Participatory Design

The classroom collaboration applies Participatory design, a strategy within design practice that prioritizes contributions from stakeholders across all stages of creative practice (Mattelmäki, 2006; Sanders & Stappers, 2008). Within this collaboration students, faculty and staff, from both KGES and ADU, all act as key contributors to the project. The KGES students’ lived experiences, stories, thoughts, and tangible actions are not only collected and observed by the design students and faculty but also discussed and built together through acts of collective making and reflecting. Though, the KGES students are the primary contributors as they bring “fresh ideas and idealistic views to the design process” (Rigolon, 2011). They criticize the perspectives and assumptions of the ADU students, through how they engage, often exposing views that adults move beyond with little thought (Rigolon, 2011; Sutton & Kemp, 2006). These can be crucial moments for ADU students.

Participatory design in education can be labelled as efficient for design practice, rapidly producing novel and innovative concepts (Yalman & Yavuzcam, 2015). This approach is aligned with industry and prioritizes developing skills in design (Schepers et al., 2017; Read et al, 2014). Alternatively, it can also be linked to place making (Rigolon, 2011), identity and self-confidence of participants (Schepers et al., 2017; Mazzone et al, 2010). In this second scenario participatory design processes a range of design research and development activities, supports not only problem framing and action towards new ways of being, but through verbal and non-verbal dialogue exposes layers of complexity or latent issues (Moline, 2014). It often ends when a goal, re-defined through the process, is reached. This can be artefacts, but “genuine participation should generate knowledge in the children, enable their voices to be heard, impact decision-making and empower them” (Schepers, et al., 2017, p. 2).

Smith and Iversen discuss scaling participatory design to support “engaging people in the complex acts and networks involved in contemporary social [...] transformations” (2018, p.10). This decade-long research project has scaled to include Master’s students, professional development for teachers at KGES and within the Vancouver school board, and continues to be a research catalyst for several faculty at ADU. Additionally, the structure and intention of the collaboration has been applied to other projects within ADU’s Health Design Lab.

Scaling participatory design work requires scaffolding design and research goals while keeping in mind that often the heart of major insights comes from the trusting relationship between the designers and participants (Smith & Iversen, 2018). These research projects are aligned to scale further, beyond continuing to support social and ethical interventions in the schools and within the practices of ADU students when they graduate.
3. Classroom Collaboration Overview

Started in early 2010 as a studio-classroom partnership, the project paired Faculty 1’s second year industrial design students with KGES grade 7 students in order to develop learning tools through the power of participatory research in design (Author 1, 2019). KGES balances social and open learning within the classroom with individual instruction for students to achieve specific literacy and math goals. Faculty 1 recognized that many KGES students need to move, they use kinaesthetic and auditory cues to support their learning. This mirrors curriculum in industrial design, where students are required to experiment with materials to understand ways of knowing. Touch, sound, temperature, texture and many more factors affect the emotive properties and our connection to objects. Designers prototype as a way to think through problems and situations, this means that literacy and math may be equivalent in importance to manipulation, motion and physical creation (Author 1, 2017; Root-Bernstein, 2013). Faculty 1 recognized that KGES and ADU students had much to share through these types of interactions that make up embodied learning. Arguably, this affinity to embodied modalities of learning is the reason why the collaboration has continued successfully for a decade. The project outcomes, during this time, have shifted based on the annual research questions posed and the diverse range of KGES students engaged. They include: musical instruments that enable KGES students to express and communicate in unique ways; chairs that support motion and hand movements required for embodied learning and concentration; play devices that support social connection. Each project speaks to the context discussed by the KGES co-creators, situating them as agents in the process.
Faculty 1’s initial structure has continued successfully with minor variations over the project’s lifetime. Each Spring semester ADU students are introduced to learning differences and given an opportunity to learn about the children they will be working with by a KGES teacher. Often this brief is done by the teacher of the previous years, giving them the opportunity to reflect on the project and disseminate some of their own learning. With this base in place, the ADU students begin working in groups of two to develop design probes for their two co-creators at KGES; within the partnership, we call these probes co-creator kits (Figure 3). This is a medium for initial introductions from afar and also sensitizes the KGES students to the types of activities that design researchers might engage in. The word research is not well understood at the K-6 level and often the assumption by KGES students is that they will be observed or asked direct questions. But design probes (Mattelmäki, 2006) generally consist of three to five making activities, and an opportunity to share some personal interests through mapping, photography or mark making. In late January of each year, the ADU faculty member (Faculty 1, Faculty 2) delivers the ADU Probes to the KGES students, along with an introduction talk on what designers do, and an invitation to participate. Over the following two weeks the KGES students work through the design probes before their interpretations are returned to the ADU students.
Figure 3. Co-creator probe Student3. Probes sensitizes KGES students to creative activities and often include text, art supplies and other forms of making (2019).

After the probe exchange, the ADU students use the KGES responses to support their initial in-person visit to KGES. In mid-February, the ADU students spend half a day at KGES being introduced to their co-creators and the school. They engage the KGES students in more participatory design related activities, often including some sort of world building as a way to share content about each other’s daily life and personalities. Figure 4 shows how is spontaneous a part of this work. It clearly suggests that conversation continues and relationships between the KGES and ADU students are developing.
Learning and Differences reciprocally shared and validated

Figure 4. In early interactions at KGES some students start by creating forts. This known and relatively risk-free activity allows students to discuss needs or comfort, building the initial conversations that shape much of the final work (Student 1, 2018).

With this experience under their belt the ADU Students return to the studio to work on research synthesis, design ideation and concept generation. The following third and fourth interactions between the co-creators become a messy balance between imaging possibilities and creating prototypes to discuss and test. One of these interactions occurs at ADU University where the KGES students get the opportunity to learn how the prototypes have been made. Through the course the children’s responses and contributions are taken into account and used for the final refinement and revisions of the ADU students designs. And after three months working on the project, ADU and KGES students present their final design outcomes to the KGES community (Figures, 1, 2, 8, 9).

Since 2018, ADU Faculty, Faculty 2 has led the project. By exposing their expertise and experience, Faculty 2 has shifted the emphasis into the school yard. In asking ADU students to consider and find means for activating outdoor spaces for self-regulation and learning. Faculty 2 links the exploratory nature of design with physical exploration of a specific context: the school grounds. Here, the risks that design can take become obvious to more than just the KGES classroom participants; fear of failure, judgment, being physically uncomfortable in a new context, pushing boundaries and testing how materials can be used (Faculty 2, 2018). The entire K-12 school community gets glimpses of the often-chaotic process (Figure 5) and are able to provide feedback as the objects and environments are recreated by the KGES-ADU student teams.

“Kids often don’t understand how the things they use everyday went through an entire sequence of steps, [through this project] they see the original thing reshaped and reformed” (KGES Faculty3, 2019).
Figure 5. Messy Suits by Student 4. Seeing this chaos from a distance looked unproductive, bordered on vandalism, and was disruptive. ADU students confirmed that “fatigue from the physical activity helps down-regulation” (2019).

4. Impact on KGES students

A key driving benefit to the collaboration is showing the younger participants a future path in post-secondary education. Over the course of the twelve-week project, KGES and ADU students build strong relationships, their input is listened to and valued by ADU students. These mutual relationships involve mentorship that sits outside of the usual student-teacher format found in the K-12 environments. Alexandra Lange, the author of “Design and childhood”, writes about how materials, products and the built environment influence child development at home and in the classroom. She notes that teachers are often expected to be guides or sources of information and that this creates a hierarchy that would directly bias the participatory design process (2018, 9). Co-creators, in this case KGES students, need to know that their input is what the designer is looking for and that anything may be relevant even if it potentially tangential to the task in progress. This approach is often new for children and their teachers, who are more accustomed to prescriptive outcome-based art-piece projects. Rather than aligning this work with teaching specific competencies, which may not allow for open-ended or self-initiated work, the project invites KGES students and teachers to embrace the unpredictable.

ADU students become seen as peers by the KGES students and this difference produces a unique type of engagement with the projects. The KGES students quickly perceive this difference and space of exploration that is non-assessed or errorless (KGESFaculty4, 2019). This freedom from assessment, in turn, opens the door to unbridled creativity. Combining this with the facilitation inherent in participatory design supports directing that creative output toward the projects. Just imagine the feeling of communicating your wildest ideas, when communication is one of your difficulties. ADU students are forced to re-evaluate how
they reach their co-creators, often moving away from text-based content towards manipulatives and creating meaning through form building and prototyping (Figure 6).

“[KGES students] struggle to find ways to communicate their ideas. This is a tremendous vehicle for a lot of them. It is a way to show people what they understand” (KGESFaculty1, 2019).

Figure 6. Ambi by Student3. Ambiguous objects supported the co-creators in expressing themselves through how they stacked, placed, and manipulated. (2019)

By the third interaction KGES students take ownership of the projects but also find the mentorship and attention that comes from the older ADU students extremely exciting. KGES students literally drag ADU students around, showing them the extent of their understanding of the world on the KGES grounds. These interactions open up new and exciting conversations that would not happen from a distance or by reading about learning differences in a textbook. As we see it, the younger KGES students unwittingly give the ADU students the exact types of insight that most designers are looking for. Not the scripted answer to a survey question, or the one that makes them fit in, but feelings and responses that come from a deep understanding of their own situation. There is an ongoing desire to share thoughts, that builds as the term progresses.

They are advocating for their ideas and helping to shape the outcome. Through the collaboration KGES students become seen as the experts in their own learning. They may not always be able to articulate this expertise with words but certainly do it through actions.
How they think with the objects the ADU students bring to KGES. The definitions of their learning difference, become an aspect of the behaviours or feedback that influences the project but not the reason for it.

Figure 7. Group collaboration at its peak. Students from both ADU and KGES form strong bonds that support listening and collaboration.

Many KGES students are anxious (KGESFaculty1, KGESFaculty4, KGESFaculty3, 2019). They left the regularized school system because they needed a fresh start to rebuild their confidence and get direct instruction on strategies that support them in at least one area of formalized learning. KGES “students don’t want to fail because they have failed so many times in their last school” (KGESFaculty3, 2019). For this reason, acceptance of mistakes is not typically a trait observed in KGES students. Difficult tasks might require movement around the room or school, sometimes even resulting in frustration or outbursts. ADU students model process which is active, requires failure, reframes problems and builds empathy for others. It is unclear if KGES students can explicitly share that these skills are transferred to them, but ADU students do reflect on their own learning in this way through the reflections they submit at the end of the term. This suggests that through the process of the project KGES students may also move toward being emotionally ready to initiate work independently (KGESFaculty4, 2019). This is present in small self-initiated projects that the KGES students create for the ADU students between visits, whether drawings, sculptures or simply ideas they share immediately upon ADU students return.
“It’s brought out their creativity that they’ve always had but have felt they can’t explore in a typical classroom because they are not willing to make a mistake. And here that ability to make a mistake is really just completely mitigated by the fact that you’re supposed to; it’s part of the entire process” (Author3, 2015, p.52).

![Image of Tempo Totter](image-url)

Figure 8. Tempo Totter by Student4. Tempo totter is a stool that channels energy though both hip and hand motion, producing a range of tones for musical output. (2019)

When the project reaches its final weeks, many ideas have been realized into physical prototypes (Figure 1, 2, 8, 9). KGES students often interpret the ADU students’ prototypes in an unexpected way. They play, connect, shape and change them, shattering ADU students’ assumptions of how they would be used. This is an important part of design and design learning for all students. As these mash-ups, linked to values, often lead to innovation. Sometimes at this phase of the project ADU students feel disappointment, but it is not the same type of disappointment that a KGES student feels doing rote or outcome focused work. It also is not that the ADU students failed to listen. It is just that, to make some of these ideas’ tangible, students have to work within their skills and the material production limits of ADU University. The key here is that both KGES and ADU students have to grapple with compromise, not all ideas are immediately possible. They begin to recognize that the outcomes are just one of many possibilities to define the project. It is extremely freeing to know that there is a different kind of right answer in the world, answers that can revolve around our own criteria, current limitations and context.
The final presentations occur at KGES and allow the students to show pride in their work, they have the opportunity to engage peers from other classrooms. This serves as an important means of giving credence to the KGES students’ own creativity and input. This sense of accomplishment that comes from actively and deeply engaging with the projects is modelled by the ADU student’s own engagement in the project (National Research Council and Institute of Medicine, 2004, p.32). Additionally, through this initiation into design process, the KGES students’ tendencies to make, explore and be active are validated. The project shows them a possible path through post-secondary education in design or art. A career path or practice that may have previously been unknown or seemed out of reach. Currently, in the 2020 cohort of this project, there is at least one ADU student who graduated from KGES. Unique learning styles can easily and positively be applied to creative thinking.

“The acts of making, that designers find so satisfying, is built into early education, but as they grow, many children lose the opportunities to create their own environments, bounded by a text-centric view of education and concerns for safety” (Lange, 2018, p.9).

5. Impact on KGES Faculty & Staff

Design as a curriculum topic was introduced in British Columbia in 2015, situating KGES faculty in a unique position through this collaboration. KGES fosters an environment that allows students to advocate for their needs in learning, and placing design into their pedagogy was a means to this end. Design was not integrated at KGES because it was prescribed, it was integrated to suggest that there are alternative ways of teaching curriculum that might be more appropriate to the types of learners they cater to. Design
supplies a way to instruct that supports students in “determining what they need to learn” (Gini-Newman, & Case, 2018, p.8). The head of School, KGESFaculty1, has come to understand what this collaboration brings.

“There is a great deal of learning on our end. I know for our teachers it is about the design process and thinking outside the box. It gives them ideas, and an offbeat way of looking at the things they take for granted. It is an enriching learning experience as much for the staff, as it is for the kids” (KGESFaculty1, 2019).

This comes with some difficulties or costs to others in the school. Design is a way of working toward change and, in its open-ended exploratory mode, can often be quite disruptive in the school environment. The projects have been interrupted in more than one classroom, they are often loud, can damage the grounds, can be perceived as unsafe or simply take up space. Even more frustrating for some faculty and staff participants is that at times design exposes issues but does not necessarily resolve them. In many contexts these hurdles would be enough to end a project. These obstacles, which in the early years of the partnership may have been perceived as a reason to stop, are no longer perceived as such. The culture of the school supports the collaboration and its messy, unpredictable and sometimes misguided approaches. Designers are not all teachers. “The experience is so rich for us that it does not matter if we have an off year or a misalignment” (KGESFaculty1, 2019); the collaboration is resilient.

The collaboration has introduced students, faculty and staff of KGES to design, and methods of inquiry integral to the design process; Design brainstorming, ideation, making as thinking and participatory design theory have been made accessible to KGES. Participating faculty are integrating aspects of design into their own pedagogy and this helps them experiment with augmenting learning through objects and physical environments.

“I’ve come to understand the design process a little more. It is constantly sprawling back, looking at new designs, improving, and getting ideas from the most interesting places” (KGESFaculty2, 2019).

6. Conclusion

ADU students’ education is enriched with aspects of sustainability as it relates to social equity, place-based learning, context driven design and even the use of materials that are likely to result in their graduation. Often ADU students engage in Participatory methods for social transformation for their final year capstone project. Further research on this possible imprint is being conducted in 2020-21.

ADU’s Health Design lab has seen how these benefits to students and partners can be ported into two other partnerships. The first project, of three years, continues to support cross-generational knowledge by asking ADU Communication Design students to co-design publications on the life stories of the elderly residents in long term care. The publications are
available for future residents, family members and the care team (Author 3, 2019). And the second project, of two years, pairs communication design students with individuals with visible and invisible disabilities (Author 3, 2020). The KGES partnership structure and model has built awareness that long-term partnerships build community and support health across its spectrum. Over time, the first and second projects will be about health through design as much as the KGES-ADU collaboration is.

For the last ten years this research has evolved to include ADU Industrial Design classrooms, research assistants from both the undergraduate and graduate level and within KGES faculty, students, librarians and specialized tutors. KGES students show confidence in their way of being in the world, ADU students grow their understanding of design process beyond simply making artefacts. Faculty at both ADU and KGES supply avenues to support student growth through this open-ended co-design project, and as a result this community is changing, toward a culture and built environment that fosters student expression. A lot of learning occurs on both sides of this collaboration that comes from a unique relationship, developed through process. It is a model of design pedagogy that could be beneficial for any design classroom.

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Abstract | This paper draws on an auto-ethnographic exploration as part of my PhD study. In this paper, I respond to the question: “how did my earlier lived experience of exclusion informed my (un)becoming a Design academic in higher education in South Africa?” I explain how I became aware of my exclusion due to my race, gender and my social economic situation at a young age, by a system designed to exclude none white people, like me. Further, I unpack how this system has impacted on myself worth, on my readiness and struggle for post-graduate education opportunities. I demonstrate how this lived experience of exclusion has informed my higher education teaching. My academic undertakings hold strong values of inclusion, equality and social justice. I retell my journey, highlighting the effects of this legislated racial exclusion through the struggle for inclusion.

KEYWORDS | AUTOETHNOGRAPHY, RACE GENDER, DIVERSITY, INTERSECTIONALITY
1. Introduction

At a workshop of Design educators in Cape Town, Western Cape, South Africa, a colleague makes a comment to me about the lack of “historical specificity and political analysis” in the work of educationist in study, work and everyday life (Lave, 2012). It is my opinion that this same silence continues in the fields of Design Education where I work professionally in High Education, as a teacher; as an emerging researcher involved in higher education in South Africa (a country where higher education and access to higher education is deeply political). South African education has a long history of political interference and struggle. I am particularly aware of how history and the past inform and experience the present along with its aspirations. In this paper, I am commenting on individual’s past and how these paths can inform present professional identities, practices and values. Writing about this, I discover some silences about the link between politics, the past and my professional life. I also provide a setting, of my experience growing up in South Africa, as an auto-ethnography. In doing so, I offer my understanding of the remaking of social order, however ever small its impact my be.

I write about my younger lived experiences as part of my PhD series. In this paper, I focus on when I became aware of how I was excluded by race and gender from educational opportunities. An introduction to my younger self is depicted in this work to provide background to my PhD work. This sets the stage for the struggles I now face during my post-graduate studies in (un)becoming a Design Academic and its complexities as a woman of colour in higher education. Further, it illuminates how politics, the past and histories are involved and the struggle I face in my professional identity.

1.1 Context for the narratives

Apartheid and I were both in trouble in 1980’s. The Republic of South Africa was experiencing birthing pains that would set off a decade of events and that eventually would shape its history. As I was gasping for my first breaths from an unwanted womb, on the hill in Bishop Lavis (figure 1), popular protest by the masses of ordinary South Africans against apartheid education and other related issues reached new heights in ’80s (figure 2). The government at the time responded with extreme brutality, equal to the life in the popular Cape Flats, in the Western Cape, South Africa. The apartheid legislation at the time was efficient both in excluding the majority of South Africans from a range of human rights, and in preventing all South Africans from having social relationships with each other (Hoosain, 2013). The topic in which they were most successful and which had the greatest impact, was excluding the majority of South Africans from quality education (Salo, 2007).

Who I am is defined by my childhood, growing up during the final years of apartheid. My family was forcibly removed from District 6. Thereafter, they were unwillingly placed into a gang infested, poverty stricken, coloured township in the Cape Flats. But is defined also by finally attending and teaching at a University of Technology in the Western Cape. A journey
of becoming and (un)becoming a scholar and a teacher of Art and Design, in a highly political, racialised and gendered environment through a PhD program. This paper hopes to be part of that journey.

The objectives of this paper are to help understand the journey of women of colour in academia. Further, it may offer valuable insights into culturally situated, complex (race and gender), multi-layered, relational identities of women of colour (Reinharz & Monroe, 2017). In this diverse and complex space in Design Education, the research takes place and is ongoing.

The significance is to understand how a childhood event may impact the life journey. How is experienced the process women of colour go through to negotiate their identities in Design Education and the lack of diversity in Design Education (Akama & Barnes, 2009). Additionally, the study considers the individual (myself) as the subject of the study, which normally, in Design would be focused on the artefact. A focus of my lived experience of exclusion becomes the focal point, and the journey becomes the design process.

Figure 1. Bishop Lavis,” Die Bult” (the hill) 1980. On the other side of this street there was my birth place, four houses away from my church to the left, my house and local super market to the right. This was also neutral gang turf. Also, the first wall I drew on.
2. Methodology

Through a reflective auto-ethnography, I make sense of my personal lived experience as post-graduate student, Design teacher and woman of colour, in a post-protest environment. I explore methods that enabled me to know myself. I use auto-ethnography as a detailed depiction of my internal conversations and the conversations with others in the process of excavating my journey of becoming and unbecoming a Design educator in a post-protest context (Tuhiwai-Smith, 1999; Ellis, 2003).

I value my own beginning, and therefore I am in the position to have authority in my work and to identify who I am in relation to others. In order to know myself and to understand who I am as a post-graduate student, I must start from the beginning, when I first became aware that I was different and not white enough. As an emerging academic professional, I dedicate my work to auto-ethnography as a research method that embraces reflection, responsiveness, transparency of the researcher (myself), relational awareness and conversations between my practice and my research (Pillay, et al., 2016).

In this paper, I reflect critically on memories, photographs, documents and inner dialogues by freewriting (Chang, 2008) to provide an account of my lived experience (Korabik, et al., 2008). I obtained ethical clearance through institutional channels but also from my family to use some of our family photographs included in my study. My family were able to assist and be part of my PhD study by searching for photographs and telling the stories and events that impacted my life. They were proud that our family photos, history and generational stories would have value. This motivated them to tell their own stories and maybe to continue to
write about some of them. I act with care and awareness by removing or renaming characters in this paper as I am aware of the impact any identification may have on other people mentioned in our stories and those who may read it. I am also aware of my focus in this study as a woman of colour and the implications that may arise from the complexity of this narrative.

3. Framing my narrative in identity, intersectionality and auto-ethnography

3.1 Coloured Identity

The fact that South Africa is such a culturally diverse country, meant that individuals of multiple ethnicities were given an intermediate status. Therefore, the term “coloured” refers to a person of “mixed-blood” (Korabik, et al., 2008). Before apartheid laws were implemented, people of colour usually mingled with Europeans and adopted some of their culture and identity (Montero & Sonn, 2009). According to Ratele and Duncan (Ratele & Duncan, 2003), coloured identity is viewed as a social construction of the apartheid regime. It was crucial for the apartheid regime to de-emphasize the African roots of the coloured person, and to promote the idea of an independent separate coloured identity. Boddy writes that coloured people are a community that cannot be considered white nor black (Boddy, 2009). Thus, this conflicting situation placed the coloured community of South Africa in a rather dangerous position between the oppressor and the majority of people that were oppressed. However, including coloured South Africans in the group classified as white was just as complicated, because it tainted racial purity. Thus, coloured people were regarded as second-class citizens before and during Apartheid. In conclusion, clinging to colouring as a racial identity is full of complexities. Davis summed up the situation regarding the complexity of colour identity as “South Africa’s coloured community has remained marginalized by history and even historians” (Davis & Johnson, 2015). One can argue that the way colouring is currently perceived leaves little hope for future generations to see themselves represented in a positive way in the new South Africa. However, according to Erasmus (Erasmus, 2001), colouring has infinite possibilities for transformation. She warns against limiting colour identity as it is trapped between black and white identities.

3.2 Intersectionality

Kimberlé Crenshaw, law professor and social theorist, first coined the term intersectionality in 1989 (Crenshaw, 2017). The theory emerged two decades earlier, however, when black feminists began to speak out about the white, middle-class nature of the mainstream feminist movement. Many black women found it difficult to identify with the issues of the mainstream (white) feminist movement, issues such as the pressure to be a homemaker. Black women, who often had to work in order to keep their family afloat and therefore
without the luxury of being homemakers, did not feel as these issues pertained to their experiences. At the same time, many black women experienced sexism while participating in the Civil Rights movement and were often shut out from leadership positions. This intersectional experience of facing racism in the feminist movement and sexism in civil rights encouraged black women to call for a feminist practice that centralized their lived experiences (Mirza, 2014; Mackinlay, 2019).

3.3 Auto-ethnography

This paper uses auto-ethnography, a critical reflection on stories from my life, in particular about my younger years. This method advances our understanding of possible alternative narratives and uses of visuals (photography, imagery and freewriting) in qualitative research (Pensoneau-Conway, et al., 2017; Ellis, 2003; Holman Jones & Pruyn, 2018; Gachago, 2015). These methods have been used to study changes in life situations, ideas, self-perception and in shaping displaced identities (Hoosain, 2013). I use these methods as previous research states that, into the literature, there is a lack of insight about doctoral research that recognises the different experiences that come from the researcher’s life (Richards, 2015).

3.4 Generating my narrative

This struggle for quality reignited during the student protests of 2015, 2016, 2017, and the gender-based violence protest of 2019 in Cape Town, South Africa (Gouws, 2017). During these times of protest, opportunities arose for research about continued inequalities in society, in particular in the field of Design Education (Armstrong, 2009). One such opportunity arose for me, undertaking post-graduate design studies and understanding that power in education plays a role in learning, even for academics (Boler, 1999). As an emerging researcher, I investigate my own academic journey as a woman of colour, designer, and teacher in higher education, in post-protest times defined by a shift in how young people of colour, and in particular the so-called ‘Coloureds’, see themselves and engage with each other and the world. This questioning about myself, was sparked by the Stellenbosch paper about coloured women and their low cognitive function.

I decided for a reflective narrative approach in which I write up the story of my life, focusing on my early life and the impact of where I grew up. I wrote mostly at 3 am after this method was suggested to me by my supervisor, when I complained that I had nowhere to write that was quite enough given the ensuing commitments of being a mother of three young boys, a and all the other responsibilities we have as women. Holding all the struggles we have as women of colour, to be able to do it all (mother, career, research, designer). I wrote about how angry for the depiction of coloured women in the Stellenbosch paper; the rage for how and why I ended up in a poor area of Cape Town. I wrote about the political system that kept us there and how it was designed. I presented these at SAVAH 2019 conference, Defsa 2019 and used it for the application to my PhD.
3.5 Analysis of the Autoethnography

The primary goal of this paper is to understand how identity and self-perception changed along my journey in academia. Drawing on auto-ethnography, I investigate my awareness and adaptation to academic culture and social system and my growth in academia (Ellis, 2003). The ongoing struggle of people of colour, in particular women, for a place to breathe, for recognition in academia, continues to be a story that pushes against dominant narratives in a context defined by masculinity and race (Salo, 2007). Research like this offers alternatives that disrupt the current status by offering a women-focused narrative. Additionally, cultural production and approaches to diversity in Design Education for academics has not been fully explored (Akama & Barnes, 2009).

From the critical analysis of my stories various themes emerged, which I will fully unpack in my thesis. For this paper the themes that started to emerge, even as I was writing, is the one I explain here, only the earlier part of the life story. In unpacking my story, one must understand that explaining one’s past is already the current understanding of that past, the meaning of my assumptions and biases. I am not making a broad statement about identity or design education, rather, I hope to provide a glimpse of how the past and present interact in one particular setting and, further, reflect on how my intersectionality and feminist views interact and explore how all this impacts my profession identity.

3.6 Summary of narrative

To facilitate readers understanding of the following section, I provide a short brief: the next section is an extraction from a larger story. This section focuses on the days in my life in which my identity as an artist was “seen” by a gang leader and when my education options were predesigned by apartheid, my race and my gender. Further, it shows how women options would be considered and consulted in a gang culture. This is a tightrope performance as violence and abuse for being too vocal or critical could be punished. Under the finding and discussion section, I explain how these relate to my struggle with my professional identity.

4. My Story

4.1 A woman’s place

Coloured townships such as Bishop Lavis, in the Cape Flats, were created through the racialised legislative processes of the apartheid era. These townships and the processes of racial classification and forced relocation that created them, assigned to the racial category “coloured” a unique political, physical, three-dimensional and socio-economic meaning. While apartheid legislation, such as the Population Registration Act of 1950, defined who “coloureds” were, the Group Areas Act of 1950 required that they were allowed to live on
the city’s edges, away from the central business districts and other well-resourced amenities. Yet, while coloureds were discriminated against the white population, they were also relatively privileged in comparison to those classified Africans (Black) (Diergaardt, 2018). Further, legislation such as the coloured labour preference policy simultaneously, created a hierarchy of deprivation in the Western Cape. In which coloured were given job preference over Africans (Blacks) as well as ensured a ready cheap workforce for the clothing, textile, canning and farming industries of the Western Cape (Salo, 2007).

The three-dimensional meanings that informed colouring were informed by the group’s relocation to Cape Flats, while its gendered meanings were shaped by the specific location and redefinition of adult-coloured women, within the apartheid bureaucracy, through welfare and housing regulations. Within the hierarchy of black deprivation, coloureds were given preferential access to social security grants, such as the child welfare and disability grants, over African (Salo, 2007; Diergaardt, 2018). Further, the public housing in the urban Western Cape was provided to coloured rather than Africans (Blacks). This was designed in order to create a stable racialised working class and secondly, to prevent the creation of a large urban African population in this region. Coloured women become the unwitting beneficiaries of this set of racial legislation and therefore were strategically positioned as power brokers for their communities within the apartheid social structure, making coloured men economical unattractive.

Less coloured men were favoured for work opportunities and therefore could not claim to be the bread winners and protectors of their families, challenging their perception of masculinity. In order to obtain housing, they had to prove that they had dependents, a wife and children. In this regard, having children was a commodity. The factors of unemployment highlighted by Statistics South Africa (1996) were approximately 30% since the long absences from household during imprisonment prevented men from providing for their families through legal means.

The gendering of the racial coloured category occurred in two ways. Firstly, through the bureaucratic assumptions about family formation that informed the state social security programme, and through the specific feminisation of the industrial workforce in the Western Cape urban economy (Diergaardt, 2018). The apartheid state assumed that all families conformed to the westernised heterosexual family norms, where fathers and mothers fulfilled stereotypical gender roles. Consequently, child welfare grants were payable only to women as mothers and public housing was provided only to families with women and children.

Secondly, within the economic sphere, the feminisation of the labour force in the textile industry, together with the impact of the Coloured Labour Preference policy in the Western Cape, resulted in coloured women being the preferred worker. Until the early ’90s, adult women held relatively powerful economic statuses within these townships as the conduits
to scarce economic resources and shelter. In the present day, the cultural status of these women as power brokers still holds in the township. This is despite the fact that their economic power has diminished slightly as many were retrenched from their jobs in the clothing, textile and canning industries. These women embodied and continue to embody the bridge between becoming and unbecoming of coloured women. They are the moral compass and medicate the state, police, gang and education in the township.

Figure 3. A demonstration by coloured woman protesting about education in front of a school. The Dega Ballerina is in the crowd as a participant.

3.2 Freewriting (my journey growing up in this system)

This is a freewriting piece and thus it is used in this paper as it was written with little editing: the translation to English may have diluted the true meaning of the content, but every effort was made to make this part accessible to the international audience.

"Vroumense hort nie hee nie" (Woman don’t belong here).

I was 10, sitting on the sidewalk drawing on an old school book. He walked by, standing over me with his small figure and new shoes. He wore Levis. I could tell by the chappies (tattoos) he stood for the “nommer” (the Numbers Gang in Cape flats). When I looked up, I could not believe my eyes, it was him “die dik ding”, the main man. I could see from the side of my eye that the passers-by and people on the street were interested in the attention I got. He sat down in his hirrke (haunches). He spoke slowly and softly, like he did not want anyone to hear. “jy is mos boeta Gummy se laaitie, (I know your grandfather, Gummy) awe ek hoor die ou op die see (I hear he has been on sea), 6 maande al, (6 months already) en jou ougirl slap mos in” (and your grandmother sleeps in a white family’s house working as a maid). He
made it clear he knew my grandfather and knew that my grandmother was not home and
worked in the white neighbourhood. He knew I was alone, except for my dad and his
brothers.

“jy teken nogal kwaai” (you draw well), he said. “ko druk gou die chap op die muur” (I want
you to draw this gang sign on the wall). A way in which a gang marks their turf. I could not
refuse him in front of everyone in the street. I saw him beat up his own gang members who
steal from the community. His mommy is a supervisor where my aunt used to work. She
runs things from third floor, pink flats. She (his mother) sees all from up there and rules with
an iron fist. Here we have our own justice and reconciliation. I also knew that by doing this I
would be associated with them (gang), which may not have been a bad thing: after all, he
already said it, I am alone out here. I got up and we walked to the wall with him two steps
ahead. Visually it is clear, men are men here.

Htjie, looks over his shoulder and says, “jy is reg groot gemaak” (you were raised correctly).
He indicated a young man, who I will later get to know as Jimmy, who was standing on the
third floor (blocks of flats). I always found it strange that the apartheid government built
those jail-like housing. Jimmy whistled in response to the main man’s request which was
signalled by that finger in the air. We stopped at a wall of one of the flat blocks. Jimmy
arrived with a box that contained paint, brushes and spray paint. I look up and see her
mother up there watching, she is in charge but she makes all men feel important and useful.
I was excited because I had never had coloured pencils, let alone this equipment. The man
took off his shirt, showed me a “chappie” (tattoo) on his chest and told me to ‘druk di’ (draw
that). I started under the watchful eye of all his getuietjies (gangmenbers). While I was
drawing, they played music from cars and played dice (gambling). The ladies were standing
on the stairs watching me, one of them shouted “jy better reg teken of jy kak vandag klein
klein.” (You better draw right or you will be in trouble as young as you are). Everyone was
making jokes, laughing, and smoking. For the most part it was actually a nice concrete picnic
of poverty.

When I was done, the main man walked over and sat next to me. He said “Jy is kwaai. Jy is
gegoorsaam en loyal. Jy is n regte soldaatjie” (Sei arrabbiato. Sei obbediente e leale. Sei un
vero soldato). He stood up and loudly said to the rest of the younger gang members: “Sy
staan vir die nommer” (she is a “nommer”) and the rest of the member retaliated with
protest. They were not happy that the main man would call me a member. The women from
the stairs shouted out, “hee hoor julle nie, die man se mos, sy is protected”. I realised here
that this is a man’s world but the women council is strong in decision making. The younger
members looked over to the older men who had blue baatjies (who had gone to prison and
had served time in jail). They were playing dumanoes (dominoes) at the end of the block.
One of them saai, “vroumense hort nie hee nie” (women are not allowed in a gang officially).
The main man, became more assertive and almost angry. “Ek se mos, sy is onder my
protection. Sy is mine. Niemand vat hee nie. Sy hort nie hee nie ma ek maak dit reg...ek dra
ha kak”. This meant that he vowed for me, and would pay my debits to the gang.
You are clever, he said, it’s a pity you won’t be in school for long. I will talk to my mother, she will make a place for you in the shoes factory. It’s not like this apartheid government would let you learn anything real anyway. It’s even worst cause you are a girl, you are only good for one thing. Too bad though, because you would be a good leader here, I can see it in your eyes, you have no “bang hare” (not scared). I can see you with the drawings, you’re a front-line soldier, but you are not a boy.

His mother came down from the stairs, he walked me to her, and said “he vat ha” (take her). She was a “big laaily aunty” and she sore a lot. I walked into the house, she said “ons is die brain van die besagheid” (we are the brain of the business), let the men play their games we deal with the real money. I looked around the room: it was a regular home just like any other around here. In the corner sat a small figure of a lady, as I came closer. She said, you must learn to take beatings, her face was swollen and bruised. The older women said: but we protect each other even “when you vang on kak” (when wrong). I looked at the small bag of money in a bread plastic bag and she said you will leave the business if you steal.

Figure 4. Pink flats, Bishop Lavis in the ‘90s. A demonstration by coloured woman protesting about education in front of a school. The Dega Ballerina is in the crowd as a participant.
5. Findings and Discussion

My analysis of this narrative allowed an exploration of the following key concepts:

By the ages of 10, I was aware that I was coloured and that because of apartheid my options for school would be low. I knew that I had talent but because I was not a boy my options were perceived limited. I knew that there were paths available that others would prepare. That I needed someone to speak for me, someone who could champion for me. That I needed a man to persuade others about my worst and my belonging. Art/design is only seen when someone of influence says is valuable.

That women have found ways to survive and had formed strategies to live even in gangs, even in townships like these. Understanding how my younger self saw the drawing and what it was used for, helps me to understand why I am so keenly interested in higher education in design, recognising the value of local art and what communities, even gang culture, call art.

These insights gave birth to my PhD strategy in which I investigate how women of colour used strategies to survive and thrive while perusing a post-graduate degree in Design. In the next section I will discuss how I will use respectability politics, creative resistance and research as making, combined with black rage.

5.1 Keywords

Intersectionality

Intersectionality allows people to understand each other by a broad understanding rather than a trait. It also helps to identify common ground, for example: I am a black woman, highly educated, able-bodied. Being black and a woman are two traits oppressed by, while being highly educated and able-bodied are traits I am privileged to have. There are many factors that contribute to difficulties in a person’s life, by focusing only on one area, there can be misunderstandings. Intersectionality helps us understand each other, by understanding that one life intersects with many parts of us (Smith, 2013). It also helps in understanding the differentiated oppression white women and women of colour experience in a broader context. However, in the context of academia, it helps to recognise the different implications it has for different races.

Respectability Politics

While these distinctions were and remain about class, they were and are expressed primarily in behavioural, not economic, terms. Respectability politics is deeply problematic because it emphasizes individual uplift and ignores structural inequalities, which are not changed by
ascending class status (Harris, 2003). Black feminist Brittney Cooper (2018) argues that respectability politics is the heart of an anger management project. Learning to manage one’s rage by daily tampering it down, is a response to the routine assault on one’s dignity.

I hope to see respectability politics, creative resistance and research as a continuum of possibilities for reframing curriculum and pedagogy. Considering the Fallism protest, as mentioned before, I highlight the call for a decolonised education and university, by drawing on Isabirye and Moloi (2017). In line with this, it would be important to consider African feminism from the point of view of a decolonial feminist. Wanelisa Xaba (2017), explains how students responded to structural violence on Black South Africans daily; how education has been used as a tool to suppose colonists’ cultures of oppression. She goes on to say:

“Fanon is useful and remains very important, his work on responding to colonial violence does not extend to the gendered ways in which violence is embodied”.

This gendered ways of how women of colour have had to embody structural violence speaks through the research project if I hope to offer some reframing of curriculum and pedagogy.

Through narratives, I hope to reclaim an emotion often regarded as negative: anger serves as a means of social and personal transformation (Boahene & Rodriguez, 2012), a way to heal from oppression and exploitation. Boahene and Rodriguez used critical race feminist theory as a framework, a storytelling to share experiences in the White academy. I am inspired by this work and agree that anger is a necessary step to achieve critical consciousness. Women of colour have learned to use their anger, as a means to survive everyday racism and also how to cope with it by understanding that this rage partially helps us to survive and thrive and the alterity defines us.

Black feminist auto-ethnography

The primary methodological framework will be that of auto-ethnography. Collins (2009) suggests that Black feminist auto-ethnography (BFA) can serve as a theoretical and methodological means for Black female academics to critically narrate the anger and pain of Black womanhood (Griffin, 2012). Kelly (2016) states that auto-ethnography attempts to identify creative ways for research to amalgamate the personal experiences of the researcher and the participants with the call for decolonised methodologies.

I hope to use these moments when I have remained silent and forced to struggle to find my place, my ethnicity marked as troublesome, inferior, or opposed to, or as a threat to the academia. As I watch as people listen to “them” instead of us "angry black women", the white privilege in practice, I narrate my moments. My voice is given back to me through this auto-ethnography. In this way, auto-ethnography is also a way to oppose otherness thanks to its power to see these moments of ethnic otherness and resist them.

Auto-ethnography is an act of creative resistance.
Feminist Thinking

The research study is developed in a feminist post-colonial theoretical framework that flags the complex intersections of gender with race and class (Mirza, 2009). Through conversation, the study will focus on lived experiences captured in the narratives of the participants, the researcher and the research process. The aim behind this conversation is to uncover the lived experiences of a group of women of Colour (Turner, 2002), designers, academics and post-graduate students. The study will be located within the larger body of literature which explores how masculinity and white supremacy, as conceptual tools with material consequences, operate within the academy.

Feminism was historically dominated by white, northern/western, middle-class women who represent the experiences of “all women” as if they were unitary. This has long been criticized by black, postcolonial, de-colonial and African feminists who demanded a more nuanced engagement with feminist questions. Black feminist authors provided terminologies to put into words what I am feeling. Davis (1983, p.13) reminds us that feminism must be for those at the very bottom of society:

“Revolutionary hope resides precisely among those women who have been abandoned by history and who are now standing up and making their demands heard”.

In the light of the above statement, the book of Bell Hooks, “Teaching to Transgress: Education as the Practice of Freedom”, can be linked to my theoretical framework and considerations of feminist thinking, as well as my research question, my problem, my aims and objectives.

Hooks (1994), highlights that “the classroom remains the most radical space of possibility in the academy”. It is her book that is ethically oriented and can be used to augment the significance of my proposed study, and its critical potential to unearth how we, academic women of Colour, are navigating a classroom that was never built for us, and it was not designed to consider our approaches, technologies and radical minds. In the same way the Design post-graduate classroom was not designed for us to thrive. Therefore, the significance of the women of Colour in design is immense because it holds the promise of unearthing the specific pedagogy of women of Colour.

Feminist scholarship allows to make visible the power dynamics of class, gender and race. It allows revolutionary ways to challenge the way mainstream research has reproduced and valued male domination and gender inequality, as well as all forms of other inequalities. For example, research in SA during apartheid reproduced and rationalised racism that holds apartheid ideology in place (Adhikari, 2005). This approach allows to challenge the violence of representation, objectification and “othering” of research participants through power relations, also merged with other forms of inequality (Reddy, et al., 2016; Khunou, et al., 2019).
The conceptual theories that will be drawn upon are intersectionality (a key concept that emerged from black feminist theory) respectability politics, theories of affect, the politics of emotions and in particular black anger as a strategy for women of colour (Nash, 2019).

6. Conclusion

This paper is clearly not a grand statement for the victory of social justice or the correction of how post-graduate studies can be improved for academia in design higher education. It simply offers a comment on the silence about the fact that the past is present in our living today. Not to mention how politics impacts on identity do not make it invisible. The effects of the past, in my present fight for justice and for women of colour to survive and thrive in design, in higher education, in my classroom, staff-room, workshops and personal studies, live with me.

I believe that using narratives as a means to excavating my past has offered valuable insights for social change and for my role as a researcher in an academic space. This work has been emotional, as well as provoking reflection on the many layers of my identity and the labour involved in hiding who I am. I look forward to the journey of (un)becoming as I discover and develop my professional identity. At the same time narratives allowed me to reflect on the relationships needed in perusing post-graduate studying and (un)becoming.

The process of narrating offered me opportunities to consider my life against the backdrop of social forces and change. The strategies that I have employed since childhood to survive ganglands and navigate education.

Finally, I am aware of the critics about auto-ethnography and narrative research methods. As for this paper’s contribution to the Design higher education community, my stories may not respond directly with recommendations, but rather comments that higher education in South Africa is focused on access and an understanding for who is in the classroom. I ask the same consideration for academics who trained and lived in the silence of the apartheid system designed to provide limited access and ill-equipped education opportunities. That they too be given the opportunity to show up as part of the “All” of who we are.

References

Greenroots 1985.


About the Author:

Cheri Hugo. Cheri Hugo was born in Bishop Lavis, Cape Town, South Africa in 1980. She received the National Diploma from the Cape Peninsula University of Technology (CPUT), Cape Town, in 2002, and HEDHET 2010 and M. Tech 2016 also from CPUT. In 2010, she joined the Department of Graphic Design, CPUT, as a Junior Lecturer. After being appointed as a Design Teacher/lecture at Belhar High School, Northlink College, Damelin, Rosebank College and Allenby College. These ranged during 2006 to 2009. Thus she has an understanding of a design student from high school through college both public and private and higher education.

During the 2002 to 2006, she was employed at Naspers where she was a graphic designer, photo editor and publication layout artist. Her knowledge about graphic design and technical skills on various graphic design computer software was a good combination. It was here that she discovered the love for learning and believed in lifelong learning, particularly in this Industry.

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The Ethics of Knowing a Shared Language and Intention in Design

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Abstract | The ability to identify and discuss designs that have supported the overgeneralization of historically marginalized communities is imperative to guide a social shift in the design community. This paper will outline the value of a shared ability to identify racialized design, the ethics of knowing a shared intention, and the understanding of a shared language when discussing racialized design. The use of a shared language provides collaborative partners with the opportunity to narrow down the elements of racism evident in various forms of racialized design. The opportunity to reimagine racialized artifacts, systems, or experiences and change patterns of thinking that perpetuates the continuum of oppression. The Racism Untaught framework helps identify racialized design and critically evaluate anti-racist design approaches.

KEYWORDS | RACISM, RACIALIZED DESIGN, DESIGN RESEARCH, ETHICS, SHARED LANGUAGE
1. Introduction

The ability to identify and discuss designs that have supported the overgeneralization of historically marginalized communities is imperative to guide a social shift in the design community (Fricker, 2007). This thread of research originates from over thirty workshops run by Racism Untaught as it iteratively developed tools and design interventions focused on critical analysis and reimagining of racialized forms of design. Racism Untaught was initially created to fill an identified gap, an opportunity for educators to foster conversations and learning environments, focused on critical thinking and diverse forms of making, for historically marginalized and oppressed communities. This paper will outline the value of a shared ability to identify racialized design, understand a shared language, and the ethics of knowing a “shared intention” when discussing racialized design.

First, we will outline the framework’s development to understand the organization of the workshops run by Racism Untaught. Then, we will describe how the cards that outline elements of racism, created a shared understanding for racialized designs and how this shared language became an essential thread of research. We will describe how participants in our workshops saw this language as a way to speak to their own social experiences with racialized design and convey knowledge and validation of those experiences. Through this research and the execution of courses and workshops, we recognize a need to acknowledge the ethics of knowing a shared language in the practice of design. The value of a shared ability to identify and discuss racialized design enables participants to responsibly contribute to design and acknowledge their agency to influence rhetoric in the public domain.

2. A Shared Ability to Identify Racialized Design

The value of a shared ability to identify racialized design in the design process helps to challenge and analyze everyday artifacts, systems, and experiences. To ensure that designers contribute to design responsibly, they must understand their ability to influence rhetoric in the public domain, not only from a visual perspective but also from a systemic perspective (Mercer & Moses, 2019). Racism Untaught is a research study focused on developing tools to facilitate discussions on racialized design—design that perpetuates elements of racism.

Racism Untaught was created in response to multiple design educators asking developers how to incorporate social design and discussions of race, culture, and identity into the classroom. The first version of the framework was developed in the Spring of 2018 over a series of brainstorming sessions and concept mapping. We refined the framework iteratively over a series of workshops and courses to ensure that each tool in the framework was improved. The framework begins by giving participants an identifier—an artifact, a system, or an experience—at the beginning of the design challenge. These three identifiers include comprehensive examples of racialized design, of which designers have the power and privilege to positively affect design in our society. It is imperative to incorporate these lessons into a diverse and inclusive pedagogy, to ensure that we design curricula that
understand the implications of design within our culture and communities. The decision was made to show both a historical and contemporary directive of artifacts, systems, and experiences focused on different forms of racialized design. This decision was made to ensure that participants in a workshop, or a Racism Untaught course, saw the development of racialized design as a contemporary and current issue. The developers also curated a collection of the three categories as a resource for design educators to use if they teach this framework in their courses.

Through the use of the framework participants will apply the design research process to identify racialized design and critically assess anti-racist design approaches. The first step in the process is called context; this step has over sixty cards that include definitions and terms focused on elements of racism. We have recently added cards focused on elements of sexism, and we are currently working on adding other elements of oppression. We ask participants to use the terms in this deck to create context around the identifier they have been given and discuss how forms of oppression are perpetuated and supported in the world around us. We ask participants to say why each element of oppression is relevant to the identifier and which elements are not. The first step also includes a diagram outlining the Levels of Oppression. This allows further contextualization of the instance of oppression on four different levels: 1) beliefs—personal beliefs, ideas, and feelings that perpetuate oppression, 2) agentic action—when oppressive beliefs translate into oppressive behaviour, 3) institutional—structural oppression that results from agentic oppressive behaviour, and 4) cultural—norms, values, beliefs, and trusted systems of truth acquiring that preserve, protect, and maintain oppression (for example, white supremacy). This, further, contextualizes the participants’ instances of oppression, prompting them to consider where the problem was created and how each level perpetuated it. This step prompted the research thread in this paper and will be further explored in the remaining sections of the paper.

The next step is called define. This step has roughly fifty cards, including qualitative and quantitative methods and theories to define how the participant might approach the design challenge. In this step, participants are also required to create a thesis question to help focus their design challenge. We provide participants with this guiding question, “How might design be used to [action] in order to [create change] with [stakeholders]?” Participants garner factors from their research in order to move forward to the next step, ideation.

The ideation step includes over one hundred cards. During this step, participants begin to determine what they will create— an artifact(s), a system(s), and/or an experience(s)—and which will help dismantle the form of racialized design. They are prompted to determine how they can affect change and how they can be a part of the solution. This step includes a quadrant map to help evaluate the value of each idea. On the X-Axis, participants are instructed to consider the intent of the idea in comparison to the impact and on the Y-Axis, participants consider how far the idea might shift stakeholders from systemically oppressive thought(s) to anti-oppressive action(s). Participants plot their strongest ideas and discuss
whether their idea only has good intentions or if it will have an impact and focus on anti-oppressive actions against oppressive thought.

The fourth step, called prototype, has approximately thirty cards. This walks the participants through a low-, mid-, and high-fidelity prototyping process. The low-fidelity prototype is non-functioning and is initially presented to communicate an idea. A mid-fidelity prototype is limited in functionality, and a high-fidelity prototype requires minimal modifications for the final deliverable. We find that oftentimes in this step, participants will move back and forth through the framework to further contextualize or use methods to help them understand how the idea they are creating impacts communities.

The fifth step is called impact; this step helps participants understand the impact they are having with the work they produced. There are two approaches to this step. The first approach is the rubric for grading academic work. In a course setting, participants will define a rubric that demonstrates both a mastery of the determined deliverable and the ability to incorporate methods and processes at an advanced level of understanding. The second approach is through the use of the impact card deck, approximately twenty cards. The cards are most likely to be used by people in industry but oftentimes used by people in academia in addition to the rubric. The individuals in an organization will use the card deck to measure their design impact on the implementation of their ideas.

3. Understanding of a Shared Vocabulary

The Racism Untaught workshop has been conducted in over forty separate events. At first, our intention of running it numerous times was to iteratively improve the tools we had developed. We intentionally ran the first workshop at a conference with like-minded designers and researchers, people who conduct research to critically analyze and re-imagine systems of oppression or as a form of activism (Warner, 2013). We did this to make sure all the words in the framework, specifically in the first step, were as comprehensive as possible. We included five blank cards in each deck for each step of the process so that participants could write a word and definitions they thought were missing. We began to run the workshop at conferences that had a more contemporary view of design and with a broader set of topics. This helped us refine the words and definitions they thought were missing. We continued to add words and create and apply our own definitions based on these conversations. The following ten words are from the Context step in the framework:

- Aversive Racism: a form of implicit bias in which a person persistently avoids interaction with other racial and ethnic groups.
- Blockbusting: convincing white property owners to sell their houses at low prices by promoting the fear that racial minorities will be moving into the neighbourhood.
• Cultural Erasure: forcing non-Western cultural groups to adopt Western culture, including attire, the English language, Christianity, and Western birth names.
• Exoticism: objectifying, othering, sexualizing, and/or dehumanizing Women and Femmes of Color who do not align or fit within Euro-centric beauty standards; also known as racialized sexism.
• Implicit Bias: the unconscious attribution of particular qualities to a member of a certain social or cultural group.
• Intent Over Impact: prioritizing well-intended actions over the negative impact they might have had on a Black, Indigenous, or a person of color (BIPOC).
• Microinvalidations: a comment or action that subtly and often unconsciously or unintentionally, excludes or negates the experiences, feelings, and experiential reality of a Black, Indigenous, or a person of color (BIPOC) (for example, “you have good hair, so you are not really Black”).
• Nativism: policies or systems favouring native inhabitants as opposed to immigrants.
• Redlining: the racially influenced and systematic denial of various residential services, including access to specific neighbourhoods through selectively raising prices.
• Xenophobia: an intense or irrational dislike or fear of people from other countries.

Once a workshop is complete, there are usually few participants who ask or take for a copy of the first deck of cards. This applies to both white people and BIPOC, but for different reasons. BIPOC could say, “I have experienced this at work (or at fill-in-the-blank), and I want to know how to respond when it happens again.” They felt empowered by these cards, and one even said, “I could keep these cards in my desk, and when I am experiencing a form of racism, I will be able to refer to these words and pull out the card and say, this is what I am experiencing.” We also noticed that white people wanted these cards in order to learn about racism and dismantling racialized design. They were seeking a shared language to speak more accurately on their own social experiences with racialized design.

When the term sexual harassment was determined as one way to describe the intimidation and exploitation women were experiencing (Brownmiller, 2000), it provided a word for a shared experience that didn’t exist. This shared knowledge and way of speaking created a collective understanding for a group of people. The ability to match an experience with a term provides an individual with the ability to understand the mistreatment and then take measures to prevent that experience from happening again. A shared language provides a group of people with the ability to discuss injustice more accurately. It creates a boundary for the harasser to no longer have more power (Fricker, 2007). This is also described as hermeneutical marginalization, “the injustice of having some significant area of one’s social experience obscured from collective understanding owing to persistent and wide-ranging hermeneutical marginalization” (Fricker, 2007, p. 154).
In order to create a space for conversations, where these words were being discussed we asked participants to determine and then apply community agreements. An example of community agreements includes:

- It is important to listen actively and compassionately and try to understand others before being understood.
- Every voice is important, and more perspectives will strengthen the conversation.
- Speak from your own lived experience by using “I” statements and refrain from telling other people’s stories.
- Invest in yourself and invest in each other by respecting our shared space and keep time in mind.

The community agreements and the definition of racialized design provide a courageous space for participants of different social identities to discuss the difficult topic of racism.

We have begun to run workshops only using the cards focused on elements of oppression. These workshops allow a more focused dialogue and, further, provide more discussions on social experiences. We have participants who arrive ready and eager to work with us, and we also have participants who are ready to challenge our ideas. We welcome both and work to guide the conversation in a shared space. We have had participants who challenge the examples of racialized design we provide and some of the definitions we use. We were happy to have this dialogue and support participants to join the conversation to work together in order to create a shared understanding. It is rewarding to see people be empowered by the knowledge of shared language and to see how this helps shape the conversation around racism in a direct manner. In the United States, students are not typically required to take foundational courses on racism. We hope that the Racism Untaught framework can be utilized in any course, not just those focused on critical analysis of different forms of oppression.

4. The Ethics of Knowing a Shared Intention

The use of a shared language provides collaborative partners the opportunity to narrow down multiple elements of racialized design and reimagine new solutions and changes in patterns, while working together to deter the continuum of this overgeneralization. This change in design takes time but will provide a strong foundation for a developing work that is able to recognize both visible and invisible forms of racialized design. In order for change to take place, “[…] the constants—media, language, repertoire, appreciative systems, overarching theory, and role frame— are also subject to change. They tend to change over periods of time, longer than a single episode of practice, although particular events may trigger their change” (Schon, 1983, p. 275).
This change also requires designers to be aware and have more knowledge of racialized design. The ethics of knowing the “shared intention” of an object depends on the social cognition connected to an artifact, system, or experience (Fiebich, 2014). This social cognition does not depend solely on an individual’s understanding but on the “shared intention of social group members who constitute a particular institution” (Fiebich, 2014, p. 3). The proposition of an idea can be believed or denied based on our unobserved matters of fact (Fricker, 2007). How do designers conclude that a design is continuing the overgeneralization of a historically oppressed community? The tools developed by Racism Untaught provide a more informed conversation when working with multiple disciplines, allowing partners to outline and identify elements of racism. It provides the design community with a set of terms that seek to understand the social experiences of those who experience racialized design firsthand and those who need to convey knowledge and validation of those experiences (Mercer & Moses, 2019).

A designer makes things. Sometimes he [she, they] makes the final product; more often, he [she, they] makes a representation of — a plan, program, or image — often an artifact to be constructed by others. He [she, they] works in particular situations, uses particular materials, and employs a distinctive medium and language. Typically, his [her, their] making is complex. There are more variables than can be represented in a finite model. Because of this complexity, the designer’s moves tend, happily or unhappily, to produce consequences other than those intended. When this happens, the designer may take account of the unintended changes he [she, they] has made in the situation by forming new appreciation and understanding and by making new moves. He [she, they] shapes the situation in accordance with his [she, they] initial appreciation of it. The situation is reflective (Schon, 1983, p. 79).

It is imperative for designers to learn a process they are able to incorporate into their work that results in responsible design.

5. Conclusion and Next Steps

As a society, we continue to create racialized design while arguing the need to be “untaught” racism. This contradiction leaves us blaming others for racist incidents while leaving ourselves out of the social justice movements. The fear to engage leads us to do nothing, which sets us up to actively perpetuate systems of oppression. It is our hope that Racism Untaught can help undo the disconnect and positively impact our communities to develop new and inclusive design at any level. This effort is necessary to redesign how individuals engage with and create artifacts, systems, and experiences to break down systemic racism. We have begun adding cards focused on sexism and ableism to work toward an intersectional conversation on oppression. The ultimate goal is to extend the framework to include homophobia, transphobia, cissexism, gender binary, ageism, and other forms of oppression.
Next steps in this work are to continue to run workshops, both in academia and industry. We will continue to run workshops on the first step and the entire process at conferences in order to continue learning, and invite other educators to teach from this framework. This work is focused on cultivating learning environments for people in industry and academia to explore further issues of race and racism, from the obvious to the invisible. We will continue to research and develop tools that participants can use to identify racialized design and critically assess anti-racist design concepts while developing space for a dialogue on racism and racialized design. These conversations require a safe and courageous space to allow participants to speak about their social experiences with racialized design or convey knowledge and validation of those experiences. These types of conversations are imperative to guide the social shift in participatory design (Fricker, 2007).

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The Neighbourhood Home. System of environments for plural inclusion

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Abstract | Migrations have always changed the way humans live: nowadays a multiplicity of people with different background, gender and lifestyle converge in big cities and they are often perceived as a threat to pre-existing culture and native cultures. But what does ‘home’ mean? For most it is the neighbourhood, that involves people’s everyday life. This paper presents a visionary project called ‘Neighbourhood Home’, a system of new environments for future inclusive cities, that aims to make all the inhabitants ‘feel at home’. In this Homes, through music, or language, handicraft, clothing etc., people can rediscover their common roots, that have always been, today as yesterday, interconnected through plural cultural expressions. In the first concept of Home designed, ‘MeetEat’, an ingredient is chosen on seasonal base to make voluntary and informal cooking classes in the neighbourhood. The ‘Neighbourhood Home’ system could turn diffidence into curiosity for what is in common and exclusion into sharing awareness and wisdom to face the challenges of the present and the near future.

KEYWORDS | MIGRATION, ROOTS, INCLUSION, SHARING, CULTURAL HERITAGE
1. Introduction: city as a home

Cities have always been the main character of human history. According to the World Urbanization Prospect 2018, globally the majority of people live today in urban areas: from 751 million city residents in 1950 to 4.2 billion in 2018, and is expected to increase to 8.6 billion in 2030 and 9.8 billion in 2050, more than double compared to today (UN Department of Public Information, 2018).

Cities have also been the place where changes occur quickly and continuously. Throughout history we have seen changes so profound and at such a rapid pace, that it is often difficult to recognize the beginning and the end of their transformations, as well as to find our way through the once familiar places. In our age, characterized by strong mobility, these changes are often perceived with anxiety and concern (Bauman, 2018). The city represents, on a reduced scale, everything that is on our planet; is a place where all the diversities must coexist. The rich and the poor and all the ethnic, cultural, origin and status differences: as in the world, in the big city everything is mixed (Augé, 2017).

When we think of “people”, “population”, we think of a group of individuals belonging to a specific territory and with common roots, traditions and culture. With today’s social changes and migrations, however, just as the borders of cities expand and become blurred, in the same way people move, leave their territories, become contaminated and seem to lose their roots.

“Nomads traditionally studied by ethnologists have a sense of place and territory, a sense of time and return. This nomadism is therefore different from what is metaphorically called such when speaking of current mobility. […] It corresponds to the paradox of a world in which, in theory, anything can be done without moving and in which nevertheless one moves” (Augé, 2010, p.9).

Today’s society can be seen as a large laboratory in which new social forms, solutions and meanings are produced and social innovation is created (Manzini & Jégou, 2003). From designing products for the survival of those who have nothing, to research platform for the constitution of new realities: this is what the movement of social design do, not for charity or good works, but to participate in rebuilding the world “seen by those who live in it” (Manzini & Jégou, 2003, p.13). The term "social design" is globally used for different disciplines: some are related to the design of products and services for humans, others refer to a kind of design that goes beyond the artifact and aims to develop new realities for the individual. Social design is the design of a process that contributes to improving human well-being and livelihoods (Holm, 2006). In recent years, designers are co-designing with users to create responsible projects that fit people’s actual needs and values, rather than commercial. Social design is also considered as a discipline that “conceives and develops solution ideas that take into account the quality of the interactions involved” (Manzini & Coad, 2015, p.59).
2. Theoretical framework: why foreigners are drivers of change and an opportunity for local communities

Although it has always been part of the world’s history, the migratory phenomenon has intensified so much in recent decades that it has been considered by many one of the greatest characteristics of our time. According to UN estimates, in the decade 2007-2017 the number of people who fled war conditions in developing countries reached 68.5 million (UNHCR, 2018), but there are also many people in the world who left their country due to famines, desertification and climate change.

From the XXVII Immigration Report we learn that in 2017 Italy hosts 5.144.440 immigrants - speaking only of the regularly resident - or 8.5% of the total resident population, and ranks fifth in Europe – and eleventh worldwide – in the list of countries that host the largest number of international migrants. Most of them live in major urban centers (Caritas & Fondazione Migrantes, 2018).

Those who leave their home to move to another territory, however, are “strangers” for those inhabitants, and often raise suspicion. “Strangers tend to give anxiety precisely because they are “strange” and therefore frightening in their unpredictability” (Bauman & Cupellaro, 2016, p.8). Locals, the native ones, are often hostile towards those they do not know: the fear of the foreigner often derives from an insufficient knowledge of cultures and customs from different territories. Often foreign gestures are re-interpreted or even misunderstood by the locals, because they are strongly influenced by not knowing how to proceed, or how to behave in a situation they have not created or are able to control (Bauman & Cupellaro, 2016).

In fact, the 2018 report of the European Commission shows that half of Europeans (46%) are not very well informed about immigration and integration and, in general, tend to overestimate the number of immigrants in their country. Four out of ten Europeans believe that immigration is more a problem than an opportunity for their nation, and this opinion is even more negative in Italy, one of the countries that demonstrate major hostility towards immigrants. Moreover, most Italians do not believe that integration is taking place successfully (European Commission, 2018).

In the report “A fragmented Italy”, a general feeling of self-loss emerges from Italians because of these social changes. Half of the Italian population reports that they have sometimes felt foreign in their own country. In fact, 59% of citizens fear that the national and the traditional cultural identity are disappearing and 53% describe their country as weak, angry and divided. Almost 60% of public opinion expresses concern about the migration phenomenon and believes it has a negative impact on the country. Only a minority (16%) thinks otherwise (More in Common & The Social Change Initiative, 2018).

“The negative sentiment towards immigration is exacerbated by fears for security and by the perception that Italy has lost control of its borders, as well as by the
inability of the authorities to effectively manage the migration phenomenon” (More in Common & The Social Change Initiative, 2018, p.9).

But is often forgotten that this feeling of loss is not only experienced by hosts, but, above all, by guests, who have consciously left their own territory and culture, and also their home, affections and memories. The new place they live in is foreign to them and their condition is often loneliness. Furthermore, the famous “integration” activity often does not involve an exchange, a mutual consolidation and a common organization. Rather, what is meant is a pact of tolerance if the foreigner proves to be able to put aside his roots, his differences and uniqueness, his traditions and his knowledge to embrace those of the new territory; only by denying what makes him ‘different’ there will be a dialog. However:

“the history of humanity is dotted with mergers of different groups [...] it is a story of languages, religions, knowledge that have met and continue to meet, merging with each other” (Giusti, 2007).

The migration is a complex and controversial topic today and this research paper tries to answer the following questions: how can we use design to create a stronger connection and make the lifestyle of foreigners in the city more similar to the right idea of “inclusion”? How can we deal with the integration of foreigners in multicultural neighbourhoods? What kind of drivers of change can be foreigners and temporary residents who live and interact with an urban community? How can they become an opportunity for the entire neighbourhood community? Can we design tools, new places where the foreigner can feel more “at home” while interacting with cultures other than their own? When we try to give substance to sustainability, we try to reinvent the everyday by enormously increasing the most elementary functions of everyday experience. We often ask ourselves questions that are not easy to answer. How could community life be more sustainable? And what does this mean? (Manzini & Jégou, 2003).

This paper presents a M.A. thesis project (2018-2019) whose study arises from a reflection on whether a different approach is possible, one that considers the migrant as a person with specific needs and could become supportive to municipal policies. Also, it could help managing the complexity of the problem in the neighbourhoods of Rome, like in other cities. The social design comes to the aid, a discipline created to handle the complexity that the current society daily creates, and that can really direct it towards a sustainable evolution.

Working in synergy with some reception centers and communities in the territory of Rome, through focus groups, co-planning activities and specific meetings that involved migrants, some concepts have been defined to mediate between the local and the migrant culture.
3. Methodology: From ethnographic research to envisioning new human scenarios

For a human-centered approach an ethnographic research was conducted to base the project on people's real feelings and desires. The investigation was carried out in contact with the inhabitants of the great city of Rome in two places rich in diversity and multiculturalism. The first place was the Esquiline Market in Vittorio Emanuele, a space rich in ingredients and people from all over the world. This is a famous place of commercial aggregation for the whole city, both for Italians and, above all, for foreigners, whom are here able to find the ingredients for their typical dishes.

“I miss my mother, my family, my sister. But we keep in touch, I see them online, and slowly I don’t miss anything here in Italy”\(^1\).

“At the inauguration of this market we had a great party. It was called ‘Taste the world’. Everyone brought something and every day there was a different cuisine, together with dancing, music, etc. It was the union of the world on the table, a union that brings happiness, love and peace”\(^1\).

For the second stage was chosen the peripheral district of Centocelle, one of the places in Rome where local and foreigners live in equilibrium and the serene climate allows conversation and exchange:

“What do you miss of your land?” - “Ingredients, the dishes that my mother cooked in my family”. “Tell me about a good time of yours in a market in this city” - “Once I was telling how meat is cooked in my culture and a person looked at me in amazement. He said that his family also cooks like this. It was beautiful, it made me think that the world is small”\(^2\).

To extend the field of research and allow people to speak more freely and anonymously, the survey “What is ‘Home’ to you?” was launched on Facebook. Eighty responses were collected from this survey, then analysed and clustered in a Word Cloud map, with the aim of tracing the most frequent feelings of people about ‘Home’. The majority perceive ‘Home’ as the place where affection and warmth can be found, where they are welcomed and appreciated and in which they have so many memories. “Feeling at home” is about a sense of belonging in everyday life, a dimension in which to feel like family, a place that is well known. At home people relax because they feel protected and because they can express themselves spontaneously and be authentic, a reassuring refuge. In home there are relationships and sociability, the possibility of aggregation and the “being together” which forms a community. But the most interesting aspect that emerged from the survey was the role of the neighbourhood, smaller and more welcoming than the vastness of the city and therefore perceived by many as a Home. The neighbourhood is a set of places, streets,

\(^1\) Sellers at the Esquiline Market interviewed in person. 09 April 2019
\(^2\) Moroccan mother living in Centocelle, interviewed in person. 13 Aprile 2019
activities and people who frequent it, with whom memories are built and represents an important part of daily life.

Figure 1. Word Cloud map of the clustered answers to the survey “What is Home to you?”.

4. Concept: the Neighbourhood Home

4.1 The system in a glance

Thanks to interviews and surveys, the neighbourhood was identified as the context of the project, smaller than the overall city and a place where insecurity can be lighted up by a progressive familiarity of places and people, daily met. The project focuses on the theme of “inclusion”, not only of others but also of themselves in a constantly changing territory. The aim is to promote co-creation behaviours in the neighbourhood and the transmission of knowledge from different cultures within the community, a great potential for building a neighbourhood cultural heritage, that is part of everyone.

From these insights the system concept ‘The Neighbourhood Home’ was born, a collective and flexible space, open to socialization and receptive to the needs of individuals as well as the proposals for improvement of the neighbourhood. In this place the inhabitants of the neighbourhood can do networking, get to know each other more deeply, promote local activities and create together new shared values that can reflect everyone. As many Neighbourhood Homes as the number of neighbourhoods in the city can be created, forming a system of structures that act as a network of welcome, assistance and creativity.
Each Neighbourhood Home has two fundamental objectives: in the first phase the goal is to improve the inclusion of the inhabitants of the neighbourhood, old and new together, with the aim of creating a new common belonging. This goal can be achieved through a mediator, common to all the peoples of the world: culture. In all its forms, from culinary to literary, artisan, musical, etc. culture can be a link between people throughout the world. There will be a Home of Music, a Home of Costumes, a Home of Language and many others.

Based on the specific cultural focus to which each Neighbourhood Home is dedicated, there will be open activities organized within a minimal pre-established plan. The contents of the activities will not be fixed but variable, as they are spontaneously proposed by the inhabitants of the neighbourhood, to guarantee flexibility and allow everyone’s creativity to emerge and shine.

Each Neighbourhood Home will therefore provide spaces and tools for carrying out self-managed and open activities, which will help exchanges and sharing of culture and knowledge.

Consequently to the creation of inclusion among the inhabitants, the second objective of the Neighbourhood Home system is to enhance and develop the neighbourhood itself, the city and the territory. The project aims to create a network of empathy and solidarity first between citizens and then between them and the territory in which they live, stimulate them to advance proposals and ideas for the improvement of their neighbourhood. In a space perceived as their own “Home”, it is easier for the inhabitants to talk about the problems and identify practical solutions together, organize petitions and volunteer events for their community. In this way it can gradually create a neighbourhood cultural heritage, shared by its inhabitants and more open to new transformations.

The buildings are imagined as newly built pavilions, each with a specific shape based on the cultural focus and located in land that needs redevelopment within the urban context. The construction and management of the pavilions can be taken over both by public authorities, such as the Municipality, the Region, etc. and private individuals, such as local, national or international companies sensitive to social issues.
4.2 Food-related concept. The Neighbourhood Food: MeetEat

The first Neighbourhood Home designed and pilot project is ‘MeetEat’, from the union of the words “Meet” and “Eat”, since socialization in this neighbourhood cultural center is promoted through food.

In fact, nourishment is one of the vehicles of peoples’ traditions and lifestyle through the preparation and sharing of dishes: to get to know a different culture, eating different food is considered by many to be easier than learning a different language (Montanari, 2011; Montanari, et al., 2015). The sharing of food takes on particular meanings both for the individual and for society, since it is enriched with a symbolic and relational meaning that goes beyond its nutritional value: “Sharing the same food is at the origin of all rituals” (Barilla Center for Food and Nutrition Foundation, 2019, p.16). Sharing a meal represents an ancient and always effective means of meeting people, a bridge between cultures that allows to grasp the differences first, but then, above all, the things that are in common.

As highlighted in the essay “The fabulous story of vegetables”, ingredients in history have always travelled across lands and continents following people (Bloch-Dano & Prencipe, 2017), which is why todays typical ingredients of a culinary tradition are often actually originating on the other side of the planet.

From these reflections, it was imagined the MeetEat core activity: people can participate in cooking classes focused around an ingredient chosen by the Home on seasonal base. These cooking classes are spontaneously proposed by anyone in the neighbourhood to make the inhabitants know a piece of themselves and their culture. This activity will allow people not only to gain confidence to each other in a relaxed context, but also to understand how the ingredients connect each other in the world.
The ‘MeetEat’ pavilion from above.

The ‘MeetEat’ structure is entirely designed around the themes of integration, nourishment and sustainability. The path inside the ‘MeetEat’ Neighbourhood Home begins in the Entrance area with a reception available to the passers-by curiosity and information. An entire wall is dedicated to interactive digital frames in which the user can discover future initiatives and look at photos of past activities: these have become memories shared in the neighbourhood. It can also have information on the network and the activities of the other Neighbourhood Homes in the city, that are in constant communication with each other. Registration for the initiatives can take place on the online platform, on the interactive screens or at the desk set up for support. Dialogue, meeting and waiting take place on modular and freely aggregable seats in the center of the room.
The Kitchen area is the thematic focus of the structure, because the main activity of this Neighbourhood Home takes place in this space: the informal cooking class. The inhabitants of the neighbourhood can turn in volunteer as teachers of a dish of their own culinary tradition. During the cooking class they will be able to tell stories, the origin, tricks and gestures necessary for the skilful preparation. Monthly, the Home will publish an ingredient themed calendar and people can set the corresponding cooking classes. Ingredients will highlight how many cultures have common roots, and people can discover new culinary knowledge, techniques and gestures. All those who want to participate and learn new recipes will be able to register freely, bring the ingredients with them and use the spaces and tools provided by the structure.
The Neighbourhood Home. System of environments for plural inclusion

Tools and furnishings organization within the Kitchen area is innovative and does not reflect any specific tradition: the Neighbourhood Home needs to abstract itself from specific culinary cultures and identify a common core for all food preparation, in order to embrace the largest number of techniques and ensure flexibility. This original and “neutral” interior concept aims to bring out new behaviours and values that favour community and participation, rather than choosing a typical layout of one culture at the expense of others. For this scope, the general process of preparing a dish was analysed: it starts from the pantry to find the ingredients, goes through the preparation (cutting, cleaning, kneading, washing, etc.); cooking - if present - (boiling, frying, smoking, grilling, steaming, cooking in the oven, etc.); ending with the dishing and the washing activities. For each of these steps, the necessary tools and functional components were designed.

In order to satisfy a multiculturality, a new aggregative rationale was identified: taking inspiration from the Lévi-Strauss culinary triangle, it was chosen to cluster activities and functions according to the four natural elements, because each one is essential in all the culinary traditions and is able to evoke the ancestral rites of the culinary space.

There is a “Water” section in which there are the activities of “filling” (containers, pantries, shelves, refrigerators) and washing. The “Earth” area is dedicated to handwork such as “kneading”, “cutting”, “forming” etc. and corresponds to worktops equipped with sinks, drawers for instruments and waste bins. At the center of the room, six functional blocks are designed for fire-related activities, each of them provided with a different type of cooking: stove, oven, wood-burning oven, grill, plate and deep fryer. These six pillars represent -at mythical level- the fireplace of the tribe, around which stories, culture, myths and rites are transmitted. The “Air” section is merged with the previously “Fire” area for what concerns smoking and steam cooking, and the absorption of vapours is guaranteed by ventilation hoods placed on the kitchen blocks.
Finally, the consolidation of the experience within the MeetEat structure takes place in the glazed and openable Dining Hall, that allows to extend activities outside. Thanks to the presence of tables that can be combined in multiple ways and allow compositional flexibility, it is possible to achieve two objectives: the consumption of the dishes in a social eating, which generates sociability and strengthens the confidence among the guests; and the possibility of holding neighbourhood meetings to discuss problems, find solutions and organize events of collective social commitment. In this way can be created a community as a network, responsible for its own Home and neighbourhood, eager to take care of it and respect it with a new trust and a renewed sense of belonging.

Figure 6. Semantic and functional organization of the Kitchen area
5. Conclusions

Today we still live on a Planet where there are several paradoxes. But those that characterize food sustainability (malnutrition, unsustainable production systems and the fight against food waste, just to name a few) have required in recent years to concretely rethink our objectives, to find immediate and long-term impact solutions. Studying new scenarios in the field of cultural and food sustainability is fundamental. Design as a participatory and co-creation method in food experience design can help to glimpse opportunities where today we only see criticalities and problems (Massari, 2017).

There are many existing design projects to increase the interaction of migrants and foreigners in the social supply chain of food and solidarity, such as the tools for integrating the activities of associations operating in the management of foodstuffs. Instead, there are fewer projects for the dissemination of sharing culture, tools and systems for inclusive integration within cities. The roots of all people have always been interconnected with each other by exchanges and migrations in trade and history. Culture is the human dimension par excellence and takes on the appearance of innumerable forms of transmissible and shareable rituals, which enclose the soul, the very essence of peoples and their values. Understanding rituals through different cultural expressions allows understanding the cultural traditions, values and “myths” of people around the world and helps generate inclusion with each other. Transmitting and sharing culture generates not only a more inclusive society in each neighbourhood, but also a possible neighbourhood cultural
heritage, composed of shared rites and myths, that can be transmitted and can become part of people in their daily lives. No longer an "I" and "them", but an "us".

The Neighbourhood Home system aims to trace the similarities between people, the roots in common; at the same time, it helps to develop curiosity and interest in distinctive cultural traits, to teach how precious diversity is and how much growth and wisdom it can offer. The project can lead to the creation of more inclusive cities and nations: today this goal would be not only desirable but also fundamental, because plurality and diversity are beneficial for all when they become connections and exchanges.

References


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Universal Visual Languages in a Male-oriented Society

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Abstract | Communication Design today plays a role of social and cultural responsibility. It represents, and at the same time shapes, the society, acting on both individual and collective biographies. An inclusive and sustainable Communication Design needs therefore to be able to take into account the multiplicity and diversity that characterize society, making itself an expression of pluralism and respect. The context in which we live and act is characterized by an enormous amount of media messages which still spread and feed, limiting and degrading gender stereotypes - both consciously or unconsciously.

The urgency to act towards a fair representation - free of negative gender stereotypes - is reiterated by the resolution of the European Parliament of 17th April 2018, which highlights the duty of the media “to ensure [...] diversity of opinion and media pluralism, to promote respect for human dignity and to combat all forms of discriminations and inequality by, among other things, portraying diversified social role models [...]” furthermore it “stresses the role of the media as an agent of social change and its influence in the shaping of public opinion and calls on the Member States to promote content on gender equality in public media”.

Starting from this context we intend to adopt the interdisciplinary point of view of Gender Studies, focusing on the consideration about the representation of the genders and the centrality of the white man, elevated to a "unique prototype of the human species" (Melandri, 2011). The contribution therefore means to focus on the gender asymmetries conveyed by schematic visual representations, specifically the pictographic language. The objective is to highlight how artifacts and communication systems, which are universal by definition and addressed to the whole community - therefore ideally representative of the multiplicity - are strongly asymmetrical and oriented to the male.

The subject of study are therefore the visual forms that are part of the pictographic language with an informative and prescriptive function, an area that has well-established origins in the history of communication design, starting from the studies of Neurath and Frutiger.
This kind of visual forms are characterized by a high degree of objectivity but at the same time they unconsciously translate models that include behaviours, duties, responsibilities and expectations linked to female and male identity, the subject of social expectations, which allows us to focus our attention around those gender roles to which women and men are encouraged to conform. The observation therefore concerns the forms of schematic representation which permeate everyday life. A both quantitative and qualitative analysis of the gender asymmetries (hierarchies, roles, contexts...) will allow to highlight through which modalities pictographic languages contribute to convey negative stereotypes towards women.

The proposed contribution is located in an area of communication design which is historically central but not widely investigated from the point of view of gender studies and which still results strongly unbalanced towards the male sphere. We therefore assume a gender-sensitive perspective to exercise an innovative point of view for the discipline of design (Decataldo & Ruspini, 2014), in accordance with a vision that enhances the multiplicity towards a fair and equal representation of genders in the media context.

**KEYWORDS** | PICTOGRAPHIC LANGUAGES, GENDER INEQUALITIES, IMPLIED STEREOTYPES, FAIR REPRESENTATION
1. Introduction

1.1 A polluted environment, the need of an ecological communication

Communication Design nowadays plays a role of undeniable socio-cultural responsibility. It has the task to "translate" (Baule & Caratti, 2017) the content into a visual form by making it accessible and it is therefore responsible for the resulting message and the effect it has on the community to which it is addressed. As Ezio Manzini states in Designing as everyday life politics:

“Design has always played a social and political role. Directly or indirectly and whether consciously or not, it has assumed all kinds of stances towards dominant social, cultural and economic systems: ranging from enthusiastic support to radical criticism and alternative propositions” (Manzini, 2016).

Design therefore acts on social reality, influencing opinions, expectations, attitudes and habits and it changes the perception that individuals have towards reality. These premises highlight the urgency to outline a Communication Design which is sustainable from a socio-cultural and ethical point of view. The metaphor of the environmental sustainability can be traced back to a passage written by Buchetti in 2019, in which he refers to the concept of “media landscape” and the pollution of the media landscape. We live in an environment overflowing with images and media messages. The quality of these messages — especially when reiterated — has important consequences on the construction of individual and collective biographies. It is also through Visual Cultures that harmful, polluting stereotypes are conveyed and amplified such as discriminations on the grounds of gender, ethnicity, age, etc.

That is why it is essential to rethink how communication could be defined sustainable. We need therefore a Communication Design: (I) able to take into account the complexity of reality and to face the multiplicity that characterizes the environment in which we live, act and relate, and therefore able to make responsible choices; (II) aware of its social responsibility and of the consequences that a stereotyped message can have on the group of individuals to whom it is addressed; (III) vehicle of values such as inclusiveness and equity rather than spreading disvalues that undermine, in more or less implicit ways, opinions and expectations towards certain social groups.

Our contribution is situated at the intersection between Visual Cultures and Gender Studies. The paper intends to provide a contribution from the Communication Design point of view, by assuming the perspective of Gender Cultures as analytical category. The use of gender as a descriptive axis allows us to carry on a wider reflection about the implicit stereotypes conveyed by the visual languages that every day characterize the environments in which we live and grow. We decided to focus the observation on the pictographic languages of everyday life, from wayfinding systems to instruction manuals. The pictographic languages represent an area of Communication Design — historically central — which is characterized
by a high degree of universality and perceived objectivity (Bucchetti & Casnati, 2020) but not immune to stereotypes. This represents an environment affected by forms of pollution that are less obvious than others — for example the advertising sector — but equally harmful. These forms of pollution act slowly and at an underlying level, which end up to be perceived as normal. Our aim is therefore to investigate whether and through which modalities and forms pictographic languages are actually representative of multiplicity or whether they — universal by definition — are influenced by a society still male-oriented and therefore subject to gender stereotypes.

1.2 Why Gender Studies – the urgency to reach gender equality

There are several reasons which led us to adopt the point of view of Gender Studies. The urgency to act towards the eradication of gender inequalities is, first of all, underlined by the institutions at international level. Starting by the Cedaw adopted by the United Nations in 1979, which represents "the most important international legally binding instrument on women’s rights"; the World Congress Women's World; the Istanbul Convention of 2011, to protect women and fight against all forms of gender violence; up until the ONU Agenda 2030, which places gender equality at the top of the objectives to reach sustainable development: to "achieve gender equality and empower all women and girls [...], and all forms of discrimination against women and girls everywhere".

In this context the Global Gender Gap Report for 2020 highlights Italy’s backwardness in achieving gender equality. The country occupies the 76th place out of 153 countries (six positions below compared to 2018). Measures were also taken within the field of media focusing on the forms of representation of women. One of the main examples is represented by the work of the Gender Equality Commission in relation to the issue Media and the Image of Women (Amsterdam 2013) and the resolution of the European Parliament of April 2018 (2017/2210 (INI)) on the impact of marketing and advertising on equality between women and men, which reaffirms the role of responsibility of marketing, advertising and media images and

“highlights the importance of promoting media literacy [...] so as to encourage young people to develop critical thinking skills and to help them identify and denounce sexist representations and discrimination [...]. Stresses the need for preventive measures [...] points out that advertising can be an effective tool for questioning stereotypes”.

This contribution is part of a wider work carried out by the research group xxx. The group works on issues related to the representation of women in the media by experimenting new models and communication tools, focusing on the socio-cultural responsibility of the designer himself.
2. Communication Design, stereotype and social identity

Media images, by their own nature, communicate by models in order to be immediately recognizable and comprehensible to the social groups they are addressed and these models contribute to activate gender stereotypes which in turn are responsible for the definition of self-schemas. They affect both "cognitive resources" and "emotional reactions to sexist statements" (Camussi & Monacelli, 2010). Media communication draws from a collective cultural basin, using already established and consolidated models and returning them amplified. The designer himself is inevitably conditioned by his own socio-cultural background and, if he does not have the tools for a critical re-reading of his work, the project will result permeated by the dominant culture.

From this point of view social reality and media representation are part of a vicious circle in which the media take on the role of a "faithful and deforming" mirror of reality (Baule & Bucchetti, 2012). It could be defined as a feedback process that continuously pollute the media landscape. The designed images are in line with the sensitivity of the moment but, at the same time, have the power to shape it. The repetition of a stereotype leads to its rooting and its transformation into prejudice, ending up by determining expectations towards specific groups of individuals and consequently shaping social identity. This mechanism is most evident in contexts such as advertising and marketing, as highlighted by Clarke and Griffin (2007):

“ [...] the cultural message about how women should look and act is endlessly disseminated on covers of women’s magazines sold at supermarket check-out counters, in the news media, on TV, in films and in advertising, all of which endorse a value system that preaches bodily perfection”.

The issue we wish to address concerns the role played by designed communication products — which are employed in society to circulate information, data, goods, services, etc. — in contributing to the development or maintenance of gender inequalities. We therefore wish to focus on iconic and pictographic representation which respond to prescriptive, orientation, guidance functions and which are by nature designed on the basis of normative principles. All those cases where the message of communication is perceived as universal and objective.

3. Universal visual languages

Starting from a consideration expressed by Bucchetti,

“Each “visual configuration” is a text: the place where its signification materialises and manifests itself; that place, in other words, where two levels may be recognised and distinguished, belonging to each language, to each sign system: the level of the signer and the level of the signified; the level of expression and the level of content”.

Universal Visual Languages in a Male-oriented Society
Cecilia Robustelli refers to verbal language as it enables us to codify thoughts and express opinions and expectations. The same principle can be applied to visual languages. The content and the coding of the message itself provide information about the idea of gender owned by the speaker – or in our case by the designer - and may cause discrimination.

“A language which is respectful of gender differences constructs the message to avoid its reading in terms of subordination or discrimination, through the adoption of precise semantic or grammatical strategies, the former relating to the content and the latter to the use of the methods provided by the language system for recognising and specifying the existence of different genders” (Robustelli, 2015, author’s translation).

How do visual languages, which are defined universal, behave? Is it possible to apply the notion of universal masculine even to pictographic languages? If we consider language as the expression of a culture and interpretation of one’s own thoughts and opinions, how does the designer act in relation to multiplicity?

The reasons which led us to identify the pictographic languages as research field are briefly listed below (Bucchetti & Casnati, 2020).

1. They are simplified representations of reality. They make it possible to relate to the surrounding world through the adoption of meaningful practices and behaviours;
2. they are signs that should — by their own nature — be accessible and immediately clear to the entire population. The effectiveness of the sign is greater if it does not require the acquisition of new decoding rules. Interpretative rules should ideally be embedded in the socio-cultural basin of the target population;
3. they have a normative dimension, they have the task of transferring rules, indications and prescriptions;
4. they are addressed to a wide range of recipients, to the community as a whole, so they have a recognized universal value;
5. they are perceived and recognized as objective messages.

Starting from these assumptions, a first phenomenological research with a preliminary value was carried out, aimed at defining the study area. This represented a first on-field research which allowed us to identify and collect those pictographic signs which are peculiar to public and private environments that we are used to frequent and that characterize our routines. From public signposting to other wayfinding systems, pictograms on product packaging or instruction leaflets, focusing on icons depicting people. This first exploration allowed to isolate and identify issues that may give rise to specific in-depth analysis, aimed at extending the iconographic material basin and verify whether certain aspects, found in individual cases, are recurrent or not.
4. Gender discrimination conveyed by pictographic languages, three main areas

The observation highlighted how the pictographic representations of the male and female figure “give rise to denotative signs that refer, depending on the circumstances, to distinct classes which are not necessarily coherent with their own denoted, according to a vision closely related to male domination”.

“The strength of the male order is measured by the fact that it does not have to justify itself: the anthropocentric vision imposes itself as neutral and does not need to be enunciated together in speeches aimed at justifying it. The social order functions as an endless symbolic machine tending to confirm the masculine domination on which it is based” (Bourdieu, 1998).

Abdullah and Hubner (2006) underline the role of pictograms and the consequent need to be as independent as possible from culture:

“Pictograms are used to warn, guide or protect and need to be immediately decipherable. They must get right to the heart of the matter by visually conveying a vital piece of information in such a way that it cannot be misunderstood, and they should therefore be internationally recognizable and independent of culture”.

What emerged, on the opposite hand, highlights the tendency of communicative projects to inevitably reflect the culture and thought of the designer — who grows and forms within a certain social group and with a certain culture. As the verbal language, the visual configurations examined in the study reflect a historically located social situation, inevitably leading to judgements that "diminish, reduce and, ultimately, penalize the positions that the woman has come to occupy today" (Sabatini, 1993).

Therefore, three main areas that represent different ways in which gender stereotypes occur have been identified. Areas that, once delimited, can become the object of future in-depth studies or a starting point for the designer to reflect on.

4.1 Man-as-default

The public sphere was the starting point from which the observation originated. Signposting characterizes all public spaces and generally represents codes that are supposed to be assimilated by the community.

They are neutral and universal systems by definition, from which, however, inconsistencies that lead to a strong orientation towards masculinity emerge. Specifically, implicit elements have been identified which reflect and justify a clear condition of gender inequality, which has not been resolved yet. The predominance of the masculine is clear and seems to coincide with the representation of the neutral, i.e. used when the message is addressed to the whole community. The issue is emphasized by a low presence of female figures which, as
we are going to see later on, seem to be mainly related to the mother/family dimension or, more generally, to care roles.

Figure 1. Examples from the Italian public signage system

The definition of neutral masculine, drawing, once again, from the field of linguistics, indicates “uses of language that do not correspond to those of grammar but which attempt to justify themselves based on a misunderstood interpretation of sexual plurality. Everyday language and the press reinforce the use of the masculine plural grammatical gender in its extensive and inclusive interpretation, in other words, to indicate male and female referents” (Robustelli, 2015, author’s translation). The same happens when addressing the plurality of citizens through the use of icons. Figures with masculine traits are used when the message is addressed to both men and women, while for specific cases, i.e. when addressing circumscribed groups, the figures may assume feminine traits, for example if in relation to a child, therefore in the role of mother. The "non-marked male" is therefore identified with the bivalent function of the male gender, which refers both to the male sex and to both genders. We can also talk about fake neutrality of the masculine when one "claims that what is only of man is universal"(Sabatini, 1993). The Man-as-Default (Kotthoff & Wodak, 1997) seems so obvious to us that it ends to be considered natural, both the motivations and the processes are taken for granted (Ghisleni, 2004).

4.2 Hierarchies

In the previous section the notion of the neutral masculine was introduced. If, however, we consider the numerically inferior cases in which female and male figures are co-represented, our attention is immediately drawn to hierarchical relationships and to those parameters that lead the beneficiary of the message to perceive a subordinate relationship of women to men.

Dimensional relationship - In case of co-representation, the female figure appears smaller in size than the male figure. Among the examples collected, is particularly interesting the danger sign "crossing children" (Fig. 2), in which the female child is clearly smaller than the
male child. The difference is emphasized by details that characterize different age groups (the bag for the male and the lunchbox). Size, posture and connotative elements also sub tend the role of the man as guide or protector of the woman, referring to the universe of gender roles.

Figure 2. Children crossing sign, Italian public signage system

Figure 3. Elderly people crossing sign, United Kingdom

Topological space - The spatial correlation between the female and male figures. In the representation of two or more subjects of different sexes, the female figure is perceived "behind" the male one. The perception of the position can be suggested, as in the case mentioned above, by the orientation of the two figures. The two kids (Fig. 2) are represented while running and their orientation defines who is in front, leading and assuming a role of responsibility and power and who needs to be led (the female kid). The same happens in the case of the "lift" pictogram which is part of the Italian public signage system. In this case the woman icon is placed in the middle (Fig. 4), between two male figures, to reiterate the need for protection.

Another modality of representation is well exemplified by the pictograms indicating "groups" and "groups with baggage" (designed for Zurich airport's wayfinding system) (Fig. 5), which place the woman icon in the background over the male figure thanks to an overlapping composition in which the male pictogram is read perceptively over the female pictogram.
Quantitative Relationship (in representation of groups) - It concerns the numerical relationship between female and male figures. When multiple subjects are represented, as in the examples mentioned above, an unjustified numerical prevalence of the male figure emerges.

Type of Action Performed - The action that is represented and attributed to a male rather than a female figure implies another fundamental issue concerning gender roles, which is specifically dealt with in the next paragraph.

4.3 Gender roles

The third defined area concerns the roles attributed to the woman when the communication is specifically addressed to her. This area is more generally part of the issues concerning the fixed roles attributed to women in the media.

Female roles

“Women have long been the symbol of men's desire and fantasies, essentially bodies with no other history than the one defined by male interest, by the criteria of value/disvalue in practice in the patriarchal symbolic order that absorbed the feminine into the masculine and gave as the only possibility of existence subalternity or parity” (Pallotta, 2012).

The issue brings with it wide-ranging problem areas such as work-life balance, the issue of glass-ceiling, inequalities in work, etc. The observation highlighted the fact that, even in the case of pictographic languages, there is a fixity of roles. The woman is mainly attributed the roles of mother, caregiver, housewife. By way of example, it is useful to mention the pictogram placed on the shopping cart of an important distribution chain, which represents a female figure (Fig. 6) in the act of pushing a shopping cart inside which a child sits. The supermarket in this case is Esselunga, whose wayfinding system uses a visual language very similar to that of public signage, in which the male-as-default prevails. The designer's "need"
to decline the icon to the feminine emerges from the relationship between a child and the act of shopping.

The icon of the mother occurs in other cases of co-presence with pictograms representing children, an example is given by the signage in stations, airports or shopping malls near escalators. The sign usually carries a series of warning or danger messages. In all messages the subjects are declined to men, even if in groups or couples, except for the signal indicating that children must be accompanied by an adult person, relegating once again the woman to the maternal and care dimension (Fig. 8). The same happens in some road signs placed near pedestrian areas (Fig. 7). On the sign, part of the public system, we can see the pictograms of a walking man, the icon "crossing children", with all the considerations previously stated, and a third icon representing a female figure in the act of pushing a baby carriage.

Furthermore, the representation on the packaging of household products — detergents, cleaners, etc. — denotes deep-rooted gender stereotypes. Only female figures alone or accompanied by children are represented on this type of products. Even when warnings for use or dangers are given, the figures are marked feminine. An emblematic example is the icon that most laundry detergent packages display to encourage correct behaviours. The message is "keep out of the reach of children". To transmit this information, a little girl is depicted stretching to pick up the product placed on a shelf above her. The action performed by the child confirms that the product is aimed at a female audience (the symbol...
is similar if not identical on other products of different brands) and implies the role that she will play as she grows up. The girl is represented with a dress, ponytails and a doll in her hand, a key reference that symbolizes the learning of the roles of care we have seen to be of female domination.

**Male roles**

If the woman is attributed roles that relegate her to the domestic sphere, the male figure is attributed active roles, which refer to positive values. From a first observation on the same product category mentioned above — household detergents — only one case was found depicting the male figure. It is a stain remover that shows some male silhouettes on the packaging. While the woman is represented doing the laundry or, in some cases, as a simple silhouette, to highlight the target audience, the man is represented as a sportsman. The product is called *sportswear, penetrating anti-odour, specific sanitiser for technical garments* and the three silhouettes represent a skier, a cyclist and a runner during their respective sporting activity (Fig. 9).

Still in the field of technical/sporting products, if we observe the forms of pictographic representation that have a prescriptive function and guide to the "correct doing", which are developed in sectors such as clothing and technical/sporting equipment, we can see that they are addressed to a male audience even when the product is not differentiated according to sex. An example is given by the sport climbing equipment (harnesses, safety devices, etc.), unisex products whose images of instructions (on tags, pendants, websites, etc...) present mainly male figures. The female figure is represented when, talking about safety devices, the practice of *couple control* is described and her role is passive (Fig. 10).

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**Figure 9. Sportswear package detail**

**Figure 10. From Petzl instructions, climbing devices**
The assignment of active or passive roles on the basis of gender is recurrent in other areas such as the emergency instructions. In three of the collected cases — referring to material distributed by airlines — the actions to be carried out in emergency conditions, in which some passengers have to take an active and collaborative role, are explained through a sequence of images. In the first one the company is Ryanair, the man has an active role (he wears a mask and life jacket, he takes care of the emergency exit) while the female figure is represented in the passive act of descending the emergency slide. Another case that deserves our attention is the one from Lufthansa, in which the subject is a female stewardess — represented in the action of taking care of a young boy by making him wear a mask and life jacket — but still, the “strength” operation — to turn the lever to open the hatch — is done by a man. The female image returns in the storytelling to show that kids and children should be picked up on the emergency slide, so once again in relation to the caring activity. In the last case (SAS) the man once again takes care of the opening of the door, assuming the role of hero and guarantor, while the woman is represented exclusively to focus the attention on the obligation to remove heels before using the inflatable slide, referring to a dimension of frivolousness.

5. Towards a sustainable Communication Design

The three identified areas highlight the persistence of gender stereotypes in areas of communication that have a recognized value of universality and neutrality. These are stereotypical forms less evident than others but which characterize everyday life by polluting it. Any kind of recurring image, despite not paying particular attention to it, ends up appearing so obvious to us that it is considered "natural", even by the designer himself. Referring back to a Ghisleni’s passage in *Sociologia della quotidianità* (2004), everyday reality and the images that are part of it are expressions of "practices of reciprocity which, being mostly unconsciously assumed, tend to make everyday life a world taken for granted"

We deem that the work carried out so far may constitute a further piece within the perimeter of Communication Design for gender cultures, but we also believe that it may represent a model for a wider reflection in the direction of a communication design suitable to deal with contemporary issues (*Agenda ONU 2030 for Sustainable Development*). This kind of design should be: (I) inclusive; (II) fair to the social groups it addresses and to all individuals; (III) representative of multiplicity; (IV) promoter of values rather than a vehicle of disvalues. “Social design is the practice of design where the primary motivation is to promote positive social change within society” (Resnick, 2019).
References


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