Track 1

There's No Plan(et) B: Sustainable Transitions to Systemic Planet-Centric Design

Along with the effects of climate change and the social unrest that has spread around the world in the past years, the recent health emergency for COVID-19 pandemic has exacerbated inequalities and injustices at different scales, and has severely tested the resilience of individuals, communities, institutions, and businesses. Current crises, in their multiple manifestations, have exposed the profound instability affecting the planet and brought to the surface many complex situations that require urgent intervention.

In this scenario, design is once again called to reconsider, as a discipline and as a practice, its traditional role towards society and the environment, and to redefine its methods, tools, and processes to offer better solutions for products and services that not only do not harm our surroundings, but also contribute to healing the conflicts that affect both humans and all other beings that inhabit the planet and interrelate as a single living system. The challenge is therefore to encourage and facilitate transitions towards more sustainable and circular patterns of production and consumption, adopting a systemic and planet-centric approach, reinforcing the ethical responsibilities of design, and reaffirming its mediating role in the resolution of the wicked problems that characterise the contemporaneity. This track invites researchers, educators, practitioners, and students, to share their reflections and experiences concerning design-led processes that bring to the disruption with traditional practices and the transition to alternative forms of thinking and acting, aiming to address current crises and lay the foundations for more sustainable future.

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There's No Plan(et) B. Sustainable Transitions to Systemic Planet-Centric Design

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Abstract
The current environmental, social, and economic crises have laid bare the profound instability plaguing the planet and brought to light many complex situations that require urgent action. Design is called once again to reconsider, as a discipline and as a practice, its role towards society and the environment, and to redefine methods, tools, and processes to offer solutions that not only do not harm the surrounding environment, but also help heal the conflicts that affect human beings and all other beings inhabiting the planet as one living system. The goal is to promote transitions to more sustainable and circular production and consumption patterns by taking a systemic, planet-centered approach, strengthening the ethical responsibilities of design, and reaffirming its mediating role in solving the wicked problems that characterize the contemporary world. Within this framework, reflections, and experiences from the field of design research were gathered to highlight disruptions with traditional practices and possible paths of transition to alternative forms of thought and action, with the aim of addressing current crises and laying the groundwork for a more sustainable future.

A Mutable and Unstable Scenario:
The Emergence of Polycrisis

Whether it is the effects of climate change, pollution or loss of bio-diversity, the planet is facing some of the greatest challenges it has ever known. This triple planetary crisis of an environmental nature (UN Climate Change, 2022), together with the multiple social, political, and economic issues that are affecting the entire world (Bauman & Bordoni, 2014), are questioning current paradigms, existing production, and consumption models and, in general, people's current lifestyles (Lefebvre, 2014). On the other hand, equity and social inclusion, political freedom, and economic equality, are some of the main demands, often unfortunately unheeded, which activists and protesters address to governments asking them to take concrete actions and activate processes of change to tackle a scenario that is increasingly VUCA (Bennis, Bennis & Nanus, 1986), an acronym for Volatility, Uncertainty, Complexity and Ambiguity.

Looking at the different crises, it can be observed that they are synchronized with deeply interconnected impacts. According to WWF (World Wildlife Fund, n.d.), for example, Covid-19 is "the indirect consequence of our impact on natural ecosystems", and deforestation is paving the way for species jumping, the so-called "spillover" phenomenon (Pratesi, Galaveri & Antonelli, 2020). Indeed, virologist Ilaria Capua (2020), by coining the concept of "Circular Health", proposes an integrated approach that aims to sustainably balance the health of people, animals, and ecosystems (One Health Center of Excellence-UF/IFAS, n.d.).

From the devastating effects of deforestation to the exponential increase in waste and ocean pollution, from the social protests that have erupted in recent years to the health emergency caused by the Covid-19 pandemic, to the more recent invasion of Ukraine by Russia, which has put international diplomatic relations in check, global crises are constantly intensifying, causing global instability, increasing inequalities between rich and poor, and exacerbating the so-called "North-South divide" (Glenn, 2007). We are living in a state of "permacrisis" (Turnbull, 2022), that is, "an extended period of instability and insecurity, especially one resulting from a series of catastrophic events" (Collins English Dictionary, n.d.), also known as "polycrisis" (Lawrence, Janzwood & Homer-Dixon, 2022), defined as "an array of grave, long-term challenges, now often labelled *global systemic risks*" (Cascade Institute, 2022).

The term "crisis" comes from the Greek word *krísis*, meaning "decision", and the verb *kríno*, which refers to the action of discerning, judging, and deciding; it designates the moment when there is a rupture or a very marked change in a given situation, such as an illness or a significant modification in nature, in the life of a person or a community (Fernández López, n.d.). The term has an agrarian origin, linked to the harvesting of wheat: for an ancient Greek, "crisis" is the process that occurs when the grain is separated from the chaff, an analytical division that allows only the good or usable part of the harvest to be kept, an operation that requires judgment (Alcoberro, n.d.). Therefore, being in crisis implies facing a conflictual or unbalanced situation, which involves a choice; it is an opportunity to generate significant transformation, since it

implies making a decision, opting for one path, and renouncing another. Such choice, however, must be made wisely and considering the consequences of each alternative: it is, thus, necessary to choose "critically" (from the word *kritikós*, related to the "ability to discern") and judiciously, that is, with "criterion" (another word derived from the Greek and meaning "court of justice").

A crisis, as such, is not necessarily negative and, if approached appropriately, can become an important opportunity for positive change, even when addressed by Design (Scherling & DeRosa, 2020). Modern philosopher Reinhart Koselleck (Koselleck & Richter, 2006) sees a semantic shift in the notion of crisis today, speaking of a contradiction between opposing forces that accelerates the transition from the past to the future (Turnbull, 2022).

In that sense, it is necessary to bring back to the center of reflection the notion of "ethical responsibility" or "ethics of responsibility", an expression introduced by the political scientist Max Weber (1919) and later adopted by Hans Jonas (1979) as the basis for defining so-called "Sustainable Development" (The World Commission on Environment and Development, 1987). "Ethics" derives etymologically from the Greek *ethos*, meaning "behavior", while the word "responsibility" derives from the Latin *respondeo*, which has the same origin as "to respond". The "ethics of responsibility" could hence be defined as "behavior capable of responding to someone or something". In other words, acting with ethical responsibility implies considering the effects and consequences of one's actions, and it is by anticipating these effects and consequences, and making oneself accountable for them, that decisions are made.

The Evolution of Design Coping with Contemporary Crises

Although many authors locate Design at the center of the contemporary crises (Fry & Nocek 2021) a more critical approach to "problem solving", which has distinguished the discipline so far, can in fact contribute to creatively reformulating possible solutions and imagining new ways of dealing with complex issues and so-called "wicked problems" (Rittel & Webber, 1973; Sweeting, 2018), which are characterized, among their main features, by a strong social impact, the involvement of multiple actors in the decision-making process and the presence of confusing information, which makes their resolution even more complicated. Wicked problems are often classified as difficult or even impossible to solve: consequently, tackling them requires divergent thinking and creativity, with a direct impact on design methods and practices.

In recent decades, in response to increasing uncertainty and complexity, the discipline of Design has adapted to new challenges through profound structural changes that have redefined its approaches and objectives, by becoming more advanced in its methods (de Bont et al., 2013) and more strategic in its perspectives (Zurlo et al., 2002; Zurlo, 2004; Verganti, 2009); also, by applying a systemic vision and environmental responsibility to design processes (Bistagnino, 2011; Battistoni et al., 2019; Barbero & Pereno, 2020).

Designers have become facilitators and mediators (Celaschi, 2008a; 2008b) of complex systems, that is, where individual factors intertwine with technological, economic-productive, socio-cultural,

and environmental factors, and have acquired a greater awareness of how to react, anticipate and "pro-act" to crises, in an attempt to transform critical situations into opportunities to generate positive impacts on people and the planet.

In addition to playing a relevant role as a creative activity that determines the technical, functional, and formal qualities of objects produced by industry, Design has thus evolved into a process that drives innovation and leads to a better quality of life through meaningful products, services, and experiences (Heskett, 2005; World Design Organization, n.d.).

Over time, Design has also embraced the criteria of Responsible Innovation (Owen et al., 2012; Stilgoe, Owen & Macnaghten, 2013; Blok & Lemmens, 2015; Gianni, Pearson & Reber, 2019; Jakobsen, Fløysand & Overton, 2019), thus taking on its own impacts and liabilities towards people, communities, and society (Succini & Ciravegna, 2022). As for environmental impacts, European Commission (2020) clearly states that up to 80 per cent of them are determined in the design phase of products; on its side, the Ellen MacArthur Foundation (2023) emphasizes the crucial role of multi-level design in the transition from our extractive to circular economy, proposing an adaptive and holistic design strategy.

The last decade has, indeed, seen the emergence of a wide variety of approaches to thinking rigorously and creatively about the long-term future. Among them, Advanced Design is an articulated system of design practices used to conceive and develop processes, products, or services for complex scenarios, seeking to produce continuous innovation and a long-term vision for society and organizations (Celaschi, 2015; Celaschi et al., 2019: Celi, 2015; Iñiguez Flores et al., 2014).

On the other hand, Transition Design (Irwin et al., 2015; Dunne & Raby, 2013) states that organizations, institutions, and communities must intentionally move towards a more sustainable, equitable and desirable long-term future by co-creating visions together with all stakeholders operating in the present, according to a principle of co-responsibility of all actors involved with respect to the impacts of a project. Transition Design is an approach characterized by some specific skills, including, for example,

the ability to devise solutions that integrate social and natural systems and to intervene sensitively in such systems; to devise solutions which take account of short, medium, and long horizons of time and all levels of scale of everyday life, and the ability to identify potentialities for transition in everyday life. (Irwin, 2015)

The Role of Design in Promoting Sustainable Transitions: A Choral Reflection

Within this framework, the challenge is therefore to encourage and facilitate transitions towards more sustainable and circular patterns of production and consumption, adopting a systemic and planet-centric approach, reinforcing the ethical responsibilities of design, and reaffirming its mediating role in the resolution of the wicked problems that characterize the contemporaneity. Researchers, educators, practitioners, and students from all over the world were invited for a choral reflection, to share their thoughts and

experiences on the design processes that lead to the disruption of traditional practices and the transition to alternative forms of thinking and action, with the aim of addressing current crises and laying the groundwork for a more sustainable future.

The results of this choral reflection are the contributions, collected here, which were presented during the 8th International Forum of Design as a Process "Disrupting Geographies in the Design World", particularly within Track 1 "There's No Plan(et) B: Sustainable Transitions to Systemic Planet-Centric Design".[1] The papers can be grouped into four main thematic areas, each of which touches on a topic particularly relevant to the reflections promoted by the track: i) Collaborative Communities for Territorial Development; ii) Towards Planet-Centric Scenarios; iii) Circular Design Methods and Tools; vi) Materials Experiences.

Collaborative Communities for Territorial Development

In this first thematic grouping, the collected articles illustrate investigations and reflections on the role of design in supporting communities in collaborative processes leading to sustainable territorial development.

"Beyond Collaboration: A Network Analysis of Local Stances and Global Frameworks in the Collective Design of the City" is the title of the paper by Francesca Sabatini, Martina Massari, and Saveria Olga Murielle Boulanger, which focuses on collective city-building practices beyond the participatory framework of institutional urban governance, specifically examining how grassroots organizations in Bologna are able to produce a dual movement between local and global, mutually informing global movements and local practices geared toward sustainable city growth.

"Alter_Azioni" is the name of a teaching and research experience at the center of Pietro Costa and Raffaella Fagnoni's contribution, entitled "Alter_Azioni: Designing between Biological and Artifactual. Scenarios for a Short-Term Future": this experience investigated the lagoon context as a framework for local design experimentation to address the problems of the local territory and the environment through the exploration of the needs of the region and its inhabitants, and in the search for a possible balance between the biological and the artifactual approaches.

Finally, the contribution "(Systemic) Design for Sustainable Territorial Transition: A Literature Review of State of the Art" by Asja Aulisio, Silvia Barbero, and Amina Pereno, presents a systematic review of the literature in the field of design, and specifically systemic design, to identify tools and methodologies useful for supporting decision-makers or stakeholders in processes of social, economic, and environmental transition toward sustainable territorial development.

Towards Planet-Centric Scenarios

This thematic area brings together works by diverse authors, united by the intent to reflect on how design is evolving and how this evolution is leading to a paradigm shift and a holistic planet-centric transition.

Sabrina Lucibello and Carmen Rotondi, with their contribution "Dasein ist Design: An Ontological Discussion of Design in the Ecological Crisis Time" propose a reflection on the evolving nature of design and how it can stimulate new dialogic, reflective, and strategic approaches to face contemporary crises.

Annapaola Vacanti, Francesco Burlando, Isabella Nevoso, and Massimo Menichinelli present "The More-Than-Human Trend in Design Research: A Literature Review", a discussion on design practices and approaches that, over the past decade, have evolved beyond a single-user focus and are thus defined by terms such as More-Than-Human Centered Design, Ecosystemic Design, Posthuman Design, Community-Centered Design, and Multispecies Design; the results of the literature review aim to provide a clearer picture of the phenomenon.

Through a methodology based on a tripartite analysis (literature review, case studies and historical context analysis), the paper "Being and Nature. The Aesthetic Ecocentrism" by Adriano Pinho and Francisco Providência, focuses on understanding how design aesthetics can take an active role in changing toward a more sustainable and resilient society.

Jurji Filieri and Elisabetta Benelli, with their contribution "Forward to the Primitive. New Sustainable Design Processes Characterized by Primitive Aesthetic", emphasize how the growing integration of ethical and environmental sensibilities leads to an often-primitive approach to design that is capable of catalyzing concrete actions and triggering a new accessible aesthetic for the public.

Finally, Guilherme Giantini and Lígia Lopes, with their contribution "How Long Does It Take For a Paradigm Shift. A Design-based Critical Essay on Materials and Fabrication Processes", offer critical reflection on the transformation processes of matter and energy in the production of human artifacts in design and architecture, with the aim of bringing out sustainable industrial approaches and promoting developments in potentially innovative fields, such as biomaterials and biomanufacturing.

Circular Design Methods and Tools

The contributions grouped in this area explore methods and tools, from both service and product design, to facilitate the transition to circularity in applications in specific fields.

Chiara Olivastri and Giovanna Tagliasco, in their paper "Sustainability Needs Service Efficacity", focus on the area of service design and its contribution in the implementation process of a project called Efficacity, a platform for optimizing bulky waste collection and recovery of reusable parts through the Surpluse reuse and shelter centers.

"Systemic Design Applied to Medtech. Guidelines for Corporate Training on Sustainable Healthcare" by Enrica Ferrero and Giulia Ferrero illustrates how to use the potential of Systemic Methodology to define the contents of a training course on sustainability for the companies in the healthcare system.

Still in healthcare, Gabriele Maria Cito and Angela Giambattista propose the contribution "Reducing Waste in Healthcare: A Systemic Design Approach for Sustainable Disposables Manufacturers", as a reflection on the application of Systemic Design methods to address the issue of waste management in the healthcare system, which plays a primary role because of its complex composition and risks to workers, patients, and the environment.

A discussion, in a systemic perspective, on how household appliances should change to adapt to the current scenario of a compromised environmental situation and the need to transition towards a circular economy, is at the heart of Chiara Battistoni's paper "A Framework to Design Appliances for the Circular Economy Scenario".

Finally, "Digital Fashion Technologies & Practices: Design Driven Sustainable Transition in Fashion Industry" is the name of Ludovica Rosato and Alberto Calleo's contribution, which addresses the environmental sustainability issues related to fast fashion and analyzes how, by exploiting technological innovation and the combination of tangible processes and intangible practices, design can support sustainable transitions in the fashion industry.

Materials Experiences

The papers of this fourth area take a specific look at the topic of materials and current experiments on both the creation of new materials and possible new applications of existing materials in a more sustainable way.

Michele De Chirico, with his contribution "Material Resources as a Contextual Complex System", shows how the multidimensional interpretation of resources can lead to sustainable design actions; the article presents a mapping of the presence and use of material resources in local supply chains, to rethink their sustainable use through design interventions.

The paper "Diffuse Micro-Factory: Circular Distributed Production System for Microbial Nanocellulose" by Lorena Trebbi, delves into the details of an operational model, based on bottom-up and co-design approaches, for micro-distributed production of biofabricated materials, with the aim of suggesting possible circular alternatives to current linear production-consumption systems based on the take-make-discard paradigm.

"From Sea to Fashion. Seaweeds as Material for a Sustainable Transition" is the title of Paolo Franzo and Clizia Moradei's essay, which addresses the reasons why fashion design is showing a growing interest in the marine environment as a context in which to identify new sustainable materials for fashion, focusing on the case of algae.

The contribution of Giovanni Inglese, Sabrina Lucibello, and Carmen Rotondi, titled "The Sound of Sustainability. Biomaterials

and New Sensory Frontiers", investigates the possibilities that design research on biomaterials can offer to the development of musical accessories, in terms of "sensory enhancement" and spreading a new ethical consciousness around sustainability.

Finally, a sustainable application of materials is that proposed by Raquel Gomes and Cláudia Albino in their paper "Unpacking Ceramic History in Asia and Europe: Contribution to New Reusable Packaging Design", which details the proposal for a non-disposable modular packaging system for ceramic products, which can organize interior spaces, thus reducing waste.

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References

Alcoberro, R. (n.d.). *Crisis: una aproximación etimológica* [PDF]. Filosofia i Pensament Ramon Alcoberro. http://www.alcoberro.info/assets/03_civilizacion_-etimologia.pdf

Barbero, S., & Pereno, A. (2020). *Packaging Design in the Digital Age: A Systemic Approach to E-commerce*. FrancoAngeli.

Battistoni, C., Giraldo Nohra, C., & Barbero, S. (2019). A systemic design method to approach future complex scenarios and research towards Sustainability: A holistic diagnosis tool. *Sustainability*, *11*(16), 4458. https://doi.org/10.3390/su11164458

Bauman, Z., & Bordoni, C. (2014). *State of Crisis*. John Wiley & Sons.

Bennis, W. G., Bennis, W., & Nanus, B. (1986). *Leaders: The Strategies for Taking Charge*. HarperCollins Publishers.

Bistagnino, L. (2011). *Systemic Design: designing the productive and environmental sustainability*. Slow Food.

Blok, V., & Lemmens, P. (2015). The Emerging Concept of Responsible Innovation. Three Reasons Why It Is Questionable and Calls for a Radical Transformation of the Concept of Innovation. In B.-J.

de Bont, C., den Ouden, P. H., Schifferstein, H. N. J., Smulders, F. E. H. M., & van der Voort, M. (Eds.) (2013). *Advanced design methods for successful innovation*. Design United.

Capua, I. (2020). *Circular Health: Empowering the One Health Revolution*. EGEA spa.

Cascade Institute. (2022). *Polycrisis - Cascade Institute*. https://cascadeinstitute.org/research/polycrisis/

Celaschi, F. (2008a). Design mediatore tra bisogni. In C. Germak (Ed.), *L'uomo al centro del progetto* (pp.40-52). Umberto Allemandi & C.

Celaschi, F. (2008b). Il design come mediatore tra saperi. In C. Germak (Ed.), *L'uomo al centro del progetto* (pp.19-31). Umberto Allemandi & C.

Celaschi, F. (2015). *Advanced Design Cultures*. Springer.

Celaschi, F., Formia, E., Iñiguez Flores, R., & León Morán, R. (2019). Design Processes and Anticipation. In Poli, R. (Ed.) *Handbook of Anticipation. Theoretical and Applied Aspects of the Use of Future in Decision Making* (pp. 773-794). Springer.

Celi, M. (2015). *Advanced design cultures*. Springer.

Collins English Dictionary. (n.d.). *Permacrisis definition and meaning*. https://www.collinsdictionary.com/dictionary/english/permacrisis

Dunne, A., & Raby, F. (2013). *Speculative Everything: Design, Fiction, and Social Dreaming*. The MIT Press.

Ellen MacArthur Foundation. (2023). *The six levers designers can use to unlock the potential of circular design*. https://ellenmacarthurfoundation.org/news/the-six-levers-designers-can-use-to-unlock-the-potential-of-circular-design

European Commission. (2020). *A new circular economy action plan for a cleaner and more competitive Europe*. https://eur-lex.europa. eu/legalcontent/EN/TXT.

Fernández López, J. (n.d.). *Crisis y crítico - Etimología*. Hispanoteca.eu. http://www.hispanoteca.eu/Foro/ARCHIVO-Foro/Crisis%20y%20critico%20-%20Etimolog%C3%ADa.htm

Fry, T., & Nocek, A. (Eds.) (2021). *Design in Crisis. New Worlds, Philosophies and Practices*. Routledge.

Gianni, R., Pearson, J., & Reber, B. (2019). *Responsible Research and Innovation:*

from concepts to practices. Taylor & Francis.

Glenn, J. (2007). *Globalization. North-south Perspectives*. Routledge.

Heskett, J. (2005). *Design: A Very Short Introduction*. Oxford University Press.

Iñiguez Flores, R., Hernandis Ortuño, B., Holliger, C., & Monterrubio Soto, J. C. (2014). Advanced Design as a Process for Knowledge Creation. Delivering Knowledge to Stakeholders and Fostering Future Skills for Innovation. *5th International Forum of Design as a Process. The Shapes of the Future as the Front End of Design Driven Innovation*, 151-156.

Irwin, T. (2015). Transition Design: A Proposal for a New Area of Design Practice, Study, and Research. *Design and Culture, 7*(2), 229–246. https://doi.org/10.1080/17547075.2015.1051829

Irwin, T., Kossoff, G., & Tonkinwise, C. (2015). Transition design provocation. *Design Philosophy Papers*, *13*(1), 3–11. https://doi.org/10.1080/14487136.2015.1085688

Jakobsen, S.E., Fløysand, A., & Overton, J. (2019). Expanding the field of Responsible Research and Innovation (RRI) – from responsible research to responsible innovation. *European Planning Studies*, *27*(12), 2329-2343.

Jonas, H. (1979). *Das Prinzip Verantwortung: Versuch einer Ethik für die technologische Zivilisation*. Suhrkamp.

Koselleck, R., & Richter, M. W. (2006). Crisis. *Journal of the History of Ideas*, *67*(2), 357-400.

Lawrence, M., Janzwood, S., & Homer-Dixon, T. (2022). *What Is a Global Polycrisis? And how is it different from a systemic risk*. Cascade Institute. https://cascadeinstitute.org/wp-content/uploads/2022/04/What-is-a-global-polycrisis-v2.pdf

Lefebvre, H. (2014). *Critique of Everyday Life*. Verso.

One Health Center of Excellence-UF/IFAS. (n.d.). https://onehealth.ifas.ufl.edu/

Owen, R., Macnaghten, P., & Stilgoe, J. (2012). Responsible research and innovation: From science in society to science for society, with society. *Science and Public Policy*, 39(6), 751-760. https://doi.org/10.1093/scipol/scs093

Pratesi, I., Galaveri, M., & Antonelli, M. (March 2020). *Pandemics: the boomerang effect of ecosystem destruction. Protecting human health by preserving biodiversity*. WWF.

Rittel, H., & Webber, M. (1973). *Dilemmas in a General Theory of Planning*. Springer.

Scherling, L., & DeRosa, A. (2020). *Ethics in Design and Communication. Critical Perspectives*. Bloomsbury Publishing.

Stilgoe, J., Owen, R., & Macnaghten, P. (2013). Developing a framework for responsible innovation. *Research Policy,* 42(9), 1568–1580.

Succini, L., & Ciravegna, E. (2022). Design and Responsible Innovation. Ethics and Caring as Keys to Addressing Contemporary Crises. *Diid — Disegno Industriale Industrial Design*, (77), 24-36. https://doi.org/10.30682/diid772022b

Sweeting, B. (2018). Wicked problems in design and ethics. In P. H. Jones & K. Kijima (Eds.), *Systemic design: Theory, methods, and practice* (pp. 119-143). Springer Japan. https://doi.org/10.1007/978-4-431-55639-8

The World Commission on Environment and Development. (1987). *Our common future*. Oxford University Press.

Turnbull, N. (2022, November 11). *Permacrisis: what it means and why it's word of the year for 2022*. The Conversation. https://theconversation.com/permacrisis-what-it-means-and-why-its-word-of-the-year-for-2022-194306

UN Climate Change. (2022, April 13). *What is the triple planetary crisis?* Unfccc. int. Retrieved November 15, 2022, from https://unfccc.int/blog/what-is-the-triple-planetary-crisis

Verganti, R. (2009). *Design Driven Innovation: Changing the Rules of Competition by Radically Innovating What Things Mean*. Harvard Business Press

Weber, M. (1919). *Politik als Beruf*. Duncker & Humblot.

World Design Organization. (n.d.). *Definition of industrial design*. WDO. https://wdo.org/about/definition/

World Wildlife Fund. (n.d.). *Endangered species conservation*. WWF. https://www.worldwildlife.org/

Zurlo, F. (2004). Della relazione tra design e strategia: note critiche. In P. Bertola & E. Manzini, *Design Multiverso. Appunti di fenomenologia del design* (pp. 75-84). Edizioni POLI.design.

Zurlo, F., Cagliano, R., Simonelli, G., & Verganti, R., (2002). *Innovare con il Design*. Il Sole 24 ore.

Forward to the Primitive. New Sustainable Design Processes Characterized by Primitive Aesthetic

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Abstract
What will Design become if the object disappears, sublimating itself into the most sustain-able expression of form, that is its absence?

As part of a wider theoretical research on new models of effective product design, we want to emphasize how the growing integration of ethical and environmental sensibilities leads to an often-primitive approach to design that is capable of catalyzing concrete actions and triggering a new accessible aesthetic for the public.

What emerges is a process of progressive disappearance of the object in user practices, replaced by more intangible qualities and value components (ethical, cultural, ideological dimensions of the project), which are also investigated and enjoyed through new unexpected media supports such as videos, films, ambient happenings. This process sees the center of content production shift toward the market or the public and its "peripheries," where a more natural instinctive and direct approach is often expressed in an essential, primitive language.

Keywords
Design process
Primitive aesthetics
Action design
New craftmanship
Sustainability

Introduction

What will Design become if the object disappears, sublimating itself into the most sustain-able expression of form, that is its absence?

Within the framework of this speculative question is substantiated one of the most pronounced and evident transformations of design practice in the contemporary: we are now witnessing a progressive utilitarian devaluation of the object, accompanied by a new participatory interest in designing the future through actions (such as happenings), rather than through the use and consumption of the objects themselves. Indeed, on the one hand, this process is characterized by the progressive dematerialization of the product, which increasingly looks more and more like a service or a "fluid assemblage" (Redström, Heather, 2019, p. 30), on the other this is driven (almost induced) by the overexposure of design pathways leading to design, which are themselves transformed into products for eminently media-driven consumption about "how it is thought". As part of the research, we want to emphasize how the growing integration of ethical and environmental sensibilities leads to an often-primitive approach to design that is capable of catalyzing concrete actions and triggering a new accessible aesthetic for the public. Through some case studies, workshops, and design experiences, we want to investigate and verify here which emerging models prove to be most effective and replicable.

Evolutionary Framework

In some ways, the call's urge to draw more sustainable scenarios pushes us beyond the Anthropocene and underscores the crisis of the majority of ecological thinking, from which almost all customary patterns of productive and market development derive. So far, humans and their needs have always been placed at the center of a modifiable relational ecosystem composed of living beings and exploitable inert resources. Firmly anchored in this existential conviction, homo-sapiens has evolved, protected, for long periods of the most recent history, from the specter of an ideological conviction based on an optimistic vision of development (linked to continue innovation) and the idea of the inexhaustibility of resources. At the same time, knowledge has grown, and a latent culture of the project has spread, within a relationship of mutual contaminal inference, capable of generating moments of reformism and rearrangement of development models.
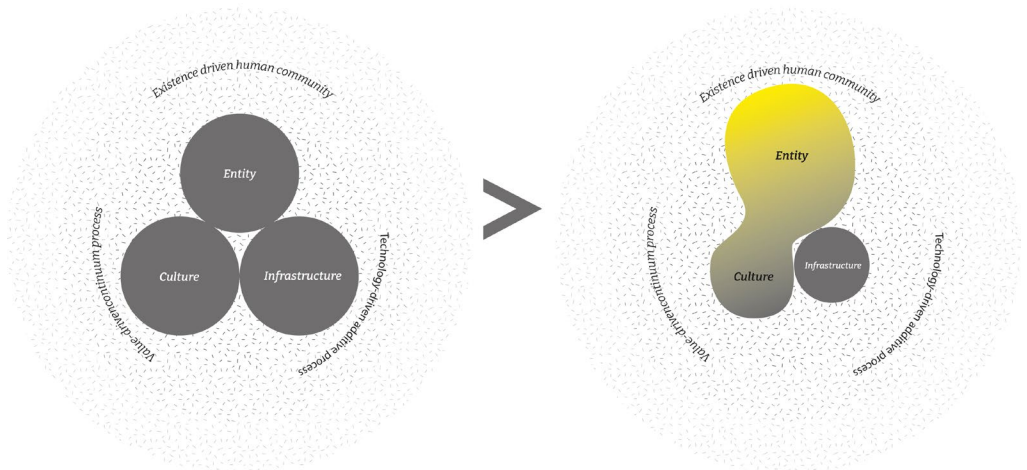
Industrial production and a certain definition of design, although in transformation today, do not escape this pattern and indeed have sometimes proved responsible for hyper-production of objects, without corresponding either quantitatively or qualitatively to people's real needs and market demand. Industrial Design bears the responsibility of having characterized its disciplinary identity for almost a century (at least until after World War II) through its strong reflexive relationship with forms, materials, techniques and production technologies, almost without strategically weighing those intangible lateral qualities (such as the quality of demand, interactions with local cultures, synergies and trans-disciplinary contaminations),

which place and sustain the product within a complex and articulated con-text, solicited from many sides, in delicate balance.

Using a lateral philosophical approach, Tony Fry, in his recent book *Defuturing, a new design philosophy* (Fry, 2020), describes the topic of sustainability in relative terms as the *sustain-ability* of a system or a community, with reference to a product, a process or a development model. This version translates sustainability into a non-intrinsic quality of the object and rather refers it to an articulated contextual framework, in which social, cultural, ethical factors are as important as the metarial, technological and economic ones, which are more traditionally traced back to design. "While we are more then even aware of both the promise and the threat of technological progress, we still lack the intellectual means and political tools for managing progress" (Feenberg, 2002).

The trajectory of morpho-linguistic evolution from *Industrial Design* to *Design*, reflects at least the most recent part of this change, which originates in the transition from *Modern* to *Post-modern* and continues even further to the present, leaving space for a possible redemption of design. If we assume the late birth of Industrial Design as coinciding with the appearance and subsequent affirmation of Modernism in Europe, accepting its already evolved complex definition of "reason of the whole" formulated by Tomàs Maldonado in 1961, we realize that its qualifying adjective (industrial) at some point slowly began to change, until it disappeared in the determination of "total-Design" (Dorfles, 1972) or in the more generic one of design. This process drew an inclusive parabola that progressively integrated soft qualities (ethics, communication, experience, etc.) and definitively dematerialized the object into a myriad of micro-projects, as Andrea Branzi states: "from product-design to buzz-design" (Branzi, 2007).

The reasons for design have remained largely unchanged over time, but its manifestations have changed as a result of technological (infrastructural) innovation and increasingly sophisticated marketing activities, which can shift the axis of the functional perception of a product and building scenarios at least as strongly as design. Andrew Targowski, a Polish American computer scientist and pioneer of applied information systems, in outlining his tripolar model (Mitrovic, Auger, Hanna, Helgason, 2021, p. 14), once again emphasizes the difference between culture and infrastructure, where culture is based on relatively stable values, whereas infrastructure changes over time in a largely additive manner, thanks to local graft and contributions, which thus cause its development to evolve in an almost unidirectional sense.

The historical, cultural, economic, social context variably influences each innovation vector and determines conditions of different inferential relationship, where today the experiential component prevails (in a certain sense with a participatory vocation), this places the project more and more inside the market, in close proximity with the user.

If we apply Targowski's model to the world of production and to what precedes it, i.e. design, we perceive the risk of a slow, technocratic, unidirectional and contaminated transformation, with respect to which, as mentioned, history punctually delivers episodes of revenge and success, mostly generated by an effort of at least cultural imagination, before being technological. Even more definitively, we can say that it is precisely the action exerted within the perimeter of culture that has always represented the sine-qua-non condition to produce visible and permanent development effects in each of the most important innovation junctures, whether or not accompanied by technological factors.

From Product to Process

According to some observers, the weakening of the materialist notion of design is an inevitable end in the face of the crisis in production and industrial systems, where the empty spaces of design have been rapidly recaptured by local communities of makers (which have sprung up spontaneously in the form of democratic actions of anarchic inspiration) and by a new craftsmanship of Anglo-Saxon origin (perhaps a residual expression of an Arts and Crafts vocation that is still alive). Faced with the crisis of capitalism and the object over-population on earth, the system is now driven by many small local editors, and it seems to react with idealistic signals, partly rejecting products, and turning its gaze into new contents and new forms of production.

While in the traditional production practice the object is the result of a synthesis process directed by a designer who works as a cultural mediator, now the object (sometimes self-produced)

grows-up directly in the market and so it is increasingly involved in the direct and democratic self-definition of the local fringes in the audience. In this new horizontal production pattern, the ethical, political and idealistic dimension prevails above anything else, to the point of blocking out or rather metabolizing the form without conditioning.

At the same time, another transformation has taken place: after the digital revolution, which slowly redefined the paradigms of production, distribution, consumption and perception of goods, there is now a mature interpenetration between the physical, digital and biological world, summarized in the concept of the fourth industrial revolution. The advent of *Digital Manufacturing* has shortened the distance that once separated the figure of the designer from the production environment. The designer now gets his hands dirty and becomes a direct-maker, creating an ever-closer link between the conceptual and the real, thanks to increasingly accessible and efficient tools. The design process itself (such as *Design Thinking*) changes in the face of the opportunities offered by Digital Manufacturing.

This transition, far from being a mere qualifying factor only for what precedes the appearance of the object on the market, finds definitive expression in the *phygital* model, in which the advanced level of development of digital technologies and the pervasive distribution of access points or protocols defines areas of proximity between the physical and digital worlds practically everywhere. In this sense, one can go so far as to define phygital virtually any experience, including those through which empathic involvement with the product is generated, on which choice and satisfaction, for example, depend.

Just as, according to the Nobel Prize winner Josif Brodskij, the eminently weak connotation of communism at the end of the twentieth century sanctioned the collapse of the Soviet countries, today the collapse of formal/materialistic hedonism in production and the simultaneous pervasive appearance of bottom-up design actions put the process (rather than the product) as a focus for Design.

The lack of interest in the product and, on the other hand, the growing interest in the act of realization (testified by the huge number of video-tutorials available on YouTube and the other social-networks) pushes the center of production towards the boundaries of the production system. In some way this often determines a more instinctive and direct design approach, at least when it is not mediated by the conscious action of a design-expert who draws on his own experience. Consumers today could not be seen as merely users but "they must become active imaginers. This is something people usually do when they visit museums to view historical articrafts on display, [...] more and more interested in using props to transport viewers' imagination into a thought experiment" (Dunne, Raby, 2013, p. 93).

This aspect of change partly derives from extra-ordinary extra-social changes (or to put it in the words of the sociologist Bruno Latour *"from uncontrolled and uncontrollable events and actions"* - Latour, 2005, p. 59), like those that more than ten years ago Ezio Manzini identified in cultures and social groups crossed by contamination, which distort the meaning of Design and from which spring other knowledge, other needs, other project applications (Manzini, 2015, p. 48).

Case-Studies

Hypebeast is one of the leading online destinations for men's contemporary fashion and streetwear. In 2012 HBTV (the business television channel of the brand) decides to produce a series of videos searching, selecting and presenting the practice of a few Anglo-Saxon artisans and designers. Behind the choice and the production operation there is first and foremost an anthropological and behavioral intuition: that of a growing public interest in the backstage of the product, an almost morbid curiosity, expressed in latent form by the public, who, from the kitchen to the factory, from tailoring to the private of a home, increasingly seek confirmation or explanation of the origins of everything. An attitude so intense that it turns into an object of interest itself and eventually diverts attention away from the commodity, the form, the product.

  In the series entitled *Modern Day Artisans* five young British designers (like the *Young British Artists - YBA* - who started exhibiting their work in 1988), Max Lamb, furniture designer, Sebastian Tarek, custom shoe maker, Ricky Feather, bicycle maker and designer, Jake Ferrato, custom shoe maker and Duffy Jewellery, jewellery designer, bring out a new dimension of craftsmanship and *DIY* (Do It Yourself) production, in which the aesthetic and value quotient of the handmade product is finally elevated to a high level of seduction, thanks to the contamination of contemporaneity and tradition. In addition to a systematic access to the heritage of traditional knowledge, each time linked to the transformation of one or more materials for the realization of a product, each author demonstrates, just as methodologically, a natural ability to contaminate codified production processes with new product management tools.

Fig. 2
Max Lamb stands in his London studio behind a maquette for one of the 6x8 Chair, made from a single piece of western red cedar. The 6x8 Chair explored the tension between individual quirk and mass-produced form, the way that a singular maker can mimic industrial methods yet push against them.

Everything (from technology to communication, from packaging design to product customization) happens under the watchful eye of a video-camera and through a *rough* and casual projection of the processes and steps that accompany the birth of the product.

Again, Max Lamb emphasizes the search for extreme essentiality (a reduction of the product to its minimum terms) behind his project to reinterpret the campaign-chair, an example of *flat-pack furniture*, produced and well-known all over the world in a very basic version (the *Roorkee chair*, for example, was produced in India and it was used by the British Army since 1898). The version designed by Lamb for Dunhill seeks to reduce the product to its bare minimum, with obvious formal and typological consequences: more contemporary production declinations such as seams and joints disappear, in favor of a bare materiality made of wood and natural leather.

From the observation of the practices analyzed and many others, scattered all over the world emerge some constant factors, which we believe can take on a strategic value for the development of new forms of production of items with a low level of complexity and for the effective enhancement of traditional knowledge.

This escapological tendency of design, or rather of emerging contemporary design, from the system of deferred industrial production, in favor of processes of self-production, in which the continuous synthesis of thought and action takes place, proves to be more sustain-able today and generates typological and morphological innovation in the direction of primitive simplicity.

The unprecedented interest in the processes of production and design, redefines the arrangement of the system-product (understood as "the set of contact elements between producer and customer, i.e., the organic and coherent whole of product, service and communication" - Zurlo, 2012, p. 33), which is increasingly complemented by the direct (or video-mediated) experience of making. This is a new offering intended to correspond to the growing voyeuristic curiosity of the public, partly replacing the fetishism of possession, and above all opening up an interesting prospect of development in the direction of an increasing aestheticization of processes instead of things.

Conclusions

After having freed the field of the project from formalisms and style exercises that are ineffective for the user or the modern public, another vocation for design remains, capable of creating value beyond form and function. As in a primordial landscape in which man (designer or user) is alone, the process and a necessary behavioral reflection become central, free from aesthetic and its materiality. This is the starting point

from which a new sustainable (or sustain-able) aesthetic arises, in which the physical manifestation of the product is systematized most of the time only in a second moment, while what immediately appears is the programmatic action (rigorously filmed) with which the designer (alone or in a group) fills the time and space of the present.

In an empirical way, the present research aims to highlight, in the work of some designers and in the in-Covid design experience, carried out within the course of Product Design of the University of Florence and University of Tuscia, constant traces and common denominators of a new methodological essentialism, experimented effectively in the production of new types of products. Within an almost neo-primitivist condition, we intended to isolate levers of design, performative, experiential action, capable of indicating new design topics and disciplinary scenarios beyond the Anthropocene.

Thus teachers, designers and researchers have chosen to operate consistently with the critical review just outlined, to isolate a minimum methodological apparatus through which to provide design tools adherent to a less formalist demand. In this sense, an experimental scientific approach was adopted, through which, starting from contextual conditions of limitation, a few but stringent instrumental constraints were added (Covid-1, comparable to those found in the case studies. The self-productive prerogative or the idea of limiting the number of materials or means at the designer's disposal has thus standardised the design process, facilitating access even for non-experts.

In this phase, the programmatic reduction of the designer's "traditional" operating field was compensated (but it would be better to say accompanied) by the parallel integration of new multimedia tools, which contributed to the preliminary and contextual planning of the design processes themselves and to the construction of a sensible component of the perceived value of the product.

From the video documentary, to the design of a digital product/service integration platform, to the planning of mass-custmization actions in the production processes: what emerges from the case studies and from the experimentation conducted are "dried" outputs in the formal component, which are however deeply updated in the meaning perceived by the public: a consumer, ethical and experiential value, increasingly expressed by rapidly evolving markets.

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Fig. 5
Gabriele Matteoli, Elisa Giliberto, Leonardo Cai, Scrub, series of bollards and street furniture made of precast concrete, a project developed as part of Prof. Jurji Filieri's Product Design 2 Laboratory course at the University of Florence Industrial Design degree program. The Project, developed during social distancing phase due to the first Covid-19 pandemic emergency, originates from a speculative conditioning of the brief, which traces the design act back to primitive actions of composition and transformation of matter. Courtesy the authors, the University of Florence.

"Therefore, it is not the ancient crafts to be pursued, but the profile and characteristics of the artisan" (Micelli, 2011, p. 64), today necessarily enriched by the ability to enhance the product also through the story of the processes from which it originates. In this framework design contaminates craftsmanship, repositioning his brand and almost creating a new form of participatory end-user militancy for the creation of an object.

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Both authors participated in the writing of the entire paper with personal disciplinary and research contributions. Paragraphs 1, 2 and 3 are mainly to be attributed to Jurji Filieri (corresponding author). Paragraphs 4 and 5 are mainly to be attributed to Elisabetta Benelli.

References

Branzi, A. (Ed.) (2007). *Capire il Design [Understanding design]*. Giunti editore: Firenze.

Dorfles, G. (1972). *Introduzione al disegno industrial. Linguaggio e storia della produzione di serie [Introduction to industrial design. Language and history of mass production]*. Einaudi: Torino.

Dunne, A., Raby, F. (2013). *Speculative everything. Design, fiction and social dreaming*. MIT press: London.

Feenberg, A. (2002). *Transforming technology. A critical theory revisited*. Oxford University press: Oxford.

Fry, T. (2020). *Defuturing. A new design philosophy*. Bloomsbury: London.

Latour, B. (2005). *Reassembling the social*. Oxford University Press: New York.

Manzini, E. (2015). *Design when everybody designs*. The MIT Press: London.

Maldonado, T. (1995). *Disegno industriale: un riesame [Industrial design: a review]*. Feltrinelli: Milano.

Micelli, S. (2011), *Futuro artigiano [Artisan future]*. Marsilio editore: Venezia.

Mitrovic, I., Auger, J., Hanna, J., Helgason, I. (Eds.) (2021). *Beyond Speculative Design: Past – Present – Future.* SpeculativeEdu; Arts Academy, University of Split: Split

Rawsthorn, A. (2018). *Design as an attitude*. Ringier & Les presses du Reel: Zurich.

Redström, J., Heather, W. (2019). *Changing things. The future of objects in a digital world*. Bloomsbury: London.

Zurlo, F. (2012), *Le strategie del design. Disegnare il valore oltre il prodotto [Design strategies. Designing value beyond the product]*. Libraccio editore: n.d..

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