Title: Speculative Design as an Amplifier of Reality
The Multiplication of Scenarios in the Solving Practice of Increasing Complexity in Design

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Source: Forum A+P 28 | Invited Papers

ISSN: 2227-7994

DOI: 10.37199/F40002803

Publisher: POLIS University Press

Speculative design as an amplifier of reality
The multiplication of scenarios in the solving practice of increasing complexity in design

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Introduction

The paper introduces the philosophy of speculative design as a mature tool for investigation and design, capable of effectively intercepting alternative scenarios of the future, including the less predictable ones that extreme conditions sometimes bring about. Today, this philosophical and methodological apparatus is combined with that device of new enabling technologies (AI, Big Data Analytics, Metaverse, etc.) that allow for a more agile management of complex systems, verifiable in nature as in society.

The project is no longer discretionary, mono-directed, constrained and closed, but rather uncertain, hetero-directed, open to transformable scenarios that adhere to a variable context of rapidly and often unpredictable changing relationships

Punctual Acceleration of History

If we analyze the evolution of the project over the course of history, and in particular in the century that has just ended, it is not difficult to come across punctual episodes of strong acceleration of innovation processes, from which more or less concrete perspectives of renewal and new scenarios have sprung up, capable of pointing out directions of technological development and evolution for the human being. Periods of crisis have been counterpointed by moments of marked cultural vivacity, within which visions and projects have often matured, nourished each time by a lateral shift in the dominant thought, in the direction of previously unexplored or even unimaginable hypotheses.

It is interesting to observe how most of these inventions arose from a specific impulse, which originated in a peripheral field or sector, only to quickly 'bend' towards alternative ones, so far more interesting and profitable fields of use and development. If we think of the internal combustion engine, the refrigerator, Internet, and the mobile connectivity we are now accustomed to dealing with on a daily basis, we realize the relative size of the initial, almost always exclusive (often military) or elitist audience, to which each of these products or services adhered with practical solutions, and which today have instead found a much broader universal, horizontal and popular interest.

Anthony Dunne starts precisely from this final democratic necessity, placing it at the basis of speculative research, understood therefore not so much as a mere methodological tool for the project, but rather as a multiplier of the field of investigation and the spectrum of projection of solutions proposed by design, capable of intercepting options of use and application, beyond the temporal and contextual conditioning of each historical phase.

"It is clear that reality only works for a privileged minority, and that designer, advocating a realist approach, work within the constraints of reality as it is, for a minority. The [speculative] school aims to challenge this situation by making reality a little bigger, so as to give more space to different kinds of dreams and hopes. An important part of this process is the generation of multiple versions of reality, and this is where design comes in" (Dunne, A., Raby, F., 2017) (figure 1).

Embracing Complexity

This maximalist attitude, which widens the gaze beyond the single solution to the problem, builds a parallel track to the spread of enabling technologies such as Artificial Intelligence and Big Data Analytics enriched, however, by a lateral cultural and philosophical dimension, in a way that looks like what Maltese psychologist Edward De Bono calls "lateral thinking" (De Bono, 2001).

We live today in an articulated society, which is rapidly evolving in the direction of increasing complexity: thinking of tackling it through selective models (inevitably approximating reality) is in all likelihood an ineffective option, from which even worse effects and consequences may arise, such as those

that global society is already experiencing, now frequently, as we can see by thinking to the growing series of systemic and interconnected crises that characterize our time (social, economic, environmental, health).

A complex society must therefore be described through complex models and, where the individual alone cannot unravel complexity in an inclusive and transversal manner, it is reasonably appropriate to imagine a progressive broadening of the intellectual base from which the solution will emerge, beyond the disciplinary boundaries, sectoral tools, analysis methodologies and action of each professional.

The research and practice of scholars and creative people from different backgrounds converge on this urgency today. The philosopher Edgar Morin encourages the construction of a non-reductionist approach to reality, from which actions and projects arise, capable of better responding to the challenges of contemporaneity and of promoting the development of alternative solutions in the face of problems: in this sense, it becomes strategic to develop systemic thinking, meaning by system "the set of interactions within a determinable geophysical unit, containing different living populations, which constitutes a complex unit of self-organizing character" (Morin, 2017).

Trying to describe the project framework today, an interesting discriminating factor to raise may be that-one linked to the desirability of the scenarios analyzed and discussed by design: there are in fact designers who, by adopting a speculative critical approach (even of a fictional type), direct the project in the direction of a practical value growth, in any case attributed to the product, the user, the experience of use, society or the environment, in which the reference scenario is a desirable scenario, in some ways resolving or at least improving on the initial one. This is an aptitude (Rawsthorn, 2018), rather than a voluntary ability or objective, that belongs to the discipline of design and project practice and that runs throughout its history, from the Arts & Crafts movement of William Morris, to the Bauhaus, the Ulm school, Design Thinking and now part of Speculative design.

On the other hand, there is a large group of designers and creatives who much more freely use initial hypotheses of conditional speculation with the mere intention of investigating and describing parallel versions of reality and equivalent to the more probable (universally predictable) or desirable ones according to the still prevailing models of thought based on growth and progress, which, beyond the label of merit attributed by critics and the public, add variables to the design framework and in fact amplify reality by anticipating the future (e.g. with reference to the design of a mobility model for 2050, when the world's population will number 9.7 billion people and they will move through car-sharing services in urban areas and private vehicles - electric and self-driving - in peri-urban and extra-urban contexts, according to new and different paradigms - figure 2).

The first approach, however 'subversive' and experimental in terms of the methodology adopted, still constitutes a partial and discriminating vision of the future, which, even if it worked in design terms for a long period of time, from at least the middle of the 19th century to the end of the 20th century, today risks moving irremediably away from the real evolution of conditions. As a result, we end up with ideas, projects and ultimately products, which are distant from the contextual conditions that will, so to speak, 'envelop' the good tomorrow, which means products that are negligible, when not ineffective, commercially unsuccessful, meaningless for the public and indifferent to society as a whole.

Universal exhibitions have often been a natural stage on which images of a new order were projected, extended at discretion in varying sizes and directions according to the visionary capacity of the designers.

The result was often a singular scenario, however innovative, capable of clearly and exclusively directing the development of large sectors of society, often as a result of partial and interested choices. However, it was still an exclusionary approach, in fact, and therefore limited in its effective capacity to meet the developments of the time, the result of a conception that put man at the center.

Multiplying And Amplifying Reality

In this framework “the [speculative] “il interested in positioning design speculation in relation to futurology, speculative culture, including literature and cinema, fine art, and radical social science concerned with changing reality rather than simply describing it or maintaining it” (Dunne and Raby, 2013); and again “to find inspiration for speculating through design we need to look beyond design […] to explore, hybridize, borrow, and embrace the many tools available for crafting not only things but also ideas, fictional words, cautionary tales, ‘what-if’ scenarios, thought experiments, counterfactuals, reductio ad absurdum experiments, prefigurative futures, and so on” (Dunne and Raby, 2013).

Contained in this premise, there are two important first qualifications that we can trace back to speculative design and that in some way allow us to approach a more unbiased understanding of certain research, namely the tension towards the inclusion of alternative and/or parallel scenarios in the project and the link with the real dimension of the world, in which the product 'lives', even according to non-unique paradigms of relationship with the context. At the origin of the evolutionary leaps that have marked the history of mankind, there have always been, on the one hand, subversive impulses arising in peripheral areas of culture such as those that, for example in the period between the late 1960s and early 1970s, fuelled the radical project of overcoming capitalist models (Radical Design), and, on the other hand, new levels of knowledge in the technical and scientific fields, capable of opening a glimmer of the relative potential fields of application and directions of incremental development for each new discovery. Some researchers and designers such as Ivica Mitrović and James Auger focus their attention on this second natural vocation of man, in an attempt to redefine in a critical

sense the role of design in relation to the history and processes of education, and to bring back within an as yet insufficiently codified framework of design, a methodological practice that was widespread throughout at least the entire 20th century. We can affirm that design's reasons for being have remained largely unchanged over time, but its manifestations have changed because of technological (infrastructural) innovation and increasingly sophisticated marketing, capable of shifting the axis of the functional perception of a product and building scenarios at least as much as design.

The pandemic emergency and the ongoing systemic crises have highlighted how environment, economy and society are closely interconnected and interdependent systems, whose respective problems cannot be addressed by following a reductionist knowledge (Morin, 2017), but rather, due to their intrinsic complexity, require an integrated, holistic and trans-disciplinary knowledge by design.

Context is increasingly a complex, unbreakable reality and for this reason sometimes not even traceable to a synthetic model; in rediscovering the classical meaning of the term complexity, “that which is woven together” (from the Latin complexus), Morin again states that: “there is complexity when the different components that constitute a whole are inseparable [...] and when there is an interdependent, interactive and inter-retroactive fabric between the parts and the whole and between the whole and the parts” (Morin, 2017).

How can the multiple aspects of the same context be brought back into a unitary, strategic paradigm, which through the design of a product, a service, a city, or an ad-absurdum experiment leads designer to imagine the future?

The whole is different from the sum of the parts, and the challenge of complexity, according to Morin, lies precisely in questioning the reductionist approach that has dominated scientific thought (Morin, 2017), and along the lines of that, also the pioneering spirit of the historical avantgardes and production, for centuries, from the Wiener Werkstatte to the Bauhaus, to Radical Design.

As James Augier argues, if radical design aimed to break with the past, speculative design tends instead to highlight criticalities and lateral aspects within evoked possible future scenarios (Auger, 2012). Accepting this enabling formulation of design, which in fact broadens the panorama of design proposals admissible in the face of a demand or need expressed by the market (in the real world even before that in the digital space of a future metaverse), means adopting an inclusive, non-formalist approach, destined to produce effects beyond the limits of a circumstantial historical, geographical and temporal collocation, and above all beyond the conclusive outcome of problem-solving.

In a certain way, we could say that, in order to effectively satisfy a need and offer a permanent solution to a problem, it is necessary to take on a complex dimension such as that one adopted by experimental science, in which 'fictional' (reproduced) replicable tests and verifications are conducted.

“Over the last twenty years experimental design practice has conjured objects and images from imaginary futures. Practitioners have considered how technologies will affect our everyday lives. During this time, common themes have emerged; how domestic spaces change with the evolution of new communication technologies; how relationships shift under surveillance capitalism; how our biological building blocks change our relationship with the environment; how work will be reconstituted through automation and computation; how our eating patterns change when our environment is destroyed, and our supply chains break down. Many of these futures have become our present during the Covid-19 pandemic” (Ward, 2021).

This research deserves to be conducted now no longer only in a unidirectional way towards arbitrary partial solutions (desirable, reassuring, profitable, etc.), but in a heterodirectional way, trying to imagine even unexplored, even obscure possibilities that critics call dystopian, in order to effectively intercept real perspectives, in a world that no longer follows the rules of the reality known so far.

Acknowledgments

I thank Anthony Dunne and Fiona Raby, through whom, many years ago, I came into contact with speculative design, just when I was researching and studying for a way to systematically introduce lateral thinking models into the design teaching in my university. I thank the myriad of designers who, more or less consciously, have contributed to build a huge 'starry sky' of examples, as bright and clear as their minds.

I thank Valeria, without whom none of this would ever make any real sense.

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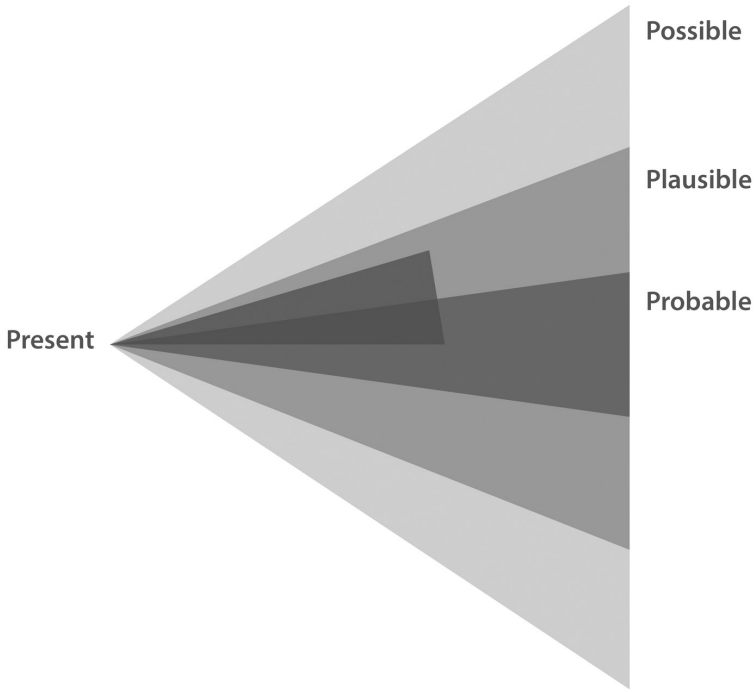

Figure 1.PPPP diagram (probable, plausible, possible, preferable). (Image © Anthony Dunne & Fiona Raby)

Figure 2. Alba, concept car for private extra-urban mobility in 2050 future scenario. Marco Tirelli (2023)