

DESIGNING ON THE EDGE OF CIVILIZATION

REFLECTING ON THE FUTURE OF DESIGN IN TIMES OF CRISIS

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The paper explores a series of important phenomena that have concurred to a global crisis, and their influence in pushing the design field to a crisis of its own. By acknowledging the scale and significance of humans' influence on the current state of the planet, and the ways in which design has contributed to aggravate the environmental and humanitarian crisis, this provocative essay critically examines the democratization of design knowledge and the use of decentralized, digital means of production as promising approaches to improving design education and practice moving forward into the 21st Century.

Keywords: Critical design, mass-production, planned obsolescence, sustainability, Anthropocene.

1. INTRODUCTION

The scope of this paper is ambitious, but its encompassing breadth is a necessary risk in order to try and articulate the scale and seriousness of the situation in which designers are presently working. A radical and energetic shift in some deep-rooted assumptions and internalized principles, which have been ruling the mindset of the profession for decades, seems more urgent than ever.

Initially, a view is described on the principal facts and phenomena that determine the overarching context of our global existence, as the dominant beings amongst many living species inhabiting the only place in the universe capable of harboring life. The analysis emphasizes humans' responsibilities for the current state of affairs, which includes environmental collapsing, social disparities, and global threats, such as the Covid-19 pandemic.

The critical lens then turns to design more specifically, and to how the development and present ethos of the profession displays clear indications of an existential crisis of its own. This analysis builds on the critical thinking tradition of the field; while also drawing from the author's own academic and professional experience in the Americas and Europe, spanning the past twenty-years, when many of the issues discussed in the paper got notably aggravated.

The final part examines potential alternatives that may help us come out on the other end of this crisis with an improved understanding, moving in a better direction. Since the beginning of the 20th Century the basic expectation around the work of designers has not changed much: our mission is to put more, allegedly new stuff in the world. As we will try and show, this is fundamentally problematic, and it is

paramount to dissociate the image of designers from the subservient role we have been playing in connection to systems of mass production and consumption. Two scenarios are presented, accounting for strategies like stopping the urge to make new things, shifting the focus from novelty to purposefulness; to enabling all of humanity to join the collaborative task of designing the future.

2. THE CONTEXT OF DESIGN IN THE 21ST CENTURY

We live in a time characterized by fast-paced change. Speed is not the only factor making this century, by all measures (social, economic, artistic, scientific, technological), the most dynamic of human history (Harari, 2015, 2017); continuous, yet erratic, transformation also accounts for the highly complex reality within which our lives presently unfold. Through the daily struggle to disentangle trustworthy from fabricated facts, to the unstable shifts in political power across the world, and the global threats such as the current Covid-19 pandemic, people living today must make sense of countless uncertainties over which they have little or no control. As we moved from a society of active makers to one of passive consumers (Bauman, 2007), the issue of lack of control became yet more problematic, since even our most basic necessities are usually provided by the will of third-party agents. Choice over predetermined options defined by others that alienate or disenfranchise personal agency are not manifestations of freedom or autonomy in any meaningful sense (Marcuse, 2002).

Designers, however, are on the active side of change-making. As such, they normally have some control over the things they design. But the power of designers is quite limited, because the scope of their decision-making is encapsulated by greater forces that have a much stronger sway in determining the structural organization of societies. In this paper, these forces are understood as part of an identifiable set of phenomena that make up for the foundations upon which 21st Century design develops, including: the widespread acknowledgement of the Anthropocene; the global environmental and humanitarian crisis; and the growth in socioeconomic inequalities. In the following sections, a succinct analysis of each of these phenomena will be offered to help us render a more detailed picture of the spacetime in which the work of designers takes shape, both now and moving forward into the foreseeable future.

2.1 THE ANTHROPOCENE

Since the dawn of *homo sapiens*, the making of an artificial world by means of imagination and the transformation of nature has been a defining trait of our species. Norman Crowe's *Nature and the idea of a man-made world* offers a vivid account of our power to transform nature into a new, artificial creation. He calls attention to how shelter, provided by chance occurrences – such as caves – has gradually become insufficient at expressing the human spirit. Ambitions grew; vision and skill evolved, ultimately resulting in “abodes that might be called works of art” (Crowe, 1997, p.5).

The impact of human activity in the configuration and mechanisms of nature has, nonetheless, remained very modest and largely localized for hundreds of thousands of years. The activities of human communities began to markedly change the organisation of nature with the advent of agriculture, which developed independently in dispersed regions of the globe, starting circa 11,000 years ago (Ellis, Beusen & Goldewijk, 2020). Since then, several evolutionary milestones have been achieved: the taming of fire, the development of language, the domestication of vegetable and animal species, the perfecting of simple artefacts into objects with specialised functions, the utilisation of more efficient sources of energy, the design of transcontinental means of transportation, communication systems, and

autonomous machines. The more recent stages on this evolutionary path encompass events of global significance such as the Scientific, Industrial, and Digital Revolutions. All of those revolutionary moments have taken place in the last five-hundred years; yet they have distinctly propelled humanity forward at an ever-increasing speed, bringing us to the present, when the scale and impact of our activities are the principal agent of changes to the global state of our planetary ecosystem – including changes in climate, mass extinctions, and the accumulation of toxic and synthetic chemicals in the ocean, the soil, the atmosphere, and within the metabolism of living beings (Lewis & Maslin, 2018).

The time when human activity has overpowered natural activity as the primary agent of global change is called the Anthropocene (Lewis & Maslin, 2015). Although not officially recognised as a distinct and agreed-upon geological era, the Anthropocene is an observable technological, environmental, and socioeconomic reality (UNDP, 2020). Accepting the Anthropocene is more than a scientific dispute about how to divide geological time; it is a political debate imbued with competing ideologies that will ultimately establish whether human civilization is at one time beneficial and massively harmful, on a planetary scale (Dryzek & Pickering, 2019). The Anthropocene is the age in which the current design philosophy, knowledge, and practice – along with all the other products of human inventiveness – will undergo their ultimate challenge: safeguarding the future.

2.2 GLOBAL CRISIS

The interconnectedness of Earth's ecosystems and our dependence on them was elegantly captured by Morowitz's biological account of the fundamental conditions for life, when he stated that "life is a property of planets rather than of individual organisms" (Morowitz, 1992, p.6). Be that as it may, humans evolved to be the only species on this planet that is aware of its existence, of the existence of other beings, and of the fact that all biological existence needs to be sustained by things like water and food, and by the availability of chemical elements such oxygen, hydrogen, nitrogen and carbon. This knowledge, and the power and impact of our transformative technology, place humans in an inescapable position of caretakers, looking after all life on Earth, especially sentient life (as amply explored in a volume edited by Peter Singer, 2006).

From an environmental perspective, there is an elementary flaw in the core of our economic system whereby financial returns grow exponentially while the capacity of nature to recover and replenish the resources that ultimately support those monetary gains, grows linearly (Pettifor, 2019). The result is an obvious misalignment of timescales between human and natural cycles. Moreover, exposure to environmental degradation is unevenly experienced by people depending on their socioeconomic conditions (Islam & Winkel, 2017). Land value is cheaper in polluted parts around urban centres or in proximity to industrial areas where it is more likely that air quality will be worse, infrastructure such as water supply or sewage systems may be limited or absent, and public services like garbage collection are less frequent or ineffective (Habitat for Humanity, 2021). As housing and land prices soar in desirable areas of the cities, these unhealthy places are no longer where only the extremely deprived and most vulnerable live, but where the working class also dwell under terrible conditions (Ezeh et al., 2017). Destitution, displacement, despair: the crisis is environmental but, first and foremost, it is humanitarian.

Inasmuch as it may be convenient to keep the calamity far from the eyes of the elites, turning a blind eye does not make the problem go away. The public health disaster brought about by the Coronavirus pandemic has been a harsh lesson of how ignoring the circumstances of the poor and abusing the

environment will not protect the rich from suffering the consequences. The issue is global: the virus does not distinguish class or creed, and only an inclusive approach to the problem will bring the international community closer to an effective long-term management that contains or eliminates the life-threatening risks of this and of future pandemics (WHO, 2020).

2.3 GROWING INEQUALITIES

Inequality is a central problem of our civilization (Wilkinson & Pickett, 2010) that is certainly an aggravator of the humanitarian and environmental crisis discussed above. Marked inequalities – of class, gender, or ethnicity – hinder access to social opportunities to education and participation in political debates, leading to imbalances on the definition of priorities for action and distribution of resources (Drèze & Sen, 2002). Inequalities are also terrible for people’s health, and not just for the worst-off. People living in more unequal societies are relatively sicker, live shorter, and have more chronic and lifestyle-related diseases than those living in societies with less inequality (Marmot et al., 2020).

It is true that some relative inequalities have improved over the past centuries, but overall inequalities have notably been on a sharp rise since the second half of the 20th Century (Piketty, 2014). Consider the effects of the Covid-19 pandemic which can already be observed after less than two years since its outbreak: the wealth of billionaires has risen by almost twenty-five percent (Neate, 2020), while more people worldwide (specially women) suffered with food insecurity and hunger (Savage, 2020).

Inequality also affects entrepreneurship, creativity, investments in innovation and, thus, design. Stiglitz (2013) outlines two important reasons for this: first, widespread inequality reduces the number of people capable of getting involved in innovative endeavors that demand high levels of education and training, and to which the returns are not immediate. Secondly, investments in research and technology are, by definition, risky, and the level of trust within a society tends to follow its level of equality. The more unequal a society is, the less people trust each other, the institutions, and the government (Marmot, 2016). Hence, there are fewer people with the time, expertise, and the resources to invest in the changes and innovations needed to improve things and, thus, diminish inequality. This is a tragic design dilemma that should not go on unnoticed.

3. THE NATURE OF OUR OWN CRISIS

This section will focus on some of the most persistent manifestations of the professional crisis designers find themselves in; those historically seen as integral to the principles and practices of the field.

3.1 PLANNED OBSOLESCENCE: 20th CENTURY BAD HABITS

For most of the 20th Century, the international economic system has functioned under the assumption that wealth could be created by increasing technological and manufacturing capabilities whilst diminishing the value of human labor (Ellis & Smith, 2010). Market capitalism was then, and continues to be, grounded on two basic principles: the mass manufacturing of material goods at the lowest monetary cost possible, and the acquisition of such goods by consumers at the highest price possible. If anything, in the past decades, this scenario has worsened with the exponential role that financialization and speculation plays in the globalized economy of today (Pettifor, 2017). The neoliberal agenda has taken capitalism to higher extremes by further dissociating value from productivity and human innovation, making wealth creation a product of the management of intangible assets such as stocks, market shares, and money (Dore 2008; Tomaskovic-Devey & Lin, 2011).

A very effective way to connect these two pillars of the ruling economic system – mass production and mass consumption – is by devising a mechanism whereby a growing number of people become interested in acquiring more and more things. This can be achieved by ensuring that the things people buy rapidly malfunction, degrade, become outdated or undesirable; in other words, that they become obsolete (Lobontiu, 2013). Here, obsolescence is not an inevitable fact, but an intentional and integral function of a system designed to assure that private profits will steadily increase (Kurz, 2015). Another way of saying this is that any product has as its primary function to help increasing company margins, and everything else is but a factor of that primary function.

Design and innovation are, equally, functions of this profit-seeking system, in the sense that a lot of what design helps making are things doomed to, quickly and artificially, become obsolete (Whiteley, 1993). Innovation in this context is seldom intended to have a lasting impact. Across the past Century, there was an observable subservience of design to the mass production system (Margolin, 2003). Perhaps then, this position could be justified on the grounds of ignorance: design grew from industrialization and thus it had to remain tied to it. In the 21st Century, that argument has no longer any credibility; accepting design as an accomplice in unsustainable cycles of production and consumption is now an educated, acquiescing choice which places designers on the wrong side of history.

3.2 REDUNDANCY: MASS-REPEATED DESIGN

When the profit-seeking mindset of those that control the means of production (and the political and economic processes which enable those means of production to persist) determines what gets to be made, a logic conclusion follows: the things that can generate higher profits will be prioritized. This occurs regardless of whether those are the necessary things which can contribute to effectively raise the quality of life of people, or that can support transformative changes to the natural and social landscape of communities around the globe. When profit rules, everything else obeys. By and large, mainstream design follows money, and those with deeper pockets will have louder voices. In the words of Tatum (2004, p.77): “Design always must have a patron. And those who are best able to pay for it necessarily will have their perceptions and interests more actively represented.”

Obsolescence is an integral part of companies’ strategy to sustain a competitive advantage (Brondoni, 2018). Products must be only good enough to last until the next version is out: quality needs to be constraint by fleeting, superficial values externally determined by market pressures and advertising campaigns – wants are transfigured into needs and associated with personal worth and social identity (Dolan, 2002). Investing on incremental, limited change and improvement of the same product is better for stimulating consumption than pursuing long-term value via favoring durability (functionality and meaning with lasting quality) over novelty, then moving on to the next problem. Designers are often confined to putting their ingenuity and energy towards iterating a slightly different version of the same thing over and over. For as long as this mindset prevails, creativity will be slave to repetition and blind to a myriad of very real problems to which the solution cannot come from the multiplication of industrialized goods on the shelves of megastores, or on the baskets of online shopping platforms.

3.3 SUSTAINABILITY AND IMMATERIALITY: A GAP IN EXPERTISE

As a professional class, one of the primordial responsibilities of designers should be to promote improvements to the lives of people whilst protecting the fundamental conditions that allow our ecosystem to sustain life, both in the present and in the future (Manzini, 2008). It is about time to

acknowledge the deep-seated incompatibilities between the things produced by the design activity and the long-term needs of the living inhabitants of Planet Earth. No matter how creative we get about our economic models and whether we frame the current global crisis as a direct conflict or a mere misalignment between economic growth and environmental protection; there are inescapable limits to the natural capital of the planet (Meckling & Allan, 2020).

The urgent need to integrate sustainability from the very start of design education is fundamental to allow for better impacts in the future practice of design students (Quam, 2016). Design is still widely taught in isolation from the core principles of sustainability, and from a broader understanding of the ethical implications of determining the configuration of products that will be used (and discarded) at a massive scale (Santos, Sakurai & Lima, 2016). The delay in fully embracing sustainability as a core value, and to activate such value within the context of practice, is a problematic and contradictory issue in design education because the foundations for working within the ethos of sustainability have been an intrinsic part of design since the origins of the field (Vezzoli & Manzini, 2008).

Another overlooked area which expands on the possibilities of design to offer solutions not necessarily associated with the mass production of material goods is service design (Sangiorgi & Prendiville, 2017). Services can help substituting idle ownership of personal products with on-demand use of collective resources (e.g. car sharing; equipment hiring). Yet, according to the Service Design Network, there are only two Universities with courses focusing on service design in the whole of the United States (SDN, 2021). Much of service design expertise still comes from disciplines associated with the economic status quo, like marketing, management, and production engineering (Morelli, de Götzen & Simeone, 2021).

4. PROMISING WAYS OUT

Inertia is a common response in the face of uncertain choices. Most people today recognize that our individual and collective choices have a great impact in the environment, that we are leaving a toxic footprint on every natural system across the planet, that our economic models and associated production and consumption patterns are fundamentally unsustainable. And yet, the changes we can foresee are frequently perceived as too daunting, complicated, impractical, or without any guarantee of success within a timeframe we can relate to on a personal level.

Simply 'hoping for the best' places all responsibility for change either in the hands of someone else, or outside the scope of our time to make decisions. As such, it evidently resolves nothing, yet it does have implications that can be predicted if we consider a stable degree of continuity in the behavior of all phenomena discussed above. As the problems become more severe, a design education that ignores their existence will produce designers unaware of and irresponsible to the most pressing issues of the future. Consequently, their value to society will be deemed irrelevant or even damaging.

4.1 PURPOSEFUL THINGS, NOT NEW STUFF

Consuming is different from consumerism: consuming is a necessity of all living organisms, consumerism is a social compulsion (Bauman, 2007). One of the qualities that would define a less consumerist society is the notion that having enough is better than having too much, and that quality is different from novelty. In such a society, people would have less things, but that are durable and reliable, or to which they have an emotional attachment. When consumerism is rejected, well-being expectations are dissociated from the acquisition of new things (Manzini, 2008).

Purposeful things are things that provide adequate functionality, that are imbued with symbolic meaning, or both. Advocating for purposeful things offers an alternative justification for the acquisition of goods which relates objectively to performance and durability, and subjectively to symbolic and emotional value. It, thus, presents permanence as a value, in opposition to impulse, ostentation, and accumulation. In today's world, however, permanence is still seen as a threat to economic sustainability (Schumacher, 1993). According to the objectives of our examination, focusing on the making of purposeful things rather than worshiping novelty as a value on its own could be positive. The intrinsic worth and the useful characteristics that make things purposeful are better fit to hold the value they have to people than the purely aesthetic awe cultivated within the logic of planned obsolescence. Furthermore, materiality is not a precondition for purpose, but even when possessing a material existence, the materiality of purposeful things is attached to the idea of usefulness and durability which, again, support this strategy as a sustainable option moving forward.

However, it is less clear how purposeful things would address the issue of redundancy or mass-repetition. That is because defining purpose in an interconnected planet with almost eight-billion people is extremely difficult. How to account for subjectivity and differences in opinion and taste when it comes to understanding purpose? Take, for example, one category of products: mobile phones. Mobile phones are valuable to all kinds of people; they afford an array of very useful functionalities and could be built to last for very long. There are around 185 brands of mobile phones worldwide ("List of Mobile Phone Brands by Country," 2021) that offer tens of thousands of different models (DroidChart, 2021; GSMArena, 2021). Mobile phone production and waste are extremely unsustainable, and their environmental impact is very significant (Rizos et al., 2019). While it may be very hard to define which make or model amongst this vast variety is more purposeful in any universal way, it is evident that the scale of production and the consequent waste resulting from this single type of product is absurd.

4.2 EVERYONE IS A DESIGNER: FAB LABS, OPEN SOURCE, CREATIVE COMMUNITIES

Extending the benefits of well-designed objects to the wider population is a relatively failed ambition of design since its origins in the Arts and Crafts movement, which was also not achieved by the ideology and innovations of Modernism (Sachs, 2018). Since after the second half of the 20th Century, the participatory design (PD) tradition has been a fundamental driver in the effort to democratize design processes (Bødker & Kyng, 2018; Bratteteig & Wagner, 2012; Luck, 2018). PD's most significant achievements have been related to values, principles, and representation rather than the physical configuration and use of the resulting material goods (Khan et al., 2020). So, making design a true asset in the improvement of the living standards of the common citizens is an aspiration that certainly evolved through time, but which is yet to come to full fruition.

The strength of some more recent design approaches lies in their ambition to combine ownership of highly effective means of production with the knowledge and technical skills to put such means to wider use. By focusing simultaneously on the democratization of ideas and plans (such as in PD), and on accessible, bespoke digital fabrication and technologies (such as Fab Labs, open-source programming), these new directions could be revolutionary. At the core of this promising approach is the combination of participatory democracy and social innovation, brought to action by decentralized creative communities, and enabling ecosystems (Manzini, 2019).

But not all hope depends necessarily on the integration of cutting-edge technology. Some examples of creative communities whose positive impact in changing people's lives in transformative ways entail the application of design processes to develop participatory solutions which prescind of new products or advanced technology. The works of Hilary Cottam (2018) within the health and social care system of the UK is an inspiring example – with successful, measurable impacts – of design activity benefiting people via enabling their inherent power to make changes to their own circumstances.

5. REFLECTIONS: DESIGNING ON THE EDGE OF CIVILISATION

Hundreds of years of continuous abuse of the planet's resources and living organisms have pushed humanity to the limits of an existential catastrophe. For a long time, this was the result of a self-inflicted disaster caused, arguably, by ignorance. Through the events that brought us to the Anthropocene, when an environmental and humanitarian global crisis of colossal proportions is being aggravated by growing inequalities, design has been an accomplice in its subservience to the larger powers of the capitalistic doctrine of mass production and indiscriminate consumption.

By latching onto old habits and resisting the urge to oppose profit-oriented market pressures, design is now amidst its own crisis. While planned obsolescence is fundamentally a distortion in the perceived quality of objects, redundancy is a problem of scale, of the quantity of seemingly undistinguishable things that are repeatedly produced. Together, these two aspects of the ruling economic system make for a combination with tragic effects over the natural environment and human communities (especially those in emerging nations). Embedding and enacting principles of sustainability within the core of design education and practice remains an unattained aspiration. Thus, generation after generation of young designers is prepared to be absorbed by a system of production with an outdated understanding of how nature works, oblivious to the limits of our planet, and governed by principles of immediate profit.

A pervasive reference in critical design, Victor Papanek, advocated for a mere 10% of every designer's time to be devoted to 'pro bono work' – a minute ambition. An acclaimed 2007 exhibition of the Cooper-Hewitt Museum, called 90% of the world's population 'the other' – an unfortunate choice to articulate a well-intended effort. In both cases, the share of competence and commitment required from designers and the expectations of their sense of civic duty and professional responsibility are embarrassing. We should be devoting 90% of our time to 90% of the people, and 10% to the other. A true commitment to a fundamentally different model needs to go beyond rhetoric and intentions.

But transformative change is on the rise. Turning to a model less dependent on the ever-growing mass production of redundant stuff is not only a possibility but an existential necessity. Many designers are embracing this project and working to make it happen at increasing scales worldwide. The critical designers of today are turning away from mainstream mass-production systems to find meaning elsewhere. Significant changes to the design curriculum need to be put in place swiftly, focusing on participatory, sustainable processes of designing and making. In that way, the knowledge necessary to transform reality will be democratized at scale, and the emerging technologies and digital means of production will help breaking the dependence of common people on the vicious cycles of unsustainable consumption.

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