Design for Future Fragilities @2033

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Abstract: Design for All is a systematic, holistic approach that calls for a team of specialists from various disciplines (including at least design, ergonomics and marketing…) to work together in synergy, while consulting with users at all stages of the process. This innovative methodology is promoted and monitored by EIDD-Design for All Europe and its national affiliates, present in 22 European countries in Europe and five more on four continents outside Europe. In the 2004 Stockholm Declaration, Design for All is defined as design for human diversity, social inclusion and equality. The Final Synthesis laboratory of the Milan Polytechnic School of Design aimed to adopt this vision and equip students with a new sensitivity and innovative design practices, suited to the complexity of our times and their constant changeability: necessary conditions for the development of a Master's Degree Thesis in Integrated Product Design at the School of Design Milan Politechnic. The laboratory at the School of Design Milan Politechnic. was structured in a series of lectures and interventions by experts from various sectors and then in the definition of mini-design workshops to be carried out in groups, aimed at generating new product/service concepts. The first of these, co-ordinated by Giulio Ceppi, was aimed at defining diversities to come (2033), the fears and the opportunities that the future presents us, in order to be able to anticipate them, interpret them and make allowance for them. In fact, we want to design a future world of equal opportunities, rights and awareness that all need to be addressed and guided: design has the ethical task of anticipating socio-cultural behaviours and trends, not just responding to the market. The 9 meta-design profiles that emerged were used in subsequent exercises, becoming the shared heritage of the laboratory and the final degree theses.

*Practical implications***:** This paper will act as the future reference for implementation of design considering human diversity, social inclusion and equality through various design pedagogies. The reported meta-design profiles will be helpful to carry out design degree theses and studio practices.

Keywords: Design for All; design for human diversity; social inclusion and equality; new sensitivity; innovative design practices

1. Introduction

'Design for All' is a systematic, holistic approach that calls for a team of specialists from various disciplines (including at least design, ergonomics and marketing…) to work together in synergy, while consulting with users at all stages of the process (Naisbitt, 1984). This innovative methodology is promoted and monitored by EIDD-Design for All Europe and its national affiliates, present in 22 European countries in Europe and five more on four continents outside Europe. In the 2004 Stockholm Declaration, Design for All is defined as design for human diversity, social inclusion and equality.

The Final Synthesis laboratory of the Milan Polytechnic School of Design aimed to adopt this vision and equip students with a new sensitivity and innovative design practices, suited to the complexity of our times and their constant changeability: necessary conditions for the development of a Master's Degree Thesis in Product Design (Ceppi, 2011).

We decided to generate a view into the future, envisioning the incoming fragilities in the next ten years: this is an approach and a methodology not so common in design for all approach, that it is normally based on present times and actual scenarios. We based our investigations in a 10-year scenario, opening a new perspective for young design students, trying to offer them a vision into the future, although from the side of inclusion and weakness, not in the classical optimistic perspective so common in design schools.

2.   Research Question(s)

We are all facing relevant issues that future trends are presenting to us, where we need answers to some basic questions, fundamental to our future welfare:
-How shall we live and work in 2033?
-How shall we move in the city and the countryside?
-What shall we eat?
And
-how shall we communicate with others?

The students in the School of Design at Milan Polytechnic asked themselves questions like these to develop their theses in Integrated Product Design, focusing primarily on people whose lives are not always so easy (PopCorn & Hanft, 2001), on fragilities that may develop in the future, on the risks that come from change and on how to preserve the value of human diversity in the near future.

3.   Methodology

The course was nominated Human Design: Exploiting Different Abilities and it was managed by 4 different professionals, in a fully complementary and multidisciplinary approach:

Giulio Ceppi (architect and design. Coordinator), Francesco Samorè (historian of economics, director of Fondazione Bassetti), Pete Kercher (loyer, founder and past president of EEID-Design for all Europe), Francesco Rodrighero (designer, president of Design for all Italy).

The lab was structured in a series of lectures and interventions by experts from various sectors (fashion, journalism, public health, advertising, …) and then in the definition of 5 mini-design workshops to be carried out in groups, aimed at generating new product/service concepts. The students where in a total of 50 and where divided in group of 3 members: we counted mainly on Italian students, approximately half male and half female.

Many companies from different sectors (wellness and health, smart life and working life, cultural heritage, food retail, fashion…) join us to present their specific perspectives on inclusion and design for all, clearly explaining to students the relevant variety of topics and perspectives, depending from different markets and business, reinforcing the relevance of inclusion as a strategic value and a "must have" for the future of companies and industries.

The first of these workshops, co-ordinated by Giulio Ceppi, was aimed at defining diversities to come (2033), the fears and the opportunities that the future presents us, in order to be able to anticipate them, interpret them and make allowance for them. In fact, we want to design a future world of equal opportunities, rights and awareness that all need to be addressed and guided: design has the ethical task of anticipating socio-cultural behaviours and trends, not just responding to the market.

We know and we share what Marco Bevelo writes about Design futures: "Future objects and interactions can be imagined but such imagination, from folding displays to pervasive ambient intelligence, often proves wrong over time, when it comes to specific manifestations (Bevelo, 2022)). One might say, the future is about desire, direction, and hope, and ultimately about vision. The future cannot be studied as history is studied, because there is no evidence or tokens emerging from the future (Attali, 2016). Therefore, the anticipation of possible, probable, or preferable futures requires the reinterpretation of the past and the present, through a creative spark rooted in observation."

As a consequence, the meta-design profiles that emerged were more than 16 and they were used in subsequent exercises by the all class members, becoming the shared heritage of the laboratory and the protagonists of the final degree theses, leaving each student to pick up his/her choice also from other students profiles, according to their own sensibility and preferences: a short of shared session and large co-design experience, where the total sum it is for sure much more than the single parts, but you are free to pick your single preference, according also to other people views and suggestions.

4.   Framework: Some Reasons to Envision Future Fragilities

The megatrends we shall have to tackle in the next ten years may produce a world that is far from easy for everyone to inhabit, increasing the everyday challenges that many people face and broadening the gaps between rich and poor, young and old, city and country dwellers. Unlike so many rosy predictions, our future may well be anything but inclusive.

As designers we have to start to face and figure out these big shifts, considering how they can be managed and we can contribute to reduce some clear threats and risk included both in the single trend as well, much more evidently, in their progressive mixing and unpredictable combinations.

Sincerely speaking we have to avoid and stay far away from the attitude we had in Europe in the last 50 years toward the environmental and sustainability emergency: we knew since the 7'0s (the so famous *Rapporto del Club di Roma* in 1972) that we were in a straight line according to some terrible risks, regarding carbonization, climate change, water pollutions… and we did not face the problem seriously, if not moving when some processes where already ongoing in a not reversable way.

We cannot afford this approach speaking about human welfare and inclusion, where some directions toward the future are already relevant and clear, accelerated from the recent Sars-Covid pandemic and long-Covid behaviours. We have to move ahead, we have to forecast and anticipate what will be negative effects on fragile people: this is the educational and political goal of what we did, and the way we want to pursuit it.

5.   Framework: Scenario Setting: Macrotrends and Emerging Futures

The ageing population, the increased magnetism of major urban sprawls, growing awareness of the environmental emergency and climate change, increasingly ubiquitous (and necessary) digitalisation, the spread of creativity and of methods of social involvement and participation… these are all vitally important and interesting megatrends, whose rhythms and methods of growth are often unpredictable and intermittent, but taken together they will generate a world that's very different and, above all, one that's in a constant state of flux and transformation.

So first we design our users based on "future human fragilities" expectations, starting from 2 kind of preassigned templates that we asked to each group to fulfil:

-A scenario to 2033 based on the crossing of future trends in 4 main areas: mobility, domestic environment, food consumptions and communications modes, at the same time considering 3 dimensional and proxemic scales: personal, domestic, urban. (see **Figure 1**)

-A "molecular portrait", make of different pictures and visual components, trying to figure out a kind of "socio-cultural vitruviana", applying the technique of the *Cadavre equis* collage invented by surrealist artists more than one century ago. This portrait it is not the classical UXP profile, the so called "persona", but it much more open and flexible, and mainly based on psychological and cognitive aspects, not so anagraphical (name, genre, age…) as in UXP usual profiling.

Figure 1. Product example considering three dimensional and proxemic scales: personal, domestic, urban.

6. Findings

We presented to the students many theories and scenarios produced by the main and more considered contemporary futurists in the last 15-20 years (see literature references) but at the end they sum up with 3 major areas of risks and difficulties, that we defined as "outer zones", including 9 major profiles of potential future users (selected among the original 18 ones) that will illustrate the importance of keeping human factors in the focus of every action of design and transformation. These nine profiles then feature in the work of the students at the Milan Polytechnic School of Design, becoming the "main characters" for whom they have to design new goods and services for a truly better and more inclusive future for all. This will happen in the second part of the academic semester and in the following months, developing their final master projects.

6.1. First Outer Zone: Globalisation Disorders

We live in a fluid world, where the borders of space and time are things of the past. We also live on a single planet, where local diversities are often lost and blurred as everything is constantly mixed together in a melting pot of hybrids. The dynamics between local and global are unpredictable and irreversible, like the ones between past and future, between analogical and digital.

It's not always easy to understand this dimension and govern it: it obliges us to manage different roles at the same time, to share our intimacy with others, so preserving our identity and memory is not always easy or automatic.

Three corresponding profiles are-

6.1.1. Fear of Shared Mobility (FOSM)

In a scenario necessarily dominated by the platform economy, with services like co-working and co-housing, moving around using carpooling or car sharing may become a problem, for personal reasons of hygiene, privacy etc. The FOSM/Fear of Shared Mobility syndrome is the hypersensitivity to such means of transport that people – above all women – may develop, often in relation to the need to transport children or personal belongings.

A smart kit for managing hygiene and emergencies may help make their journeys less traumatic.

6.1.2. Techno-flexed Globalist

Living in huge, hectic, technology-obsessed cities often leads to a loss of authenticity and a sort of excessive global conformity. Technoflexed globalists experience a sense of disorientation and anxiety that may be triggered in isolation, followed by a sense of anger because the world has become so unfamiliar. They lose their sense of roots and are obliged to live in an excessively alienating dimension, where they feel they are ultimately citizens of nowhere and anywhere. Maybe a scent of something older and now lost can help them find their feet again.

6.1.3. Forgetful Multielaborator

Speed and dynamism are increasingly dominant phenomena in society today: it takes incredible effort to stay concentrated and focused in a high-speed world where multitasking is a must. The forgetful multielaborator risks becoming addicted to the always-on mantra, ending up condemned to being superficial, incapable of stopping to think critically about the single issues that add value to everyday life. Maybe only discreet backup from a digital assistant can help keep that hectic urge to keep doing more under control.

6.2. Second Outer Zone: Climate Change Imbalances

Although the climate emergency and its effects on the planet are abundantly clear to everyone, what is not always clear is the level of our own responsibility and personal involvement, so how we should behave. There's no doubt that there is a negative fallout on us, sometimes quite unexpectedly, and we feel we need to do something positive and dynamic, to have the courage to face up to the challenges that the future holds for us, even though the task is not always self-evident to every one of us.

Three corresponding profiles are-

6.2.1. PCS/Precarious Climate Syndrome

Climate change will force many people to abandon the places where they live and work and move elsewhere: climate migrants will wander the planet in search of safe new destinations. Uncertainty, loss of identity, anxiety and frustration will be the consequences of this obligation to move: the risk is that they will end up feeling themselves to be foreigners wherever they are on the planet. Maybe only a digital barometer to wear on the wrist will be able to give them a moment's peace and comfort.

6.2.2. Ethicorexic

The increasing scarcity of resources on our planet may lead to the development of forms of "eco-anxiety", which may also be generated by an ethical dilemma: how can I practise conservation and waste less? Ethicorexics respond by minimising their consumption, reducing their food to the bare essentials and looking for exclusively environmentally sustainable and socially ethical solutions. Doing good for the planet may end up paradoxically becoming harmful for the individual. Doing everything yourself, producing your own food and tracking how it grows may become a compulsive obsession.

6.2.3 Mercury Biomagnifier

The quest for a healthy, environmentally aware diet may trigger paradoxical side effects if we cannot track how our food its grown and delivered to us. Eating too much fish, for example, can cause mercury intoxication if the fish are caught in polluted waters, leading to a loss of life functions, the reduction in our ability to speak and a loss of memory. Mercury biomagnifiers may employ an algae-based therapy combined with a mercury detection system to help them survive by gradually eliminating excess toxins.

6.3. Third Outer Zone: Digital Excesses

We are all aware that new information technologies and digitalisation have changed our lives, often irreversibly. Artificial intelligence (Morace, 2018; Paura, 2022), augmented reality and the metaverse all await us in the near future and not everyone can take them in their stride, finding them easy to tackle and metabolise. The fact that we are enclosed in something like a "digital second skin" may sometimes produce disturbances in our psychology and relations that we have to learn to recognise and overcome from early infancy and maybe even beyond our physical death…

Three corresponding profiles are-

6.3.1. Digital Multiple Personality Disorder (DMPD)

DMDP is a disorder in which two or more real and digital identities alternate to control an individual's personality. The symptoms are brusque mood changes, irritability and depression, as well as difficulty in managing memories of the past. A "seeking mirror" can help individuals understand where they really stand in the to-and-fro between their different personalities, in turn helping them overcome their state of confusion.

6.3.2. Polarised Alexithymic

Excessive dependence on the digital world and social media can generate a sort of polarisation in how we communicate in the real world, reducing its value and standardising its nuances.

We may be able to fight against a general sense of apathy, the inability to experience real emotions and a lack of interest in others and correct them by turning technology to our advantage and making a more conscious, mature use of it, searching for a hybrid dimension known as "phygital" and giving value back to reality by speaking the same language that inevitably surrounds the polarised alexithymic.

6.3.3. Shared Identity rebel

The Alpha generation (2010-2024) is the first to be born in the world of social media and is sometimes subject to the sharenting phenomenon, in which parents share their children's progress on social platforms. Shared identity rebels are the ones who kick back against this, perceiving what they are experiencing as a false identity that's imposed on them and demanding a real, original, analogical identity of their own. Maybe only a sophisticated use of digital masks will ultimately enable them to show their true faces and express their personalities freely and independently.

7. Conclusions

We strongly believe this experimental practice is going to be highly successful: design works are still in progress and the first results will be available only at the end of 2023. But we already brought together important companies and partners (such as Esselunga and Fastweb) during this process, and this is already a very important goal, as we directly show during the Milano Design week 2023, presenting and exhibition on these 9 profiles at BASE MILANO, a very creative and dynamic cultural hub from the Milano city government, that invited us to display.

And again, during the Design for All Italy yearly reunion, we have been asked to display this research, as a way to investigate design futures and to understand diversity and inclusion in it.

What we did during this practice at the Design School of Politecnico di Milano has no many reference or benchmark in term of academical practice, according to my personal experience and knowledge, teaching since more than 25 years: generally speaking the Design for all practice are always based on present and normally placed in a running scenario: we truly trust this as one of the first time that a group of 50 students base their final thesis on a 10 year scenario to investigate and promote inclusion and diversity into the design culture (Clifford, 1988; Rifkin, 2001).

We believe there is a new way to look at our futures, where people are absolutely first, where diversity it is a key factor, where social inclusion it is the strategic key to design a better society, not only better products. This way should necessary start from the beginning of our education as future designers, should become a given into our strategic approach to design: I do not see any other more meaningful way to look at our future as designers and as people living on planet Earth, today and tomorrow.

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