



Design and Education

Cultural Resilience Experiments

Cultural Resilience Experiments, as well as being the title of this article, is also the purpose of an elective course for Master's students at the School of Design of Politecnico di Milano, called Temporary Urban Solutions (TUS). During the scheduling of teaching activities for this course, we unexpectedly found ourselves in the midst of a real global emergency due to the explosion of a pandemic that generated a necessity to adapt, to redesign a teaching method investigating social and cultural issues in order to experiment new educational approaches in the field of Design for Social Innovation and prototype new temporary urban scenarios during periods of a pandemic.

In the following paragraphs, attention will primarily be focused on the structure of a new teaching model for the TUS course: a didactic experimentation with cultural and social investigation, translated into analogical visions and digital practices, and conducted remotely through interpersonal connections. A new methodological and design approach was tested within six weeks, which consisted in rearranging themes and practices already consolidated with the basis of Design for Social Innovation, through the use of new digital and analog tools for co-design activities and the generation of simulations for the prototyping of the final project.

Design Education is always changing. Starting from the awareness that "the experimental approach will become the normal approach in our future" (Manzini, 2015), *Cultural Resilience Experiments* is the result of a new possible educational methodology that reflects on these changes and transforms them into possible new scenarios. Manzini (2015) urged us «to consider the whole society as a huge laboratory for sociotechnical experimentation»: this practice is an example that could be used as a model in the future on a large scale where future designers must be able to manage complex and innovative processes, possess transdisciplinary knowledge, and to combine them in their projects.

[design education, online distance teaching, prototyping, cultural Resilience experiments, design for social innovation]

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The Design Discipline: from present to future

In terms of education, the discipline of design is always changing. Starting from the awareness that «the experimental approach will become the normal approach in our future» (Manzini, 2015), design today is characterized by fluid, evolving patterns of practice that regularly traverse, transcend and transfigure disciplinary and conceptual boundaries. This mutability means that design research, education, and practice are continually evolving.

For most designers, design has no history; it is narrated in the permanent present and if somehow, they are reminded of its history, most designers cannot see any future in this past. Design has never been linked to its wider and more deeply defined temporal dimensions. From a design point of view, time is now; the perfect design is the present. The design has not even managed to deal with its only means of controlling time: asking the question what could it become? Seen in this way, the history of design is captured in different time cycles that are all competing. Rodgers (2017) said:

“To identify the history of design in the present time, it is necessary to look at the origins of design in the way it is as a product of the division of the idea from production. In the common history of design, the most familiar period of time is the simple past, in which design was given the project of producing competitive advantages on the market which, bound by the machine powering, the now globalized cycle of production and consumption”.

At the basis of this production cycle there was an almost resolute devotion in material progress that led to Foucault (1971) stating that « we know what we do but we don't do what we know». This investment is fixed in our faith in technological progress, as a perfect future: trust in technological progress connected within a digital network. In order to imagine a feasible future, it has now become necessary to cross the competitive times of digital classification of the past and digital reproduction of the future. Ken Friedman (2019) suggested that:

“These challenges create a new context for the design process. Some forms of design remain similar to what they have long been. Other forms of design emerge in response to new developments, new tools, new situations, and new technologies.”

The Third Industrial Revolution allowed for the development of electronics and information technology; these were instrumental in the emergence of the Fourth Industrial Revolution, which revolves around smart manufacturing and the maker movement. Digital platforms and distributed production are becoming increasingly accessible and affordable. They generate a socio-economic shift by changing the processes, know-how and actors involved in designing, producing and distributing contemporary artefacts. With an advanced planning activity anticipated in the 21st century, an increasing number of researchers and professionals in a wide range of creative disci-

plines and other application themes habitually consider their methods to be rooted in the practice of designing, or using methods, techniques and approaches that could be considered “designerly” (Cross, 2006). Consequently, the Design Discipline is constantly expanding, taking on the changes and emerging problems of the world, waterproofing new possible scenarios for the creation of new ideals and tools to be applied in different production systems.

The Design Discipline, with its focus on education, includes various design fields such as product design, graphic design, communication design and design in engineering, etc.. Design refers basically to a problem-solving method, a creative problem-solving approach and relevant processes. Design education has adapted itself to the changing function of design throughout history due to changing consumption, production and competitiveness patterns. At the beginning of the century, and especially during the post war period, design gained importance as the aesthetic element of objects. As the function shifted from pleasure to differentiation, the concern and content of the design problem became diversified. The essential structure is based and focused on interchanging solutions to problems. Design education has also been responsive to systemic transformations and increasing complexity. Overall, these changes in the discipline have been significant.

Design Education: living with pandemics

Muratovski explained in 2015:

“Design is all around us, it influences how we live, what we wear, how we communicate, what we buy, and how we behave. Yet designers are rarely invited to participate in the planning of the strategies that determine what kind of design solutions should be developed, for whom, or why”.

The world is becoming an increasingly complex place. Negative tensions, such as unsustainable population growth, ageing populations, global terrorism, and increasing pressure between people and technology, are affecting society. Muratovski had previously said in 2012:

“other critical uncertainties such as globalization, natural disasters, environmental impoverishment and global epidemics are still present and will continue to be major problems in the years to come”.

These multi-faceted problems require new solutions and unconventional approaches so that we can improve or even maintain our quality of life as it is.

Design is a process. The design process is has a strong foundation and involves theoretical disciplines and fields of practice. Like all fields of practice, knowledge of design requires both explicit knowledge and tacit knowledge. «The challenge of each evolving field is to focus tacit knowledge in an articulated way» (Friedman, 2000). This creates a terrain of

shared understanding on which the field of practice is built. It is possible to explore new methodological and multidisciplinary approaches in increasingly diverse and articulated forms, thus developing new and renewed educational models, giving an interpretation based on an intermediate tool between research and teaching, and the performance of an analogical and digital perspective of cultural, social and cognitive interconnections. Can design look further humanistic and scientific culture to focus on the ability to transform human needs into products that improve life and social relationships? And, what is the role and impact of distance learning within experimental education methods aimed at international students with different disciplinary backgrounds?

Cultural Resilience Experiments: the brief

Pandemics have always shaped cities and Covid-19 is already doing that. From the Plague of Athens in 430 BC, which brought about profound changes in the city’s laws and identity, to the Black Death in the Middle Ages, which transformed the balance of class power in European societies, to the recent wave of Ebola epidemics in South Africa, which highlighted the growing interconnection of today’s hyper-globalized cities, public health crises almost never fail to leave their mark on a metropolis.

As the world continues to fight the rapid spread of the coronavirus, which is confining many people to their homes and radically changing the way we work and think about our cities, some wonder which of these adaptations will last beyond the end of the pandemic and what life could be like afterwards. The transformation that our cities have undergone in the last months is clear: long panoramas of deserted public spaces, like a film with no sound, no human presence, no traffic, but, primarily, no pollution.

Since we stopped walking around town, have we learned to really listen to it? From the windows of our private homes we collect sounds and smells that our distracted life has never allowed us to hear, and we can enter a fragile and emotional city landscape. Each of us has wondered at least once during this period if the status of isolation was not the right occasion to stop and reflect on the tomorrow that will greet us after this pandemic. We have begun to wonder if and how the trauma of total lockdown will affect all levels of society: in the workplace but also in the sphere of relations and the use of public spaces, particularly in the context of large and medium-sized cities.

The reality is to start thinking about a new possible future. In this context, however, there is a space that has been re-evaluated most of all – semi-public spaces, such as balconies, windows and terraces. A revolutionary architectural element that was previously considered a demarcation point of the domestic boundary and that is now the place within the house where the relationship of proximity with neighbours and a connection between private and public space is still possible, indeed somehow stimulated. This was described by Ugo La Pietra (2014):

“the balcony has been revalued by many and considered a stage for relations, from which it is still possible to express, perform and communicate”.

Orizzontale, a design collective, immortalized the *balconanza* in one of their drawings for the magazine Domus (1). The term *balconanza* describes this emerging activity of relationships between people from their balconies and terraces. Subsequently, other semi-public spaces of proximity have become involved, starting with the experience of the individual with his/her own apartment and progressively spreading to the remaining condominium spaces: courtyards, stairs, elevators, terraces, etc.

Why not think about collective activities, which, through art, music, cinema, theatre can become a tool to encourage and strengthen the relationship of proximity and solidarity in the neighbourhood?

Cultural Resilience Experiments' brief consists of bringing the concept of city, public space, personal relationships, and collective and performative activities into a private dimension. This can include one's own home, developing new artistic and interpretive forms from disciplines like dance, art, music, theatre, cinema, literature, and culture giving value and using - as an urban temporary stage - the semi-public spaces of one's own condominium: balconies, windows, stairs, terraces, courtyards, elevators, neighbouring streets, etc. Fassi (2012), in his book, *Temporary Urban Solutions*, affirmed that:

“temporary installations, performances and urban actions organised in public spaces have been one response to social, cultural and spatial differences. (...) The city is read as a container of public space”.

Different design disciplines were presented via video to students in the first lesson of the Master's course. Each theme was explained by an expert from the Italian artistic and cultural world to present his/her idea of performance in a fragile period where the crisis of culture is still evident today. Among the experts we find Lorenzo Palmieri, a Music Designer; Petra Loreggian of RDS, Base (Milanese cultural centre); Beltrade Cinema (historical cinema in Milan); the architects of Orizzontale (design collective in Rome); Triennale di Milano; Fondazione Castiglioni; and an actor and performer. Following this multidisciplinary artistic and cultural presentation with case studies and analysis of the themes chosen, the course began with this personal vision of the experts, and in this way the students, divided into working groups, chose their theme to be developed in the following weeks, thus giving a new interpretation of the discipline, and how this could be transformed into a collective activity during the period of quarantine.

Design aims to reconfigure spaces through new strategies by modifying the spatial experience, influencing people's everyday life, and eliciting social and behavioural change. As Fassi (2012) says:

“feeling urban space means perceiving a conformation of empty and full, of high and low, of above and below, but also recognising a system of relationships between people who live in these spaces, the neighbourhood and the neighbourhood life, true centres of affective communication”.

According to Navarra (2008):

“we find ourselves acting in places which are not usually offered or dedicated, but on the contrary are made available, are lent or temporarily given for a specific use”.

The challenge for the students, in addition to relating to a new methodology and the distance learning approach, was to enhance their point of view as to the situation of social distancing and how to transform these disciplines into a cultural and social revitalization. And, also, how these semi-public spaces, in the condominiums, could become important for temporary performance, and how this could express a concept of spatial and service legacy in a near future.

Cultural Resilience Experiments: new teaching methods and new tools

In previous editions of TUS, the methodology used was human-centred, a creative approach to solving problems that generates a deep empathy with the people you are designing for. As IDEO (2) states, «it's a process that starts with people you're planning for and ends with new solutions tailored to meet their needs». It was therefore a question of generating ideas and building prototypes, sharing what has been done with the people you are designing for and also putting new innovative solutions out into the world. By collaborating with different groups of people, you are designing solutions with them, as the central core of the process, and therefore building together, which is more likely to bring about real success. To maintain this community-centred project approach, but due to the impossibility of being able to design physically with people, the methodology was changed in terms of time, educational activities and tools. The students were very active and involved in reinventing new tools appropriate for their projects.

The course included the choice of a single discipline to be developed according to a specific intervention strategy, such as: low-tech impact, analogic impact, offline approach, sensorial experience, and sustainable value. These strategies were then to be completed with project outputs, in terms of space and service, according to a temporary vision and future legacy; as an example: collective activity, remote event, spatial installation and impact, performances, etc.

The phases of the process established through the course, and developed over six weeks, are:

1. Analysis and Research: including a desk research and a field research about the context and the discipline chosen, analysis of case studies, interviews done remotely, and analysis of semi-public spaces;
2. Concept Generation: including creation of scenario, brainstorming session, development of moodboard, and vision project, and set up of 3 personas' profiles;
3. Co-design Session: testing the effectiveness of concept project remotely;
4. Project Development: including creation of project manifesto, choice of project title and effectiveness, creation of key images, spatial journey map timeline (legacy included);
5. Prototyping: including plan of spatial and service prototyping activities in the chosen space, insights from the prototyping activities through a video report.

Due to COVID-19 and the necessity for social distancing, future designers will need to digitally interact with users in a meaningful way that furthers ideation. Some tools and steps of traditional process have been remotely reviewed: students have succeeded through the digital tools mentioned above to transform co-design and prototyping activities, which is a first change in the concept of teaching methods. All lessons during the course for the academic year in the pandemic period were conducted through an online platform. The tools of the traditional process have been remotely rethought, especially with regards to the co-design activity: it has transformed the whole activity to online platforms that are open to a public with different skills, from all over the world, and with different situations lived in such a fragile period who are ready to make their contribution without the problem of distance. The prototyping phase is affected in the same way: for a moment that usually involves a large group of people coming together in a major collective event, rethinking a prototype at a distance was a real challenge. The students engaged in the organization of prototyping simulations using homemade materials and the spaces of their own building, setting up different activities to involve their neighbours, who were rather reluctant given the pandemic situation. The results of these activities when transformed for a remote approach, especially the last two, produced more satisfactory results than expected: more interaction from participants; more attention to detail; more time to organize the activity to be developed; more opportunity for comparison; and more time for participation. Co-design activity takes place when designers invite users to take part in the ideation process because “they value user experience and feel that users can contribute to the overall quality of the design” (Kanstrup, 2012). As Briggs and Makice (2008) said:

“increased information access, global view, ease of networking and increased activism has created non-employees who are becoming a part of the process of value creation with organizations”.

But what if you cannot meet in person? What if all communication is done digitally? The students committed themselves to creating working groups that reach different age groups and from all over the world. In addition to using digital platforms that help to support the activity with shared virtual boards without space and time, they had the opportunity to design digital tools for the dissemination of their ideas to obtain more feedback for design developments. Given the impossibility of being able to design physically with people, to create tangible groups with associations and experts, and to form interpersonal networks, the methodology was changed in terms of time, educational activities and tools. Each year, as a conclusive event of the course, a collective classroom exhibition of all the students’ is usually organized. Artsteps.com has been tested as a tool to organize a final remote exhibition of these current projects: a free online platform that allows virtual museum space to be created and different contents to be exhibited. Eight virtual museum rooms were created, one for each group, in which visual paths with graphic and video materials were set up to present the various projects. The final tool of this remote virtual exhibition is an overall video of the immersive journey between the final projects of the course.

A starting point for innovative distance education

In this essay, the **starting point to the** critical challenge of a new reformulation of the educational process of the design discipline is highlighted: a collaboration between teachers-researchers, students as designers, and the sudden cultural crisis due to a pandemic. The role of the teacher, as spokesperson for the discipline of Design and its multidisciplinary, is to shuffle the cards and rethink through new solutions and new methodologies for a teaching that is constantly evolving. Obviously, the problems faced in this first remote teaching experiment are manifold - due to misunderstandings in logistics, slow connections and different time zones, not having any kind of visual and empathic contact - but the experimentation was stimulating. A new chapter has been opened, reformulating and testing new approaches for the designers of the future, those who will be called to redesign new solutions for cities and for people’s, and their own, personal needs.

This article proposes one of the many potential solutions to make a new teaching design method possible, and it is an initial answer to the questions asked at the beginning of the text. But what is yours?

^[1] Quarantine’s Diary edit by Domus. Retrieved from <https://www.domusweb.it/it/notizie/2020/03/16/come-abitiamo-in-quarantena-un-diario-dei-giorni-del-coronavirus.html?fbclid=IwAR1M1ehvVzmEUxEGyujzopV4NlivjR6peizLpIKZWS5tzmAlPsBUfJgETg>

^[2] Design Kit. What is Human-Centered Design? Retrieved from <http://www.designkit.org/human-centered-design>

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