

# From Emergency to Emergence: re-think design approach in a transition age

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## ABSTRACT

This paper intends to reflect on the questions that, in relation to the current COVID-19 emergency, invest design and its new cultural, social and political role. The undoubted impacts that the pandemic has produced in many spheres of our lives should not only be intended as an “emergency” to be quickly responded to, the virus allows the “emergence” of the opportunity to dispel some contradictions of our time, with critical, problematic and lateral questions. In its meaning of “emerging phenomenon”, the virus opens up conceptual and operational scenarios that deserve to be actively investigated, also by trying to force the project’s capacity to intervene in everyday practices. In this sense, the paper highlights the “political” action of design as an “attitude” to generate a questioning urge that is actively inserted into the world, looking at and investigating the concepts that shape a vision of constantly changing design. Through four case studies, the paper carries out “practical theories” capable of broadening the field of intervention of design, incorporating multiple contextual relationships and outlining a geopolitical dimension within which to identify new forms of dialogue with the “real world”.

*Keywords:* Attitude, Emergence, Frugal Design, Recycle, Restorative Design, Technological Disobedience.

## 1. FROM EMERGENCY TO EMERGENCE

For the first time on 31 December 2019, the WHO China Country Office was informed of cases of pneumonia unknown etiology detected in Wuhan City, Hubei Province of China. It is perhaps time for the world to collapse.

It is known that the global pandemic of COVID-19 has had a number of far-reaching unpredictable effects in many areas of life. The abrupt breakdown of many of the “natural logics” prior to the crisis — in very different areas, from cultural to political — has led to the emergence, or strengthening, of new epistemic and ontological dynamics and at the same time the emergence of new collective and non-collective imaginaries.

The pandemic has sanctioned the shift from an analogue to a digital world, grafting itself into a more profound modification of social relations, both in the offline and online spheres, and generating a blurring of the distinction between reality and virtuality and the distinction between man, machine and nature (Floridi, 2015). The pandemic has contributed to making evident the need to re-imagine our relationship with the other and consequently to re-design our “proxemics of space” (Hall, 1966), and more generally our “being-in-the-world”, as agents of a new ecological condition.



In this sense, the pandemic as an “emergency” can become an opportunity to prefigure changes and transformations in very different fields and at very different scales. The concept of emergency, commonly understood as a rapid event requiring a rapid response, is proposed as a condition in which the “emergence” of themes and issues that already exist in a latent way, takes on value and which, intertwined with other more topical ones, force us to modify the times and modes of reflection on the changes taking place.

The word emerging or emergent refers to that process of coming to light, or becoming relevant and prominent. “Emergent is not a static property; it is a label for a process” (Rotolo et al., 2015). Emergent “refers to the arising of novel and coherent structures, patterns, and properties during the process of self-organization in complex systems. Emergent phenomena are conceptualized as occurring on the macro level, in contrast to the micro-level components and processes out of which they arise” (Goldstein, 1999).

In this new and changing scenario, design confirms itself as a powerful tool to transpose the needs and expectations of human beings into the reality around them, fostering the production of new imagery, as “a language that a society uses to create objects that reflect its aims and values” (Sudjic, 2009).

László Moholy-Nagy’s progressive and transversal approach opened up the world of design to critical reflection in analysing the interconnections and scientific and technical implications with everyday practices. Alice Rawsthorn, with clear reference to Moholy-Nagy, says that design becomes an “attitude”, which is expressed in “the idea of design and the profession of the designer has to be transformed from the notion of a specialist function into a generally valid attitude of resourcefulness and inventiveness which allows projects to be seen not in isolation but in relationship with the need of the individual and the community” (Rawsthorn, 2018).

The field of design thus acquires an emerging dimension that projects it beyond its traditional disciplinary boundaries: not only do spaces and artefacts need to be reconceived, but also our modes of social interaction, our ways of making community, our relationship with ecosystems, our models of economic and productive development.

Investigating the political and social role of design, and its possibilities of agency in relation to the specific forms of emergency that characterise the contemporary world, Paola Antonelli’s positions take on a highly topical character. In dealing with the theme of “broken nature” (Antonelli, 2019) she proposes a “restorative design” through the search for a new balance between humanity and nature that is played out on different scales, from the microbiome to the cosmos, from the oceans to insects, including human agency.

In other words, it is taken for granted that in order to act within a context of crisis it is necessary to prepare ourselves — as individuals, as local communities, as nations and as humanity — to adapt our lifestyles and our transformative processes to a world that will certainly be different from the actuality of the “design for a real world” (Papanek, 1971).

## 2. BETWEEN EMERSION AND EVERSION

Although the anthropocentric dimension of design is not only intrinsic but also historically conceived by the discipline itself, the development of more inclusive and complex narratives led Victor Papanek already in the 1970s to the development of a real approach to design, as enriched with an ethnological sensitivity to local cultures and the vernacular





characteristics of places, and open to the specificities of the material cultures of the communities for which it is designed.

For Papanek, then, design becomes not only a process conveying form, but also an instrument of geopolitical change, “providing not only much needed know-how but also working towards universal principles of cooperation” (Papanek, 1971). Thus design enters the domain of competences not addressed to the global market, but to government institutions in search of new methods to manage and organise forms of life that confront the political, social and technological transformations of the time.

Among his many projects, the most iconic and emblematic of his approach to social design was definitely the Tin-Can Radio (Figure 1), a transistor communications device. The radio receiver, designed in collaboration with George Seeger, then a student at North Carolina State College, was self-built and destined for third countries. It was made from a recycled fruit juice can and powered by a candle (dried cow dung or other available fuels could be used as an alternative to wax) and a lantern. The heat produced was converted into enough energy to operate the receiver with no selective function. This device, originally developed for the US military and later adopted by UNESCO, was seen as a “participation facilitator” for communities cut off from the advancement of new media and was tested in some rural communities in Indonesia.



Figure 1. *Tin Can Radio* (1962) by Victor Papanek and George Seegers and the radio decorated by an Indonesian user.

Subsequently, several aesthetic changes were made to the device by villagers, using coloured paper and pieces of cloth, ornamental motifs and local materials. Such interventions, according to Papanek, were not only a way to improve the device, but also a way for those communities to get in touch with new technologies, giving the device a meaning appropriate to the local material culture and at the same time initiating forms of integration into the globalising system of mass-media communications.

In the face of deepening social and ecological crises, design began to emerge as a crucial domain of thought and practice about life itself and the creation of worlds. This has led over time to emerging and subversive narratives that help define a new, deeper understanding of the relationship between design, production and the environment.

Real and localised practices, projects or operations of an informal nature redesign or disobey the material, formal, aesthetic or functional conditions, arrangements and inscriptions of design objects and the political effects of their use. In this sense, it moves away from the traditional “problem-solving” attitude to seek to produce spaces of contestation and dissent, where “problem-setting” succeeds in unveiling emerging issues and problems (DiSalvo, 2017)



Ernesto Oroza's Cuban revolution can also be included within this trend. Through "disobedience", expansion or subversion of these parameters — agents, spaces, times, practices and products — "disobedient re-design" incorporates a conflictual dimension through which it acts as an engine for the transformation and politicisation of design and its effects on the world.

A bicycle with an artificial kerosene engine in a plastic bottle becomes a Rikimbili (Figure 2); a washing machine engine used in a key-copying machine; television aerials made from tin plates from canteens; fans whose engine comes from countless other objects. Re-design objects thus acquire value for their potential, for the possibility of becoming something else, rather than for their topicality, for what they should be and for what they should serve. The success of re-design objects therefore depends on the possibility of being "untethered": of becoming accessible, manipulable, modifiable, alterable, non-composable, recomposable, re-editable, in order to multiply their functional, formal and material possibilities. The logic of disobedient re-design is very similar to that of hacking: it is about escaping predefined answers in order to explore and experiment in a very direct way with the immediate conditions that allow us to extend or subvert the possibilities of a system, change its logic and shift its limits.



**Figure 2. Technological Disobedience by Ernesto Oroza: Rikimbilis model and the mechanic Felix Ramon Guirola with his new bike.**

Through the presence and circulation of its productions, disobedient re-design brings new, previously invisible or unnoticed agents onto the scene, who go from being simple users and passive consumers to becoming re-creators of their most immediate material environment.

If these agents, like designers and producers, establish and recreate forms of intimate, close and experimental relationships with matter, it follows that design practice can emerge and continue during subsequent re-appropriations, re-interpretations, modifications and adaptations by users, in alliance with matter and objects, even at the end of their presumed useful life.

This is perhaps the main task of disobedient re-design: to break with the deterministic idea that there is only one world or one way of composing and designing and, at the same time, to materialise a "pluriverse" (Escobar, 2018): to recompose and recreate other possible and different worlds, experimenting and materialising, making present, unforeseen forms of life.

In the face of the current economic and financial crisis, including the pandemic, and the increasing scarcity of resources worldwide, it is now more important than ever to address the idea of creating more valuable goods, services and business models, at a lower cost, for more people. Innovative solutions that are both affordable and accessible are indispensable





to address the pressing social and resource scarcity problems that contemporary society is facing.

Design as “frugal” used to refer to innovations developed in developing markets where resources are limited, could be an answer to these needs, as it concerns the ability not only to do more with less, but to do better with less, or to create much more value, both economic and social, by minimising the use of scarce resources.

In his inspiring TED talk, Vinay Venkatraman, co-founder of the Copenhagen Institute of Interaction Design, presents for the first time the results of CIID’s research on “technology crafts for the digitally underserved”, and how innovation spreads in the poor but ingenious conditions of India or Africa, and portrays a new kind of entrepreneur.

In the words of Vinay Venkatraman, perhaps learning to do more with less may be the only way to sustain growth and prosperity in the West. The Indian Copenhagen-based researcher refers to “intelligent improvisation”, a term that specifies the creative way in which ordinary people solve everyday problems, whose solutions are not sophisticated or perfect, but create value for users at a very low cost. According to Venkatraman, these people, like new craftsmen, are able to turn an adversity into an opportunity and something of little value into something of great value. In other words, they are masters of the art of doing more with less, which is the essence of frugal innovation (Venkatraman, 2012).

Eversiveness and frugality may constitute two paradigms in the practice of design, in response to the great criticalities that “the age of wealth” has placed in front of us; if properly supported by the technological innovations of the fourth industrial revolution, they may allow contemporary culture to recover the category of reciprocity, a “giving without losing and a receiving without taking away” (Zamagni, 2019).

In this direction, the Rotterdam-based research and design studio The new raw, has introduced a new initiative called Print your city! (Figure 3) that uses 3D printing to transform plastic waste into street furniture and explore the possibility of involving citizens in the transformation of public spaces through recycling and state-of-the-art technologies at local level. The project raises awareness of the disposable lifestyle of contemporary cities, which have exponentially increased the production of plastic waste.

The first result of the project takes the form of the XXX bench, designed in Amsterdam for an original use of recycled plastic bags. In Amsterdam itself, residents generate an average of 23 kg of plastic waste per person per year, which is enough to 3D print one bench for every two inhabitants per year. The bench can accommodate two to four people and takes the form of a two-sided rocking chair, on which users must balance together or rock each other. Each bench can be easily customised in terms of form or function and can also incorporate messages or logos. The production process uses large-scale pellet extrusion using recycled plastic from municipal waste or ground recycled product flakes, weighing 50 kg, 150 cm long and 80 cm wide, which are 100% recyclable. Such a process ensures a short material cycle, in which constant streams of urban plastic waste can ensure a steady flow of material for the evolving needs of the city (Narea, 2015).

The firm has further expanded its initiative with the Zero waste lab in Thessaloniki. The project invites citizens to bring their plastic household waste to the lab, design their own customised street furniture and 3D print it with the help of a robotic arm and on-site recycling facilities. In addition to turning waste into street furniture, citizens can learn more

recycling facilities. In addition to turning waste into street furniture, citizens can learn more about the plastic recycling process, read about the circular economy and design new

furniture for their neighbourhoods. Via a web page, interested parties can generate customised designs, choose the location, and select from a number of additional functions that promote a healthy, environmentally friendly lifestyle. The geometries of the objects are based on ergonomic curvatures that support correct posture, and each piece bears an indication of the kilos of plastic used to make it (Lekka, 2019).

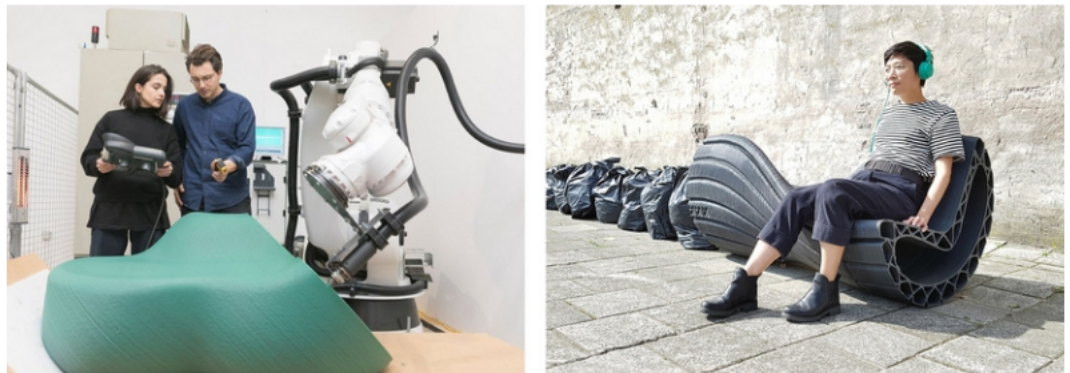


Figure 3. *Print Your City!* by The New Raw studio: *Zero Waste Lab* and *XXX bench* projects.

In these contexts design finds its essence, putting itself in the position of being a factor for change acting where nature has lost its initial stigma of being a world apart from culture. In this scenario, design claims a role as a responsible actor in the habitat irreversibly modified by human intervention.

Design also brings into play practices of imagination, revolt, resistance and repair of the crisis points of a social system and the forms of life of capitalism. This dimension makes it possible to develop a radical critique and a concrete rejection of the new forms of exploitation of neoliberal capitalism. Therefore, the project of the real is a way of connecting everyday transformations with the horizon of a radical change, a design that activates a dimension, first of all, political, of refusal of the “status quo”. The aim is to build a design and reflection platform aimed at excavating, demythologising and challenging the existing in order to try and design future scenarios.

It is in this framework that *Ore Streams* (Figure 4) developed by the Formafantasma studio fits. It is an investigation into the folds of the disposal system of computer and telephone devices in the rich West. Computers, laptops, motherboards, disused mobile phones are the basic elements used to build a collection of alienating furnishings supported by an immersive video-installation made up of documentation materials around the millions of tons of electronic waste thrown away by advanced countries that end up, every year, mainly in the countries of the South. A high concentration of this material is deposited in some African states, notably Nigeria, Ivory Coast and Ghana.



Figure 4. *Ore Streams* (2017-2019) by Formafantasma studio.





Ore Streams points to the bulimia and technological cynicism of western societies and proposes itself as an attempt to extract and recycle this waste. This is how old computers and other technological objects are disassembled and reassembled to obtain the furnishing elements of a workstation, an office, a mirror of a critical contemporary issue: the toxic hi-tech lead, mercury and cadmium dumps.

Through Ore Streams, Formafantasma aims to identify a non-trivial strategy of denunciation by bringing into play a complex and stratified device. The confirmation of a wide research that ranges from industrial products to more research-based projects generated by a moment of deep historical and social transformation. A way of working that explores the potential offered by design, feeding and proposing scenarios in which the design proposal is experienced as an agent of transformation and change. Formafantasma explore an expanded dimension of the project by declining a personal idea of practice that challenges the conditions of the designer's work as scanned, divided and shaped (Petroni, 2020).

### 3. TOWARDS EVERSIVE DESIGN: OUTLOOKS

In the present crisis, in which the pandemic is proposed as an opportunity that allows latent themes and questions to emerge in new terms, it seems necessary to reflect on a new dimension of design that, going beyond the definitions, meanings and sense that have traditionally been attributed to it, takes on the role of agent of change in everyday reality, through a new attitude of consciously responding to the challenges posed by globalisation, imposing, as Papanek states, "a significant order on the world" (Papanek, 1971).

The case studies presented in the text are placed within this horizon of meaning, in an attempt to highlight reparative and subversive design practices that bear witness to a new way of conceiving design in its technological, social and political dimensions, as a design discipline that learns from contexts to generate new conditions of use and new socio-technical cultures that are sensitive to the evolving characteristics of the geopolitics of a global world.

The ultimate goal is to bring back practical theories based on experiences that help to promote a new culture of challenge, understood in its broadest sense as the transformation of the world in which we live. Imagining a differently habitable world, in fact, requires the definition of new processes of co-evolution and transformation supported by a design attitude that allows to "repair" and, where necessary, "rebuild" the links now lost between man and nature, according to creative, generative, interactive, strongly transversal processes.

This defines a cultural approach to nature which, recognising the holistic dimension of the project in its strong link with the concreteness of emerging problems, foregoes the "hope of change" that can be placed in an undefined future, and accepts in the present the "challenge of change" (Perriccioli, 2020). The prospect of the pandemic — and what will follow — offers us a great opportunity to continue moving in this direction.

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