

BEYOND
SPECUL
ATIVE
DESIGN:
PAST —
PRESENT
— FUTURE

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SpeculativeEdu *NeoRural Futures* Summer School, Rome 2019.

CONTENTS

CH.1	Beyond Speculations James Auger, Julian Hanna, Ivica Mitrović	12
CH.2	Echoes of Futures Past – Speculations and Fictions from History Michael Smyth, James Auger, Ingi Helgason	24
CH.3	An Overview of Speculative Design Practice Ivica Mitrović, Julian Hanna, Ingi Helgason	68
CH.4	Methods, Approaches and Tools: Ambiguity, Tensions and Scopes Enrique Encinas, Sara Božanić, Oleg Šuran	94
CH.5	A Practice of Hope, A Method of Action Matt Ward	166
CH.6	Future Paths James Auger, Julian Hanna, Ivica Mitrović	202
	Bibliography & References	214

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Enrique Encinas is a design researcher looking at the patterns and textures formed by peoples and technologies with a critical eye and an interdisciplinary focus. He uses practice-based design approaches to examine the contested boundaries that define what is actual, what is preferable and what is

possible in the realm of technological development and use. His current work produces objects, methods and tools to deploy speculative designs in educational settings, rethink socio-material assemblages of energy production and consumption and question the role of algorithmic wizardry when developing Blockchain and AI technologies. He trained as a telecommunication and semiconductor tech engineer before obtaining his PhD in interaction design. He is currently assistant professor at Aalborg University where he teaches people centred design research methods, visual communication and interaction design.

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Michael Smyth is an associate professor at the Centre for Interaction Design, Edinburgh Napier University, UK. He grew up in a generation that can remember men landing on the moon; he listened to the music of Ziggy Stardust (aka David Bowie); and dreamt about a future and things that did not yet exist. He likes to tell stories – not stories about the past, but stories about our future. His hope is that these stories allow us to better understand our world and our place in it; and critically what that could be like in the future. During the day, Michael researches and teaches in the fields of interaction design and human computer interaction. He is intrigued by the space between people and technology. Michael

is a Co-Director of the Edinburgh Creative Informatics Partnership funded through the UK's Arts and Humanities Research Council Creative Industries Cluster Programme. Previously, he has worked on European Commission projects funded under Horizon2020, FP7, FP6 and FP5 initiatives, and is the co-editor of the book entitled *Digital Blur: Creative Practice at the Boundaries of Architecture, Design and Art*.

Sara Božanić is CEO of the Institute for Transmedia Design, based in Slovenia. She is a “hybrid” – a designer, strategist, educator, and thinker. She has been working for many years on the promotion of transmedia design disciplines in Europe, organizing events, designing labs, and lectures. As a consultant, producer, and director, she has worked on numerous international projects funded by the European Commission. In 2015, she was chosen among 40 EU consultants working on audience development via digital means to take part in policy debates under the Voice of Culture project – a structured dialogue between the European Commission and the cultural sector. In 2011, she received a Young Creative Entrepreneur Media Award by the British Council for her achievements in the development of the interactive media design sector in Slovenia. Sara believes that digital opens new paths to the public and fosters an endless series of design possibilities.

BEYOND S P E C U L A T I V E D E S I G N

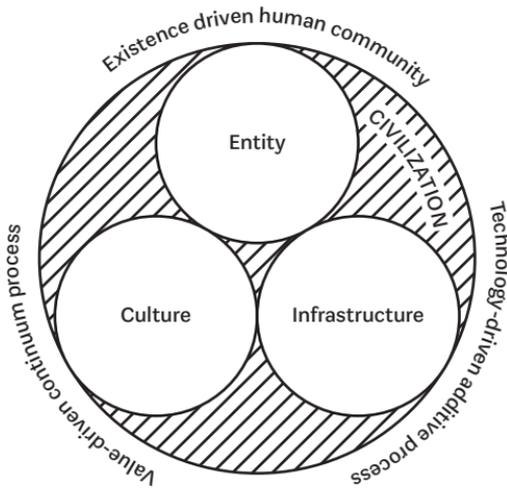
“Imaginative fiction trains people to be aware that there are other ways to do things and other ways to be. That there is not just one civilisation and it is good and it is the way we have to be.”

— Ursula K. Le Guin,
quoted in *Worlds of Ursula K.
Le Guin* (Arwen Curry, 2018)

Le Guin is the ideal person to turn to as we begin this introduction to the conclusion of SpeculativeEdu. In her preface to an interview with the writer in 2014, Heather Davis argues that “Le Guin’s works helped to redirect science fiction out of the margins of genre literature to an unparalleled category of thought experiments and possibilities for different worlds, lives, and ways of being.” This description (of science fiction) could be directly transposed to the *promise* of speculative design; the approach, however, is still in the “redirection” phase, exploring and articulating ways of looking outwards (temporally, across disciplines) and inwards (critical evaluation and clarity of purpose).

SpeculativeEdu (an educational project funded by ERASMUS+) was conceived at a crucial moment for speculative design and related practices. Whilst it is uplifting to see its popularity on the rise, it is in need of some redirection – away from the all-too-easy dystopian spectacles that shock or titillate but little beyond, and away from the obsession with (largely technological) futures. The question we’ve been asking over the past two years is: redirect to where? To address the question we – a group of educators and practitioners from institutions across Europe – have conducted more than 50 interviews, organised workshops, collected case studies, held conferences and discussions, gathered data and honed tools and approaches, with the aim of creating a clearer sense of purpose for ourselves and a clearer view of the field for anyone interested in speculative design, speculative design education and design education in general.

Still a bigger question remains: why the need for imaginaries of different worlds – in particular in the field of design, which has always been at the core of defining the “better life”? We will therefore begin with a brief analysis of the state of contemporary design by way of justifying the need for alternative approaches. Le Guin’s choice of the word “civilisation” in the statement above is particularly helpful in this task, especially when approached from Andrew Targowski’s Tri Element Model (TEM) ⁽²⁰⁰⁴⁾.



The Targowski Tri Element Model (TEM).

Targowski makes a differentiation between **culture** and **infrastructure**, culture being based on relatively stable values whilst infrastructure changes through time in an additive way – typically through new developments in technology. When we view contemporary western **design** through this model it could be argued that its **values** were shaped during the early 20th century as the arts and crafts shifted towards industrialisation and growing consumer culture, values that remain relatively unchanged today. Whilst the *raison d’être* of mainstream design has remained stable, the practice has evolved through both the infrastructural aspect of civilisation

automato.farm



We all stumbled upon speculative design and design fiction, more as a way to explore some of the questions and doubts we all had about the hyper tech-positivism we encountered in our respective backgrounds and education.

Works and quotes marked with  are taken from speculativeedu.eu/interviews/.

– as Targowski notes, a technology-driven additive process – and the refinement/enforcement of the values through increasingly sophisticated marketing techniques. Some time ago design’s role in validating modernist myths of progress cemented its status as a force for good; an illusion that somehow remains culturally stable despite the various counter movements/arguments that have arisen over the past century.

The key to design’s relatively untarnished reputation, in the face of a growing list of misdemeanors, may be explained as an ingenious sleight of hand. This sleight of hand is the elevation of the status of designed objects to an almost sacred level, which draws focus away from the dubious practices that are revealed when we look beyond the object to the various systems that facilitate its existence: the systems of resources, of production, of distribution, of marketing and fundamentally, of economy.

Norman Bel Geddes⁽¹⁹³²⁾, one of the pioneers of the influential movement Streamline Moderne, describes the potential elevation of the industrial object to the level of sacred art:

“When automobiles, railway cars, airships, steamships or other objects of an industrial nature stimulate you in the same way that you are stimulated when you look at the Parthenon, at the windows of Chartres, at the Moses of Michelangelo, or at the frescoes of Giotto, you will have every right to speak of them as works of art.

Just as surely as the artists of the fourteenth century are remembered by their cathedrals, so will those of the twentieth be remembered for their factories and the products of those factories.”

(CITED IN WOODHAM, 1997, P. 67)

In *Mythologies*⁽¹⁹⁵⁷⁾ Roland Barthes makes the same point somewhat more convincingly through the example of the Citroën DS. Cars, he argues, “are almost the exact equivalent of the great Gothic cathedrals: I mean the supreme creation of an era, conceived with passion by unknown artists”. Commenting

on the seamless perfection of the vehicle, he compares it to the “unbroken metal” of science-fiction spaceships and even to the smooth and seamless robes worn by Christ. Barthes’ emphatic words anticipate the status objects of today; seams, he argues, reveal the hand of the (human) maker, therefore suggesting that the DS is beyond human – an immaculate conception (BARTHES, 2009, P.101). Similar claims could be made on behalf of the latest Apple product, perhaps the best example of a contemporary superlative object, based on the complete absence of all visible forms of assembly (and more importantly from a repair point of view, disassembly).

The one key aspect of change, since the time of Barthes and Bel Geddes (aside from the fact that the artists are no longer unknown), is the increasing role and sophistication of an object’s representation in popular culture. It is impossible, for example, to separate an Apple iPhone from the brand, its marketing, and the global fanfare that surrounds the launch of a new Apple product. This focus on seamless design, on the spectacle, on the superlative object, has resulted in a dramatic dislocation of ends from means, in Borgmann’s terms (1984). Highly emotive and susceptible personal value systems, such as a perceived enhancement of status, place an almost total emphasis on the end, allowing the means to be reduced to whatever it takes to facilitate its existence. Our systems of culture have convinced the public (consumers) that this civilisation is the only one, the way things must be.

The COVID-19 pandemic – not to mention accelerating environmental collapse, increased economic inequality, and so on – are revealing the old systems to be fundamentally flawed in many ways. To return to the words of Le Guin, “if we don’t think about alternatives, we’re stuck with what we’re doing now, following hi-tech industrial growth-capitalism to the bitter end: the uncontrolled exploitation and exhaustion of mineral, plant, and animal resources” (DAVIS, 2014). Or, as Donna Haraway puts it: “Cheap nature is at an end” (2015, P. 160). The old narratives of conquest and immortality – what Le Guin calls

Tobias Revell



Speculative design has become separated from its critical origins. ||| It's when speculative design creeps into corporate strategy and marketing that it becomes a problem.

Jimmy Loizeau



Over the years, the critical and speculative design conversation has made the genre self-aware to the point that perhaps it takes itself or is taken too seriously.

the “techno-heroic” – are played out, unconvincing, even nihilistic given our dire present circumstances. Design is of course deeply implicated in and is a key contributor to this mythology.

The vast majority of mainstream educational programmes still sit within the modernist vision of the 20th century, marked primarily by a few central myths about the social role of design. This view is still rooted in the modernist rational and functional understanding of design as a problem solving discipline operated in the context of industrial production and the market, viewed through a trio of classic design myths (AUGER, 2016):

Myths taught at design school:

- ① *Design is good,*
- ② *Design makes people’s lives better,*
- ③ *Design solves problems.*

Of course design can be and do all of these things, but the pervasive role of the market, the lack of any real evolution of methods (beyond technical) since the early 20th century and the non-critical celebration of its own (very narrow) history means that the majority of design programmes are ill-equipped to teach students how to design for the complex world of the 21st century (ABDULLA, 2021).

In 1970, the American economist Milton Friedman famously called for the freeing of business from any pretence of social responsibility, on the basis that it went against the interests of shareholders. Friedman (1970.) argued that companies that did adopt “responsible” attitudes would be faced with more binding constraints than companies that did not, rendering them less competitive. The fact that several of the companies at the top of the global stock index have design activity at the core of their business raises important questions – what are these constraints and how does their non-adoption limit the potential of contemporary design as a force for social good? This observation reveals the original promise of speculative design – which we will go into in depth in the chapters that follow – rather than being liberated from the constraints of ethical and moral considerations, or liberated from its critical

faculties in the name of industry and progress, it would generate fresh critical debates and new perspectives on technology and society by practicing a type of design that was decoupled from the constraints of capitalism to which it had been bound so closely since the Industrial Revolution.

A number of critiques of speculative design – including the charge of privilege and other issues first raised in the MoMA “Design and Violence” debate (THACKARA, 2013) – are out-

lined in the CHAPTER 5, entitled “A Practice of Hope, A Method of Action”. One common critique is that the edgy depictions of bleak dystopian futures with which it is often associated (and which were once potentially useful) are no longer surprising – they have been reduced over the past decade to a familiar form of entertainment. In fact these dark imaginaries are now realised on an almost daily basis, exemplified by Elon Musk’s brain implant, Neuralink, which he demonstrated on a live pig (NEURALINK, 2020). Both mainstream design and speculative design have followed a similar additive or extrapolative model, both failing to look beyond the frame of the system itself. How can we invent new narratives and new metaphors that take us beyond *Black Mirror* dystopias, “used futures” (INAYATULLAH 2008), the “netflixisation” of the future, and the apocalyptic fallout of the Hollywood thriller? How can we move beyond the spectacle of the dystopia to engage with the real-world?

This desire to “move beyond” was the motivation for this research project, with its scope to collect, exchange, reflect upon, develop, and advance educational practices in the area of speculative design and beyond. As project member Jimmy Loizeau (2020) puts it: “the SpeculativeEdu project is a platform to attempt to move the term or the discipline forward, to look for and explore new approaches, to move the term ‘speculation’ away from perceived dogmas; to make the argument for reinvigorated speculation.” One of the main goals of the project, as expressed by James Auger (2019) in the kick-off meeting, is “to really help us understand and to put forth a metric or system, a better understanding or a way of evaluating

and being more critical about speculative design, being more ambitious.” In her interview for the project, Deepa Butoliya⁽²⁰²⁰⁾ issued a stark call to action in the midst of uncertainty: “As design educators we *cannot afford* to exclude Speculative Design from a holistic education of our students, especially after the current crisis that the whole world is experiencing.” We need to help our students to think more creatively and critically about the role of design in our shared futures.

As an alternative we have the benefit of something like Le Guin’s⁽²⁰¹⁴⁾ revolutionary approach to sci-fi: “rejecting wishful thinking and easy false solutions, sticking to what science, however tentatively, can tell us about reality. Not just space technology and cyber engineering, but the life sciences and the social sciences, ecology, anthropology, neurology, all of it. There’s such lovely stuff there for the mind to play with. Lovely, and maybe life-saving.” How can we as design practitioners and educators, in Haraway’s⁽²⁰¹⁵⁾ terms, “make possible partial and robust biological-cultural-political-technological recuperation and recomposition”?

This book is structured in six main sections. After the introduction comes a brief history of speculation in radically diverse contexts, followed by a broad overview of speculative design practice and education. From there we dive into speculative design approaches, methods, and tools via a series of detailed case studies written by the practitioners themselves. A summary of critical views of speculative practice over the past two decades follows, and we conclude with a suggestion of future paths and a list of guidelines (towards good practice) for both educators and speculative designers.

We hope that this book will provide newcomers with a thorough introduction to the past, present and future of speculative design and related approaches. Experienced practitioners will have a chance to check in and learn more about diverse approaches, methods and tools, as well as case studies; some of which – due to the radical heterogeneity and interdisciplinarity of the field – they may not previously have

been aware. Educators will find a wealth of guidelines, tools, case studies and other sources of inspiration, while students will benefit from a comprehensive and multifaceted overview of the speculative design landscape, across Europe and beyond.



🌐 *Insects au Gratin*, Susana Soares and Mr. Andrew Forkes, 2014,
photo by Amelie Fontaine, MUDAM Luxembourg.

Dash N' Dem



Speculative design needs to become more accessible and develop collective strategies to engage people in confronting and rethinking their social reality.

ECHOES OF FUTU RES PAST

– SPECULATIONS AND
FICTIONS FROM HISTORY

“What is history? An echo of the past
in the future; a reflex from the future on the past.”
— Victor Hugo

Jan Boelen

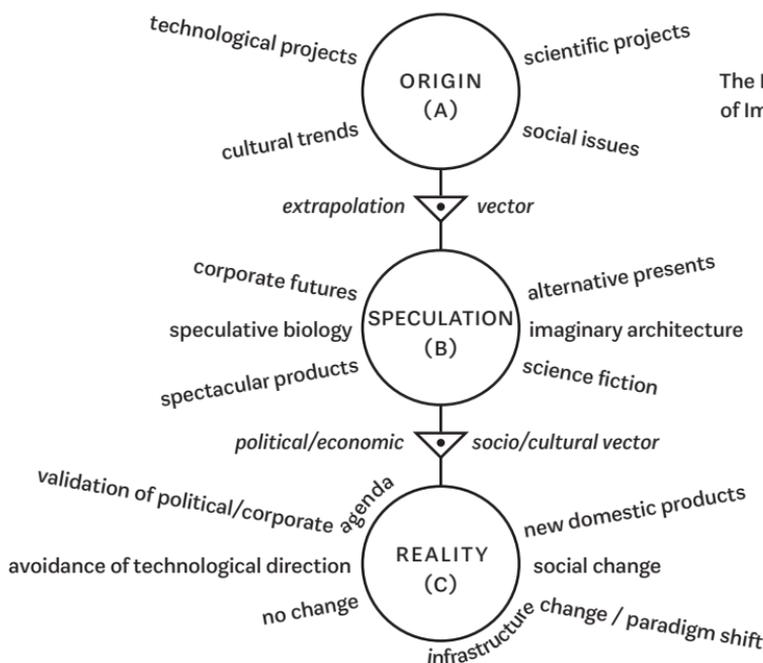


We had Relational Design / Social Design – Speculative Design and Critical Design are the new domains in the design field, where the pragmatic approaches of design itself are questioned.

OTHER WORLDS

Speculative design has many antecedents, sharing family resemblances with other approaches to future-formation, technological aggrandisement or critique and the building of *other* worlds. A rigorous historical analysis of speculative imaginaries (in relevant contexts) is helpful in not only understanding how they are constructed but also in identifying the complex social, cultural or political agendas that direct and motivate their existence. Such a study, conducted with hindsight, also facilitates an opportunity to examine the ultimate influence or impact of the *other world* in real life contexts.

Alternative or new configurations of the world have been presented across a variety of contexts, using diverse media and for a multitude of different reasons. The following DIAGRAM divides this process into three key elements:



In *The Pervert's Guide to Cinema* the philosopher and cultural critic Slavoj Žižek describes the viewer's reading (of cinema), stating that, "If something gets too traumatic, too violent, even too filled with enjoyment, it shatters the coordinates of our reality – we have to fictionalise it" (FIENNES, 2006).

◀ P 27 These "coordinates" (A in DIAGRAM) typically relate to the individual, social, cultural, political, historical, technological, and scientific dynamics of contemporary life. Speculations typically focus on one particular aspect and extrapolate this to create a modified version of the world or artefacts and evidence from this new version. The vector that drives the extrapolation acts on behalf of particular agendas or interests – these shape the imaginary (B in DIAGRAM) with the ultimate aim of attempting to influence (aspects of) the future world (C in DIAGRAM). Good speculations "stretch" rather than "shatter" the coordinates, ensuring plausibility and in turn eliciting a powerful level of audience reaction (AUGER, 2013).

In this series of short texts we will examine a selection of historical speculations with the aim of unravelling and exposing the political, corporate or social agendas behind them, analysing the techniques and design of the actual speculations and, with the benefit of hindsight, revealing the impact they had (or not) on the real world.



FAIRS WORLD

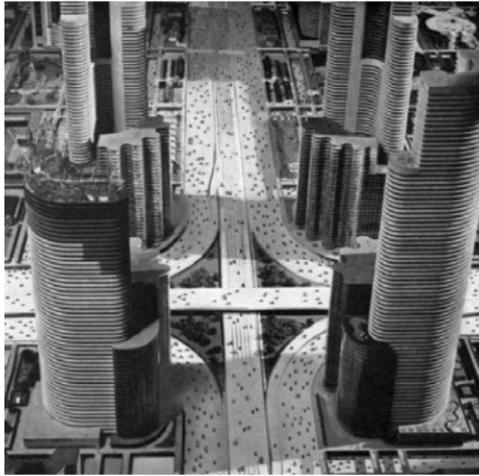
World fairs are a caricature of a nation at a specific moment in time. Captured in the dramatic and provocative pavilions are a nation's technological dreams and aspirations, its cultural identity and philosophy. Behind the spectacular façades, however, complex political and corporate agendas are at play. Disruptive technologies are exploited for their (positive) transformative potential – guiding (or manipulating) visitors towards state or corporate versions of a *better* future.

○ 1939 WORLD'S FAIR – FUTURAMA

The classic example is *Futurama*, General Motors Corporation's pavilion at the 1939 New York World's Fair. Designed by Norman Bel Geddes, the attraction featured a 35,738 square foot (3320 m²) diorama describing a vision of the United States set in the "wonder world of 1960".

“Let us look then to Norman Bel Geddes, to such men of imagination, our practical visionaries who can build the world of tomorrow today.”

—Futurama press release (MORSHED, 2004, P.2)



Futurama diorama (detail),
circa 1939,
photo by Richard Garrison.

The technology that represented the origin of Bel Geddes' speculation (A in DIAGRAM) was the internal combustion engine, his client General Motors' core product. The aeroplanes, automobiles and ships that were built around such engines were, at the time, rapidly becoming symbols of the new machine age. *Streamline Moderne* represented freedom and escape – both in the physical sense, through the function of the engine, and in the metaphorical, through the sleek teardrop styling that gave the impression that the objects were moving

even when they were standing still. Designers were, for the first time, beginning to play an instrumental role in linking technological progress to the notion of a better future – all in the service of American corporate capitalism.

Futurama described a further extrapolation of the potential of the engine – outwards across time and space. The super sleek motorcars needed a place to exploit their potential for speed outside of the claustrophobic cities. Bel Geddes presented the concept of super-highways: these would connect America's cities with revolutionary run-offs, allowing the cars to join and leave the motorways without slowing down, and in turn facilitating the sprawl of a perfect picket-fenced suburbia. For visitors whose outlook had been influenced by the Great Depression, this future was compelling. It was a place that was clearly better than the present, and American consumers bought into the dream. As a result, many aspects of the diorama became reality.

Futurama was of course motivated by other interests than creating a better future, not least the selling of a particular political and corporate agenda – interests that are strikingly revealed in E. L. Doctorow's novel *World's Fair*. As a family leaves the ride, the father says: "It is a wonderful vision, all those highways and all those radio-driven cars. Of course, highways are built with public money,' he said after a moment. 'When the time comes General Motors isn't going to build the highways, the federal government is. With money from us taxpayers.' He smiled. 'So General Motors is telling us what they expect from us: we must build them the highways so they can sell us the cars'" (DOCTOROW, 1985, P.285).

Futurama provides a valuable historical lesson, in that through hindsight we can compare the promise of a corporate future with the reality that came to pass. Highways were built and millions of cars were sold. But Bel Geddes's vision – a vision constrained by his role as a designer working for a corporate client with the brief to glamourise and sell the technology – neglected to present the potential shortcomings.

These shortcomings included not only traffic jams, smog, accidents, and road rage, but also, with the benefit of hindsight, more complex societal consequences such as insurance fraud or the decline of cities that relied on automobile manufacturing.

Sohail Inayatullah 

Prior to any social design, we, I, need to understand my own epistemological biases, and thus intervention can move from being technical and strategic to adaptive and transformational.

O 1964 WORLD'S FAIR – EXPANDING HORIZONS

The spectacular machines on display at the NASA sponsored Space Park could be seen as the continued (and final) extrapolation of the internal combustion engine. The super highways depicted in *Futurama* had been built and many cars sold. However, the resultant reality (C in DIAGRAM) was far from the utopian paradise described by General Motors in their 1940 film *To New Horizons* (GENERAL MOTORS CORPORATION, 1940), rather the United States was entering one of the most tumultuous and divisive decades in world history (Kennedy assassination, war in Vietnam, civil rights movement). Meanwhile in Flushing Meadows a different story was being told, as the government deflected the public gaze from reality by describing an updated petroleum dream – rockets and the new frontier of space. In his account of the events surrounding John F. Kennedy's 1962 Rice Stadium Moon speech, John M. Logsdon describes the short-term and more lasting impact of the Apollo programme on US international prestige and associated national pride (LOGSDON, 2010, P.238), and how the early psychological and political advantages of Soviet space successes were quickly and effectively countered through the Moon mission. ◀ P 27

Two years later, at the 1964 New York World's Fair, spectacular exhibits such as the Space Park revealed how this backdrop of profound technological development, Cold War fears and the spectacular challenge of the space programme were impacting on popular culture. Again, hindsight provides a luxurious position through which to view such events – whilst *Futurama* was successful in transitioning from the imaginary (B in DIAGRAM) to everyday reality (C in DIAGRAM), space race imaginaries turned out to be a little more disappointing. In the words of J. G. Ballard, written two years after the moon landing: ◀ P 27

“The world of ‘Outer Space’, which had hitherto been assumed to be limitless, was being revealed as essentially

limited, a vast concourse of essentially similar stars and planets whose exploration was likely to be not only extremely difficult, but also perhaps intrinsically disappointing ... The number of astronauts who have gone into orbit after the expenditure of this great ocean of rocket fuel is small to the point of being ludicrous. And that sums it all up. You can't have a real space age from which 99.999 percent of the human race is excluded."

(EVANS, 1979)



*Space Park at 1964
World's Fair, New York,
National Aeronautics and
Space Administration.*

Elsewhere at the 1964 World's Fair, however, a new
◀ P 27 genesis (A in DIAGRAM) was being revealed – introducing a refresh-
ing new direction for the technological future. The IBM Pavilion
with exhibition design by Charles and Ray Eames and architec-
ture by Eero Saarinen introduced visitors to the computer. Again
quoting the prophetic words of Ballard (EVANS, 1979):

“The ability to pass information around from one
point in the globe to another in vast quantities and at stu-
pendous speeds, the ability to process information by fantas-
tically powerful computers, the intrusion of electronic data
processing in whatever form into all our lives is far, far more
significant than all the rocket launches, all the planetary probes,
every footprint or tyre mark on the lunar surface.”

This significance, with a specific focus on the contribution of the “US Cold War military-industrial-university-entertainment complex” in shaping the content of the World’s Fair is described below by the Professor of Global Arts and Politics Ryan Bishop:

“The IBM Pavilion and the Eames Office’s contributions to it provided the means by which this global political structure would be realized: namely information, computation, complex systems, tele-technological surveillance and control coupled with multimedia spectacles and avant-garde aesthetics with cool design features generated as a package to dazzle the masses while delivering a singular vision of a collective future. That vision of a collective future is the present we currently occupy a half century later.” (BISHOP, 2020)

○ EXPERIMENTAL COMMUNITIES IN THE 1960s – EPCOT

Conceived in the 1960s, Walt Disney's Experimental Prototype Community of Tomorrow (EPCOT), was to be both a laboratory for future technology and a home for the citizens of tomorrow ^(THE-ORIGINAL-EPCOT.COM, 2020). This vision was explored in the 1939 World's Fair in New York. What is significant about the vision for EPCOT was that it took the familiar concept of attractions a step further and imagined them as elements of an integrated living environment. The vision for EPCOT was that families would live, work and play in a technologically rich environment.



The original 1967 *E.P.C.O.T.* model.

In a 1966 promotional film, Walt Disney described this idealised relationship between the individual and the corporation: “when EPCOT has become a reality and we find the need for technology that don’t [sic] even exist today, it’s our hope that EPCOT will stimulate American industry to develop

new solutions that will meet the needs of people expressed right here in this experimental community.” He went on to say that “it will never cease to be a living blueprint of the future where people actually live a life they can’t find anywhere else in the world” (WALT DISNEY PRODUCTIONS, 1966). In this revolutionary vision there would be no retirement and all citizens would be required to work for the maintenance of the city and would live in rented apartments and houses.

EPCOT was to be the future, a vision of an American utopia institutionalised as a process of constant development and refinement. In a similar manner to the visions of the Italian Radical Designers (DISCUSSED BELOW), EPCOT would be upgradable and constantly evolving. For all the promise of EPCOT, the plans were halted after the death of Walt Disney, which occurred just two months after his promotional film. A more commercial version of Disney’s concept was created in the 1980s and was called the EPCOT Center. It was part of a theme park and would have no residents. So EPCOT had moved from being a vision of a utopian community to being a theme park – from a place where the future was sought through a process of living, to a series of attractions through which new products could be observed. The vision of EPCOT had moved from a community to a laboratory firmly premised on a commercial prerogative. ▶ P 53

A footnote to Walt Disney’s vision is the town of Celebration, Florida which was established in 1994. Celebration is a planned residential community that deliberately references the perceived qualities of post-war, middle America – it is a move away from the sprawl of suburban life and the associated social and civic isolation. While the city is very much in the Disney vision, it also provided up to date technology in all of the homes. It represents a manifestation of utopian thinking in a contemporary setting while all the time being grounded in commercial reality.

Whether Celebration represents a dream or a nightmare is debatable, but it is undeniable that the desire to create new experimental communities is strong. This can

also be witnessed in the development of communities that explore social housing and urban planning, for example Welwyn (Garden City), New Lanark and Milton Keynes (UK) and Brasilia (Brazil). More recently Masdar City (UAE) and New Songdo (South Korea) have been built with the purpose of providing citizens with technologically rich environments, thereby enabling the long term study of their usage within the lived experience. The creation of such new communities

← P 27 (B in DIAGRAM) is motivated by different origins (A in DIAGRAM). Each represents particular beliefs, ideologies or imperatives but the challenge is the creation of resilient communities that can adapt and change and that ultimately can provide a home

← P 27 for people (C in DIAGRAM).



🌐 *The Age of Entanglement*,
Curated by Petra Lilja, 2020,
photo by Petra Lilja.

Petra Lilja



Speculative design, or any related design approach oriented towards the future, is to use it as a vehicle to approach complex societal and environmental challenges through design.

SCIENCE FICTION – DYSTOPIAN IMAGINA RIES

The *other worlds* of science fiction have much in common with the World's Fair's pavilions. The key differentiating factor, however, is a negative extrapolation vector, as Daniel Dinello points out in his aptly titled book *Technophobia: "the best science fiction extrapolates from known technology and projects a vision of the future against which we can evaluate present technology and its direction"* (DINELLO, 2006, P.5).

○ MARY SHELLEY'S *FRANKENSTEIN* (1819)

The classic literary example is Mary Shelley's *Frankenstein* (1819). In her book *Representations of the Post/Human*, Elaine L. Graham acknowledges Mary Shelley's "evident knowledge and interest in the emergent discipline of natural science", concluding that she intended *Frankenstein* to "explore the serious issues of natural philosophy in the context of the scientific debates of the time" (GRAHAM, 2002, P.66).



Frankenstein
(Whale, 1931).

The origin (A in DIAGRAM) of Shelley's speculation ◀ P 27 can be found in the late 18th Century scientific research of Luigi Galvani, whose experiments with frogs' legs led him to conclude that electrical energy was intrinsic to biological life. Shelley, in building on a history of previous fictions such as the Jewish legend of the golem and several Greek mythologies such as Daedalus and Prometheus (as referenced in the subtitle of the book), provided an updated version of the myth validated by the most up-to-date science of the day.

The allure of Shelley's original novel comes in the pure crafting of the speculation – the initial description of the monster powerfully reveals its repugnance: "Oh! No mortal

could support the horror of that countenance. A mummy again endowed with animation could not be so hideous as that wretch. I had gazed upon him when unfinished; he was ugly then; but when those muscles and joints were rendered capable of motion, it became a thing such as even Dante could not have conceived” (SHELLEY, 1992, P.59).

The key lesson to be learned from Shelley is how the speculation can be managed to better embrace the complexity of the theme. She permits her monster to speak to the reader in the first person, providing it with an opportunity to elicit empathy through distressing and moving depictions of its miserable existence. This acts to humanise the creature and in turn complicate the issue of its creation and the science behind it – the focus subtly shifts away from the pure uncanny horror of the creature towards the hubris of its maker and indeed, the role and function of science itself.

In a chapter entitled “Did Hollywood Make the Monster”, Graham describes how Dr. Frankenstein’s creation was transformed in the popular Hollywood productions of the 20th Century: “the ‘monster’ devolved to become silent or at best, inarticulate, a device which accentuates its brutishness ... the ambivalence of the monstrosity dissipates, to be replaced by pure horror” (IBID, P.66). *Frankenstein* shifted from a complex cautionary tale of gothic horror to a simple form of entertainment, a spectacle – “the primary virtue of which is to abolish all motives and all consequences: what matters is not what it (the public) thinks but what it sees” (BARTHES, 2009, P.3).

Many speculative design projects follow this path, seduced by the allure of a powerful provocation and the ease with which it can disseminate. It allows the speculation (B) to be the end goal via a gallery exhibition or media publication. Negative imaginaries, however, have been successful in influencing real-life events. In the 1990s the Frankenstein myth was well exploited by the right-wing press, particularly in the UK, in relation to genetically modified foods.

O CYBERSYN – LOOKING BACK AT A FUTURE (1960s – 1970s)

In the context of speculative design, the communicative power of design fictions is conveyed through their articulation. Whether it is film, models or diegetic prototypes, each presents possibilities with the purpose of making us question the nature of such alternative scenarios. But the reverse is not always the same, as the lens of the present can unintentionally distort the past, leading to projects being interpreted as more or less fictional speculations because they offer glimpses of the future, irrespective of whether this was their intention. As a consequence, myths are born and icons developed from projects and activities that were perhaps only considered truly remarkable in the light of events that happened soon after.

One such project that remains shrouded in mystery is Project Cybersyn, or Proyecto Synco in Spanish (MEDINA, 2014). This project emerged in Chile in the early 1970s during the government of Salvador Allende. Its aim was to gather and centralise existing data to increase the overall efficiency and responsiveness of the economy. This was a vision that predated both the internet and data-driven innovation. Project Cybersyn speaks to our imagination about how our futures might have been imagined, although that was never the intention of the project. The aim of Project Cybersyn was to revolutionise the Chilean economy by minimising waste and inefficiency in production by connecting hundreds of firms to a centralised organisational system through a national network of telex machines (A in DIAGRAM). ◀ P 27

These machines collected real time data from factories, for example on production output or energy consumption, and transmitted the data to two mainframe computers in Santiago. The goal of the project was to enable exchange of information and to encourage the participation of workers in

planning and management of the economy in order to create flexible and adaptive systems that would sustain economic stability in Chile (the extrapolation factors in DIAGRAM).

◀ P 27

Fernando Flores, an advisor to Allende, proposed the new science of Cybernetics be used to manage the Chilean economy. At the same time in the UK, Stafford Beer was applying concepts of cybernetics to business management. He believed that business could be thought of as an intelligent system and that the system could be “tuned” using the principles of cybernetics towards achieving that goal. Flores approached Beer who in 1971 arrived in Chile to begin a project that would become Project Cybersyn (B in DIAGRAM).

◀ P 27

Why is it that certain projects have become part of the DNA of speculative design? In the case of Project Cybersyn, a key part was its visual aesthetic and the resulting imagery that has become part of the project’s legacy. By the end of 1971, Allende’s government had nationalised more than 150 companies and it was Beer’s role to develop processes through which the data could be transformed into action. As part of the process the project featured an economic simulator to model alternative policies. But perhaps the most enduring image of Project Cybersyn was its operations room which featured mounted screens and white fibreglass swivel chairs designed for optimal creativity.

Stafford Beer understood the importance of the physical interface to such a complex system. The operations room was conceived by Beer and designers from Chile’s industrial design group, whose desire for a modernist style was strongly influenced by the European visual aesthetic. Their vision centred on seven white fibreglass chairs in which would sit high ranking members of the government who would adapt the economy based on changes in the national environment. Each chair had an ashtray, a place for your whiskey glass and a set of buttons that controlled display screens on the walls. The futuristic design of the control room masked the mundane reality of the technology it controlled. The buttons in the chairs

were connected to wires in the floor which were connected to slide carousels that displayed pre-made slides. In many ways, Cybersyn's operations room seemed to anticipate a future that hadn't yet arrived.

Project Cybersyn came online (so to speak) in October 1972, and its first tangible impact was to enable the government to circumnavigate blockades set up by the right wing transport union Confederacion Nacional del Transporte and to co-ordinate deliveries of essential food and raw materials. After 24 days the strike was defeated and Allende's project was vindicated. Project Cybersyn ran until September 1973, when Pinochet's military forces overthrew the government and dismantled the project (C in DIAGRAM).

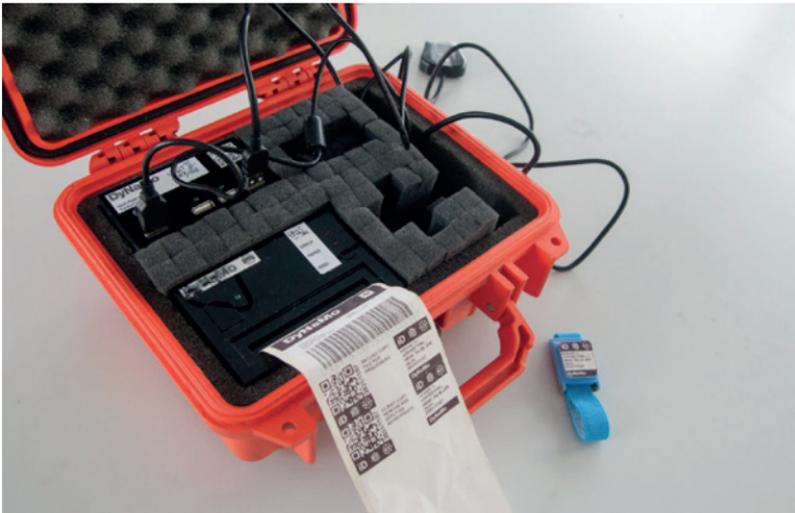
◀ P 27

Would Cybersyn be so widely discussed in the design community without its futuristic control room, complete with white fibreglass swivel chairs, like a stage set from Kubrick's film *2001: A Space Odyssey*? While the application of Stafford Beer's vision of cybernetics to manage real time data collected from over 150 companies in Chile was a bold move to centrally co-ordinate production and distribution with the goal of adapting economic policies to any changes at the national level, it is the operations room of Cybersyn that is the enduring image of the project.

Paolo Cardini



Speculative designers should be able to manage a process that can smoothly pass from the abstractness of future thinking to actionable items.



🌐 *DyNaMo Identity Management System,*
Changeist, 2017,
photo by Sjef Van Gaalen.

MID-CENTURY COMMERCIAL DOMESTIC FICTIONS

Visions of technological advancement are not confined to large scale, civic planning and transport infrastructures. Social and cultural shifts in society (A in DIAGRAM) also affect the indoor, domestic world of the private home, and specifically the production of food for the household. In the mid 20th Century, after the stress and deprivations of the Second World War, populations were hungering for a more relaxed and settled home life. Future looking corporations, freed from wartime constraints, were increasingly able to turn their attentions to devising novel foodstuffs to make use of new technological advancements in food science and in factory production. These commercial drivers (the *extrapolation vectors* as in DIAGRAM) led to new and creative ways to manufacture, store and distribute food in order to maximise shelf-life and ease of use, and therefore, profit. However, unfamiliar new products required explanation on how to use them and on their benefits in terms of time saved, better nutrition and supporting modern, exciting lifestyles. This led to a proliferation of advertising aimed at the housewife, for it was the woman of the household who was expected to take responsibility for creating meals and arranging the appropriate domestic setting and furnishings for their consumption. These adverts frequently offered recipes for new combinations of canned, powdered and other types of processed and preserved goods. Entering search terms such as “vintage 1950s food advertising” into a browser search reveals a

cornucopia of brightly coloured and often bizarre concoctions and “serving suggestions”. These images can be looked at as corporate speculations or imaginings of how a domestic life could or should be lived (B in DIAGRAM). They are presented as lifestyle templates for the consumer.

One of the most comprehensive and successful of these corporate imaginaries is *Betty Crocker’s New Picture Cook Book* (BETTY CROCKER, 1961), published in the United States in the early 1960s. More than just a collection of recipes aimed at young housewives, this is an instruction manual that explains exactly how to create a perfect domestic family life in the increasingly affluent America of the post-war era. This second edition of *Betty Crocker’s Picture Cook Book* presents a vision of a domestic world that manages to be both practical and glamorous. The ring binder cover is brightly coloured with graphic, sugary blues, yellows and pinks, holding together a set of cardboard chapter dividers and pages. “Every morning before breakfast, comb hair, apply makeup and a dash of cologne”, the book instructs the homemaker. “Does wonders for your morale and your family’s, too!”

The reassuring world of Betty Crocker was hugely appealing to the intended audience. The first edition of the *Picture Cook Book* was published in 1950, with the new updated edition in 1961, and since then the various editions have sold more than 60 million copies. Betty herself, in spite of being a corporate invention, was highly respected, receiving 5,000 fan letters a day at the height of her popularity. As a fictional character created by the Minnesota-based General Mills company, a multinational marketer of branded consumer goods, Betty Crocker symbolised not just a return to domesticity after the disruption of the war, but also the promise of a heightened and intensified version of normality, a kind of aspirational super-normality. As a persona, however, Betty became less prominent during the 1960s. Her image, “competent-looking, dignified, neither-young-nor-old” (MARLING, 2009), began to appear

on the packages of convenience foods in the 1930s, but by the time the *New Picture Cook Book* was published she was becoming a background figure. As the swinging sixties were getting under way perhaps she seemed rather out of date. Instead of looking to a kindly aunt figure for advice, young women were responding instead to a richer vision of a whole lifestyle to emulate, complete with all the accoutrements of modern consumer life. Colourful tableware, dining room furniture, barbecue equipment, and even new cars make an appearance on the pages of the *New Picture Cook Book*.

In its design the book is a work of mid 20th Century art. In every section elegant line drawings reminiscent of the style of Cocteau or Picasso depict laughing people enjoying clam bakes, bridge luncheons and skating parties. Even as pen and ink sketches the characters look like movie stars or fashion models. Women are sleek in Grace Kelly dresses while their husbands are smart in Cary Grant city office suits, at least until the weekend when they can relax and take charge of the barbecue. The food itself is shown in full and sumptuous photographic colour, laid out in elaborate tableaux like the still life paintings of the Dutch masters.

This turn to the emphasis on the private, domestic arena was fuelled by the growing market in consumer products for the home. New domestic products, furniture and appliances were launched, combining space-age luxury with homely imagery of American rural life. Betty Crocker's homemaker enjoys the benefit of technological modernity with her record players, refrigerators, and food mixers, but her home decor also reflects traditional values of the past, exemplified in the photographs of the Betty Crocker Early American Dining Room with its pewter accessories and antiques. The vignettes of comfortable, affluent suburban life are depicted throughout the book in Joseph Pearson's illustrations. By contrast, the photographs of the test kitchens presented in the introductory pages of the *New Picture Cook Book* could easily be mistaken for science-fiction movie stills, with their blend of shiny laboratory

surfaces and women in working costumes that could have been designed by Margaret Atwood. In fact, in Atwood’s speculative fiction novel *The Handmaid’s Tale*, the Aunt characters, trainers of the handmaids, are named after “famous female figures of American consumer society”, both real and fictional, including Betty Crocker herself (COOKE, 2004, p.114).

From the perspective of speculative design and design fiction it is interesting to look more closely at the aesthetic of the book. In *Speculative Everything*, Dunne and Raby (2013) discuss the challenges of designing aesthetics of unreality. A successful speculative design captures both the real and the not-real, using the visual language of design to convey a seductive and ambiguous plausibility. Sketches and drawings play a role here. Discussing the drawings of a utopian land by architect Ettore Sottsass, Dunne and Raby suggest that their “cartoon-like quality invites us to view them as inspirational daydreams”. In the *New Picture Cook Book*, the many stylised line drawings depict the homemaker in her modern kitchen or fashionable dining room, presenting perfect edible concoctions to the delight of her loving family and admiring guests. For many young women in the early sixties these scenes must indeed have seemed very much like inspirational daydreams.





The New Picture Cook Book,
photo by Ingi Helgason.

The New Picture Cook Book,
photo by Ingi Helgason.

Scott Smith



We're hard nuts to crack as a group because I'd say our one common attribute is realism. We take a realistic look at the world as it is, and where signals indicate it might go. This sets aside the utopia/dystopia trap.

THE RADICAL DESIGN MOVEMENT

In an interview reported in 1982, Peter Cook, one of the founders of the influential 1960s architectural practice and eponymous magazine *Archigram*, commented that on “one day we realised that 50 copies of our funny little magazine had been sold in the Centro D shop in Florence. The peripheral nature of these groups might have been a factor: for at that time (1965) there were none reported from Berlin, Milan or New York” (COOK, 1982). What he didn’t realise was the chance purchase of the *Archigram* magazine in London by the girlfriend of Adolfo Natalini, an architecture student from the University of Florence and later to become one of the founding members of Superstudio, was probably the reason for the magazine’s popularity in the Italian city. This is one story that gives a clue about how the city of Florence became the centre of the Italian Radical Design movement in the 1960s.

Radical Design developed from an architectural tradition in Italy and centred on the city of Florence. Its roots began with students who were working with Leonardo Savioli, a professor at the Faculty of Architecture of the University of Florence. Under his guidance students had the freedom to advocate a departure from the past and their work focussed on proposing radical new ways of living. Their visions represented an overt break from the austerity that characterised the immediate post war years in Italy. As a result of this work, the Radical Design movement grew to give voice to a new generation of architects

who wanted to critique the traditional methods of planning and question the very nature of what cities might become in the future. These architects adopted an explicitly speculative approach to both the critique of architecture and the envisionment of future cities.

The 1960s was also a time of great optimism and faith in science that was seen as a powerhouse to deliver a vision of social and economic freedom for a new generation. This optimism of the time was widespread and was best characterised by the British Prime Minister of the day, Harold Wilson, in his speech at the annual Labour Party Conference of 1963, when he warned his audience that if the country was to prosper, a “new Britain” would need to be forged in the “white heat” of this “scientific revolution” (FRANCIS, 2013). Such confidence in science, as a driver of progress, was also reflected in popular culture, for example the Mike Nichols (dir.) film entitled *The Graduate* (1967). In a famous scene the eponymous character, played by Dustin Hoffman, is brought to one side by a family friend for the purpose of career advice. The friend utters one word – “plastics” – and when asked by Hoffmann what he means, he elaborates by saying: “there’s a great future in plastics. Think about it. Will you think about it?”

The Radical Design movement exhibited a similar desire to that of speculative design as they presented visions of possible futures as a means of critique and provocation. Where perhaps they differed was in terms of their motivation. Radical Design wanted to break from the past, whereas speculative design exhibits a greater degree of criticality of our journeys to, and visions of, such futures. In Florence, two practices became synonymous with the Radical Design movement. One was Superstudio and the other was Archizoom, while in London Archigram contributed to the debate about the role of architecture and the form that cities might take in the future.

The 1960s ushered in an age of optimism, finally moving society out of the austerity of the post-war years. A new generation began to exert their influence on science, culture and

society (A in DIAGRAM). In the field of architecture, the Radical Design Movement reflected this desire for change as it sought to break away from the constraints of the architectural past and to question the nature of the city through the exploration of new possibilities for building and living in cities (the *extrapolation vectors* in DIAGRAM). The resulting imaginaries (B in DIAGRAM) for example, *The Continuous Monument* by Superstudio, adopted the semantics and visual aesthetic of architecture to convey radically new ways of living and to question issues such as globalisation and the rise of the consumer society and the subsequent impact on the environment. In reality (C in DIAGRAM) the impact of the Radical Design Movement was short lived and while some prototypes and photomontages remain, the long term change on the field of architecture remains niche. Much of the work operated in the space between social criticism and irony and it is this duality which suggests that the overarching aim was exploration, not realisation. What distinguishes Radical Design from speculative design is that it sought to “shatter” the coordinates of our reality, or at least the reality represented by the architectural establishment.

O SUPERSTUDIO

In 1966, a young group of architects who had trained at the University of Florence first exhibited their work in the *Superarchitettura* show. The group was known as Superstudio and was founded by Adolfo Natalini and Christiano Toraldo di Francia, who were later joined by G. Piero Frassinelli, Alessandro and Roberto Magris, and Alessandro Poli.

Superstudio were to become one of the most influential groups from Florence and they became synonymous with the Radical Design Movement. Indeed, their work presented at *Superarchitettura* became the basis for a manifesto of the movement. An enduring theme of Superstudio's work was the natural environment, and much of their thinking was focussed on the use of space and how architecture could be a catalyst for social change. In their manifesto, quoted in van Schaik and Makel (2005), they state: "envisaging the progressive impoverishment of the earth and how the now nearby prospect of 'standing room only' we can imagine a single architectural construction with which to occupy the optimal living zones, leaving the others free". This vision was manifest in the application of a grid system to the urban context in which every point on the grid was the same as any other point and all people existed equally. Their aim was to create a democratic experience and is perhaps best represented in their work entitled *The Continuous Monument*.

This was an architectural structure that covered and shaped the entire world. The structure was intended to serve as a refuge for humanity, its volume acting as the optimal living space that would offer a place for every human being, leaving the rest of the Earth uninhabited allowing for natural development, free from human intervention. Superstudio saw this work as a continued critique of the structure of society. Their vision was of an architecture that could self-organise and operate at any scale. The sheer scale of the vision represented

by *The Continuous Monument* was a commentary on the rise of globalization, a world rendered uniform by technology with local cultures being stripped away.

Although presented by Superstudio as a tangible object, *The Continuous Monument* never aspired to be a realizable building. It was a piece of speculative architecture or, as Frampton ⁽¹⁹⁸⁰⁾ comments: “it is a metaphysical image, as fleeting and as cryptic as the supremacist monuments of Malevich or the wrapped buildings of Christo”. In the illustrations of *The Continuous Monument*, the focus was primarily on the effect the structure produced on the viewer. Its goal was to be a catalyst for thought; from the perspective of Superstudio, it was the viewer that had to change. The vast “mega-structures” were deliberately ambiguous, left to the imagination of the viewer to make their own assumptions about the interior.

Superstudio operated in the space between social criticism and irony. Irrespective of the scale and importance of the topic, their designs contained an element of irony. The aim of the work was to explore ideas and was not dependent on a final realization. Superstudio called this “demonstration per absurdum”. Indeed, it is the duality of Superstudio – on the one hand melancholy and serious, while on the other, playful and witty – which gave much of the power to their visions.

O ARCHIZOOM

Perhaps the main driving force behind the Superarchitettura exhibition in 1966 was a design studio called Archizoom. Like Superstudio, Archizoom had its roots in the School of Architecture at the University of Florence. The group was founded by Andrea Branzi, Gilberto Corretti, Paolo Deganello and Massimo Morozzi, who were later joined in 1968 by Dario and Lucia Bartolini.

In a similar manner to Superstudio, but with less irony, Archizoom questioned the role of architecture through an overtly anti-design position. An early manifestation of this approach was the sofa entitled *Superonda* (Andrea Branzi) that was exhibited at Superarchitettura. The sofa was designed without a conventional frame and its undulating surfaces were intended to challenge convention and encourage a more flexible approach to living; it could be a bed, a sofa or a chaise longue. Like much of Archizoom's work that was to follow, *Superonda* aimed to inspire creativity and imagination.

The most developed articulation of Archizoom's anti-design philosophy was in the project entitled *No-Stop City*. Contemporaneous with the *Continuous Monument* of Superstudio, the group developed its vision of a diffuse metropolis that featured flexible products and spaces. Central to the concept was the idea of a city that constantly constructs and re-constructs itself – a city that breaks the prevailing view of architecture where urban planners and architects plan and build cities based on a “bird's eye view” from above. The *No-Stop City* was essentially conceived of as being organic and driven by the needs of its inhabitants. In a similar manner to speculative design, Archizoom asked the question, “what if ... the modern city is nothing more than a problem which has not been solved?” (ARCHIZOOM ASSOCIATES, 1971, P.157).

The *No-Stop City* wanted to offer an alternative to the existing realisations of the urban environment. The project questioned the very essence of the city: is it a bath every 100

metres or a computer every 40 metres? These are quantifiable data that make up the city, but that don't convey form or direction. Archizoom's vision was created around flat sheets of paper on which a grid plan of dots and crosses had been laid out by means of a typewriter. As the name suggests, *No-Stop City* had the potential for unlimited expansion. While the project lacked the irony of Superstudio, the work did ask the public why *No-Stop City*'s vision of the future would be any less desirable than the state of society at that time. Rather than being a blueprint for an actual city, the project was a critical utopia, more of a model for understanding the phenomena structuring the city and society. Ultimately, it was an early vision of what a "user negotiated" city might look like, in the language of today a "co-created" city of the future.

○ ARCHIGRAM

Meanwhile back in London, the authors of that influential magazine *Archigram* were also creating their own visions of the city of the future. One such vision was the *Plug-In City* that proposed a linear city housed in a raised grid system that would start near London, grow in one direction towards Liverpool and in the other across the channel, past Paris and on into Europe. The scale of this vision echoed that of the *Continuous Monument*, while the grid system was similar to the *No-Stop City*. Archigram's concept included a monorail, itself synonymous with an aspirational future, that would run along the top of the grid. This would carry passengers but also cranes which, in turn, carry sections of the grid so that the city could, in a similar manner to the *No-Stop City*, continuously build and rebuild itself. Inhabitants "plug-in" to the spaces created by the grid that also incorporated the infrastructure required by the city. This high level of flexibility allowed the *Plug-In City* to adapt to the ever-changing needs of citizens over several generations.



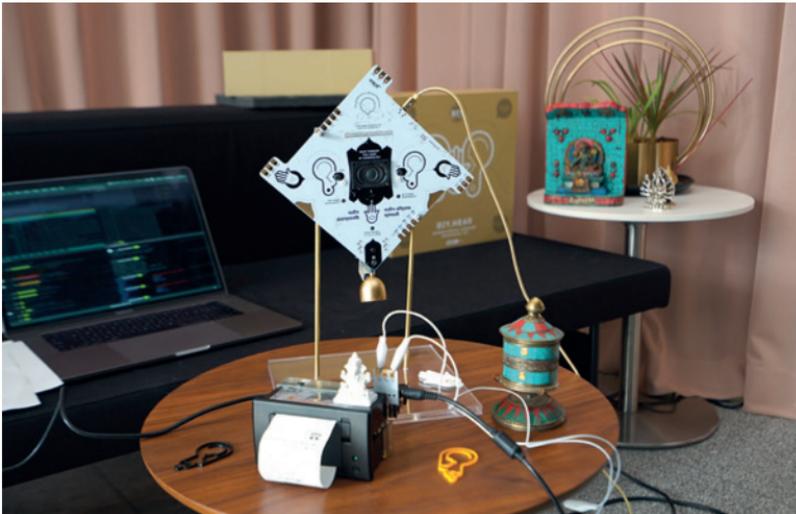
Habitat 67, Montreal (1967), photo by Ingi Helgason.

Of all the visions of architectural futures presented by these practices, it is perhaps the *Plug-In City* that has come closest to realisation. While not at the scale of a city, Kisho Kurokawa of the Metabolist Group in Japan created the *Nakagin Capsule Tower* (1972) in Tokyo. This structure consisted of pod-like living capsules that were attached to a central services core. The long-term vision was that the pods could be replaced and updated as technology and needs changed. A similar approach to modular construction and evolution was explored in *Habitat 67* in Montreal (1967). This was a project that explored the experience of apartment living. It was the vision of the architect Moshe Safdie and it is one of the two pavilions that remain that were originally built for Expo 67. In his own words, Safdie's aim was to create "a building which gives the qualities of a house to each unit – Habitat would be all about gardens, contact with nature, streets instead of corridors" (SAFDIE, 2014). Each cube has access to a roof garden that is built on top of the adjacent cube.

By the mid 1970s the utopian vision of cities that democratised and evolved to the needs of citizens had begun to fade along with the optimism for technology. The mood was represented by Archizoom's declaration that "architecture was dead" and the result was echoed in the presentation of speculations that were a deliberate break from the past – or in some extreme cases, an attempt to obliterate the past and all that Modernism stood for. This feeling was epitomised by the final scene in Michelangelo Antonioni's (dir.) *Zabriskie Point* (1970) when an archetypical modernist home explodes and we witness the artefacts of consumer capitalism being transformed into particles. The final scene depicts one of the main characters driving into the sunset, perhaps representing the dawning of a new age.

The influence of the Radical Design Movement undoubtedly outweighed its relatively short life. By 1978 Superstudio had disbanded, while Archizoom had closed in 1974. But the architectural speculations that had emerged from

Florence in this period continue to provoke as they speak to new generations of architects. Issues of globalisation and environmental sustainability have become ever more important, and as we move towards the era of the “mega-city” the radical design speculations of Superstudio, Archizoom and Archigram are becoming more prescient.



🌐 *BIY, Believe it Yourself*, automato.farm, 2018,
photo by automato.farm.

James Auger



Speculative design projects are currently happening, projects that embrace the complexity of the systems in which design happens, whether material, economic, political and so on, rather than the type of object worship that typically happens in the design community (and reverberate far beyond).

ENDPIECE

PEAK FUTURE – THE 1960s, WHEN ALL FUTURES SEEMED POSSIBLE

The 1960s marked a decade of great optimism. The trauma of the Second World War had finally begun to fade and a new generation of young people without those memories were entering the workplace. Economic prosperity was becoming more widespread. Science was seen as the powerhouse to deliver a vision of social and economic freedom for the next generation and was exemplified by Harold Wilson’s characterisation of progress being forged in the “white heat” of “scientific revolution” (FRANCIS, 2013). It was the decade that people witnessed space travel and watched in awe as Neil Armstrong took those first tentative steps onto the surface of the Moon. Broadcast live on television to a worldwide audience he described the event as “one small step for man, one giant leap for mankind”, and with those words the Space Race was effectively ended. The achievement fulfilled John F. Kennedy’s 1961 goal “before this decade is out, of landing a man on the Moon and returning him safely to the Earth” (KENNEDY, 1961).

Looking to futures that offered new possibilities wasn’t just limited to science. Perhaps it was the seemingly unstoppable progress of science that inspired other creative fields of endeavour. From film making to architecture and from fashion to music, the 1960s heralded a time of change, one that questioned the accepted norms and values. Of course the seeds of this movement can be seen in the 1950s, albeit more easily with the benefit of hindsight. For example, in the 1953 film *The Wild One* (Laszlo Benedek [dir.]) about a motorcycle gang living outside the norms of American society, when Marlon Brando’s character Johnny Strabler was asked, “Hey, Johnny, what are you rebelling against?”, he replied with the prescient line, “What’ve you got?”. In that moment Brando became a cultural icon of the 1950s. Similarly, James Dean in the 1955 film

Rebel Without a Cause (Nicholas Ray [dir.]) portrayed a character, Jim Stark, who this time was rebelling against his parents who represent the norms and values of a previous generation. In this case the rebellion is closer to home, the “outsider” is less overt than the Brando character and in many ways points to a future that lies ahead in the 1960s.

The sense of change was beginning to manifest in other fields. In Italy, the Radical Design movement was breaking free from traditional architecture and giving a voice to a new generation of architects who wanted to critique the traditional methods of planning and question the very nature of what cities might become in the future. Groups such as Superstudio and Archizoom in Florence and Archigram in London utilised the language and semantics of architecture to present future visions of buildings and cities that rejected the tropes of the past. While speculative in nature the goal was to leave the past behind. In contrast, speculative design exhibits a greater degree of criticality of the journeys to, and visions of, such futures. But the desire for change remains strong. In the same way as Radical Design confronted the paradigm of High Modernism in architecture as the dominant ideology of the time, emergent (speculative) design practices seek to question the dominant consumerist ideology of today.

NEW FUTURES IN A TIME OF CHANGE

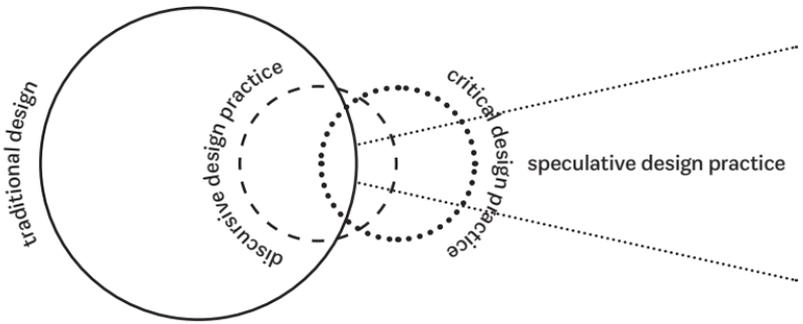
By the mid 1970s the sense of optimism had begun to wane and the early promise had not delivered a new reality. In 1978 Superstudio disbanded, while Archizoom had closed in 1974 with the final declaration that “architecture was dead”. The fervour and excitement of the 1960s was finally over. So why is it that the 1960s and 70s continue to exert a disproportionate influence on visions of the future? Franco “Bifo” Berardi described this effect as “the slow cancelation of the future” in the context of being unable to break free from the shackles of these decades ⁽²⁰¹¹⁾. The horizons of the future seem tethered to ideas that emanate from this period of Peak Future. But maybe there is a glimmer of change towards the end of the first quarter of the 21st Century. Has the global pandemic of 2020–2021 radically changed the visions of our futures? No longer so overtly shaped by the 1960s or 70s and distributed through the high speed networks of today ^(FISHER, 2014), the collective experience of pandemic has raised the question of what is actually wanted from the future, rather than what has been assumed is needed. There is a dawning realisation that the “new normal” is simply “the normal” and how moving forward will never quite be the same. A tipping point has been reached for our expectations about the future – the first global event that has marked time in the new century. Suddenly our futures look different, our values, hopes, dreams and aspirations destined never fully to return to how they were before.

See CHAPTERS 5 and 6 for more
discussion of these issues.

► P 166

► P 202

AN OVER
VIEW OF
SPECUL
ATIVE
DESIGN
PRACTI
CE



Traditional design vs speculative design,
Ivica Mitrović and Oleg Šuran.
(MITROVIĆ, 2016)

Speculative design asks questions about the future and offers some alternatives that are essential for the world of today, but more importantly, the world of tomorrow. It is a discursive activity founded in critical thinking and dialogue reflecting design practice. However, the speculative design approach expands the critical practice towards imagination and diverse visions of possible future scenarios (MITROVIĆ, 2016). Through imagination and its radical approach and by using design as a medium, speculative practice inspires thinking, raises awareness, examines, provokes actions, opens discussions and has the ability to provide alternatives. With critical thinking, design of objects generating a story, or through the stories embodied in artefacts, speculative design attempts to anticipate the future and at the same time helps us to re-think the present.

Speculative practice moves away from the consumerist role of design and uses speculation about potential futures and design as a medium to challenge current social, economic and political relationships as well as our relationship with the natural environment. It also intends to move beyond the role that design has in presenting market-ready solutions and attempts to restore design's foundations, such as discursiveness (analysis, reflection, examination of various possibilities, anticipation and so on).

Speculative design practice should be, above all, understood as an *attitude*, an approach open to various methods, tools, techniques and instruments as well as other practices and disciplines. Viewing relations between object and story, artefact and narration, is also one of the possible and usual mechanisms for understanding the relationship between speculative design and other related practices (CRAP FUTURES, 2016).

By defining speculative design as a closed practice, i.e. as a design specialisation with accompanying methods, we risk falling into a trap that could bring into question the fundamental openness of speculative design, which is characterised by *not* belonging only to the design context and a particular set of rules or methods. (We deal with these issues in greater detail, by looking more deeply into the design process, in CHAPTER 4.)

► P 94

Considered as an historical movement or tendency, Speculative Design encompasses or is related to a series of similar practices: Critical Design, Design Fiction, Future Design, Antidesign, Radical Design, Interrogative Design, Discursive Design, Adversarial Design, Futurescape, Design Art, Concept Design, Reconstrained Design, Transition Design, and so on.¹ Although they have become part of a wider cultural context, speculative design and related critical practices are still developing today, and discussions on definitions,

¹ An online survey by Sjeff van Gaalen of the names of design practices oriented towards the future gathered 80 different names, from “Radical Design” to “Post-critical Design” (VAN GAALEN, 2018).

their role, accompanying methods and education are ongoing (SPECULATIVEEDU, 2019A). Within the same speculative practice, there is continued reflection and a need for constant development.

After interviewing (SPECULATIVEEDU, 2021) dozens of leading design practitioners, educators, and theorists from across Europe (and in a few cases beyond); as well as soliciting survey responses (HELGASON, 2019) from dozens of professionals currently working in the industry; and in addition to the education-related activities hosted by the project (IACONESI & PERSICO, 2021) (SPECULATIVEEDU, 2019B) (SPECULATIVEEDU, 2020A) (SPECULATIVEEDU, 2020B), we are able to draw a clearer path to show where speculative design has come from, where the approach is at present, and where it might be headed in the future. While the range of interviews that we will draw upon in this chapter is selective rather than exhaustive, it is intended to provide a useful snapshot of contemporary speculative design in a European context.



Anthony Dunne and Fiona Raby 🌐

Many of the problems facing us today are political in nature and far beyond the scope of design, despite its claims. Speculative and critical design practices do have a role to play, but designers need to recognise their limitations and work with them.

DEFINITIONS

A note about terminology is in order before we go any further into the field itself. What is speculative design from a practitioner's point of view, really? James Auger provides one useful starting point:

“Speculative design proposals are essentially tools for questioning. Their aim is therefore not to propose implementable product solutions, nor to offer answers to the questions they pose; they are intended to act like a mirror reflecting the role a specific technology plays or may play in each of our lives, instigating contemplation and discussion.” (AUGER, 2012)

Design critic and academic Cameron Tonkinwise has criticised as unnecessary the appending of terms such as “speculative” and “critical” to design (TONKINWISE, 2015). However, in the interview we conducted with him, Tonkinwise provided a positive vision of what the practice could in fact look like: “Speculative Critical Design, insofar as it is a form of Design-focused Science Fiction, can be, at its best, an applied example of design philosophy, explicating how designs materialise particular kinds of futures, and/or lending particular kinds of futures plausibility by fleshing out their designed socio-technical material practices” (TONKINWISE, 2019). Matt Malpass, a lecturer and researcher at Central Saint Martins, argues that speculative design and other related practices are “all modes of critical design”; that is, “They serve to challenge orthodox conceptions of design and extend the agency of design and the matters of concern that design might typically engage” (MALPASS, 2019). The artistic director of z33 and educator at Design Academy Eindhoven Jan Boelen, on the other hand, views speculative design and critical design as being separate and “fundamentally different positions” (BOELEN, 2019). Ivica Mitrović, the coordinator of SpeculativeEdu, clarifies that the scope of the project includes not only speculative design but also “all related discursive and experimental approaches in the

field of design, which are focused on re-thinking the practice, and which are situated outside the mainstream design world (e.g. critical design, reflective design, discursive design, adversarial design, etc.)” (MITROVIĆ, 2019).

Many individual practitioners define the term for themselves on an ad hoc basis. The members of Basel, Switzerland-based circumflex.studio, for example, provide a very clear definition of what speculative design means in their own work:

“Speculative design should be an informed projection that brings into question the reality we ground this projection on. Informed means that it’s not about making up just any alternative future, present or past but grounding this speculation in prior knowledge, emerging tendencies, existing technologies, and human behaviours. Through creating an alternative reading – set in the future, present or past – the predominant reality is put into question and inherent biases are revealed. This is our very ideal understanding of speculative design.” (BÜSSE & MITROKHOV, 2019)

According to London-based designers Andrew Friend and Sitraka Rakotoniaina, “Speculative design ultimately allows us to think about what’s preferable, no matter what dystopian, utopian or particular lens a project may use as a vehicle” (FRIEND & RAKOTONIAINA, 2019). Similarly automato.farm calls speculative design “a great safe space ... where it was ‘allowed’ to explore possibilities rather than problems, where we could create microworlds in a parallel present or near future and where you could still use the language and the materials of design, without tumbling into the world of art” (AUTOMATO.FARM, 2019). The Slovenian critical and speculative scenario designer Tina Gorjanc provides another useful definition of what speculative design means in her own work in her project interview: “Speculative design thinks about current laws, political systems, social beliefs, ethics, values, fears and hopes, and projects how

they can be translated into future material expressions and embodied into the material culture” (GORJANC, 2019).

In the eyes of many of the practitioners we interviewed, speculative design is most frequently understood as an *approach* rather than a precise methodology. Nicolas Nova, of HEAD Geneva and Near Future Laboratory, states: “I wouldn’t call that a ‘method’, as it’s too strict and formal. I’d say it can be seen as an approach with a focus and a certain number of ingredients that designers play with in their project. Depending on context, the mix leads to different results” (NOVA, 2019). According to circumflex.studio, this designation means both added risk and responsibility: “Since there is no methodology to follow, speculative design requires a critical mindset and the ability to connect dots and look at the world differently” (BÜSSE & MITROKHOV, 2019).

The education survey carried out as part of the SpeculativeEdu project within the speculative and related design practices also shows that many educators favour a predominantly open approach to the curriculum (HELGASON, 2019, HELGASON ET AL, 2021). Educators point out the advantages of an open concept that offers diversity in its approach, while also mentioning the usefulness of explaining individual specific methods within the practice.

With all of these caveats in mind, speculative design will continue to be used as a general term designating the broad range of practices described in the context of this book. It will refer to objects designed under the rubric of speculative approaches that might function primarily as a critical alternative, a possible future or a catalyst for reflection in any form, from imaginary narratives to theatre performances to physical prototypes to collage, storyboards, and so on. Our aim is to use the term in an inclusive manner, acknowledging that there is in fact a broad range of approaches, each with its own emphasis, and that these approaches continue to evolve.

SPECULATIVE EVERYWHERE

During the last few years speculative design practice, like the critical study of futures generally, has been very much in vogue. As futurists Scott Smith and Madeline Ashby state in *How to Future: Leading and Sense-Making in an Age of Hyperchange* (2020): “Tomorrow is so hot right now”. More and more designers have adopted speculative and related design approaches into their everyday practice. There is a growth of media content that follows this practice in both specialised and popular media. The number of books and publications that deal with speculative and related design practices is growing, as is the number of studios creating visions of future technological scenarios. Companies are hiring designers to imagine future trends and surveys on the adoption of upcoming technologies. Speculative practice is integrated into mainstream technological projects, humanitarian projects, and even state infrastructure projects and future energy projects (E.G. SUPERFLUX, 2017). There are a growing number of public-facing conferences and exhibitions that deal with futures via speculative fiction, and which are not only intended for expert audiences (E.G. WALKER ART CENTER, 2020). The importance of connecting speculative practice and the business world is also often stressed. The exceptional popularity of the series *Black Mirror* at the level of popular culture has shown the potential of speculative practice and has successfully brought it to a wider audience.

Many practitioners now see a speculative approach as an integral part of their everyday practice. As Maja Grakalić states in her interview:

“If we want to stay relevant we cannot afford NOT to engage with critical and speculative methods and tactics in theory and practice, whether it be through academic research, discursive or market-led practices. ... Public institutions have started experimenting with critical and speculative design proposals in the context of futurecasting

as a tool for futureproofing and ethical innovation. The Economist wrote about ‘Why it’s worth reading crazy-sounding scenarios about the future’, NESTA UK innovation foundation working in the field of a creative industry, education, government and health asks ‘Speculative design: A design niche or a new tool for government innovation?’. Policy Lab, dedicated to bringing new policy tools and techniques to the UK Government, explores using speculative design to examine the future of open justice. The BBC’s R&D department explored the future of radio in collaboration with students from Goldsmiths University in London. Small design studios like Normally and large agencies like Arep alike are embedding speculative design approaches in their practice.” (GRAKALIĆ, 2020)

The European Commission sees speculative practice as a tool for opening up a discussion on the domestication of new technologies in the European Community (EUROPEAN COMMISSION, N.D.). Greenpeace uses similar scenarios to raise awareness on environmental issues (GREENPEACE INTERNATIONAL, 2014), and the military speculates on future scenarios of warfare (NIILER, 2017). Even the World Economic Forum has used methods of speculative design practices in its discussions of potential economic futures (WINICK, 2018). Google’s April Fools’ Day jokes take the form of satirical speculative projects (GOOGLE NEDERLAND, 2019). Moreover, the recent and ongoing pandemic shows a series of speculative projects on a daily basis (LA REDAZIONE DI DOMUS, 2020). Speculative design scenarios are becoming a part of everyday social media memes.

As a result of the popularisation of critical design practices oriented towards the future, an increasing number of new study programmes are being initiated that indicate speculative practice as their central concept and a tool for “changing the future”. The two that have received the most media attention are The New Normal, an educational programme of the Strelka Institute in Moscow, and the master’s programme University

of the Underground in Amsterdam (STRELKA INSTITUTE, N.D.) (UNIVERSITY OF THE UNDERGROUND, N.D.). Both have emerged outside of the traditional European academic context, and are considered by potential students to be attractive study programmes.

Speculative design has tended to sit within art and design school curricula, especially within western European academic universities and within the art school tradition, but this is changing. As an approach, it has become relevant where there is a focus on imagining products and services that incorporate technology, and it is now increasingly finding a place within subjects such as computer science, engineering, and social sciences. It is currently being reinvigorated and reinvented in other geographical areas, such as south-eastern Europe, and in varied types of independent research and educational institutions.

Over the past two decades, speculative and related design approaches have played – and continue to play – a leading role in challenging the status quo of design practice and education: from questioning modernist functionalism, decoupling it from the market, and bringing back its discursive role; to raising discussion about political and social issues relating to technological development, and finally in envisioning alternative futures.



🌐 *Algature DIY Biology workshop, Fara Peluso, 2018, photo by Anne Freitag.*

Paolo Cardini



We often assume, involuntarily, that present realities will converge and homogenize into one omni-comprehensive future, giving the green light to stereotyped and de-contextualised future visions.

SPECULATIVE DESIGN AT A CROSSROADS

Speculative and related practices have definitely reached a turning point. On the one hand they are becoming more widespread and accepted, while on the other they face more and more critics. In the negative view, the current position of speculative design lies somewhere between being the agent of a new technological colonisation and the creator of spectacular style clichés indebted to *Black Mirror* future visions (unfortunately in most cases lacking Charlie Brooker's dry wit). Fortunately, the many ongoing discussions and reflections within the practice are important activities that can contribute to the development of the practice by setting new standards.

As a result of the external criticism and auto-reflection within critical and speculative design practice, things have started to change. Educational institutions and practitioners are examining new approaches and ways to practice speculative and related design. In fact many of the pioneers of speculative design are today trying to close the loop to action, taking the practice out of the gallery and into everyday life. James Auger and Julian Hanna initiated the Crap Futures blog in 2015 not only to document their work but also to tackle discursive and reflexive topics linked to critical and speculative practice. As a result of their discursive activities, and later working with others as the Reconstrained Design Group, they published a manifesto about the current state of design (RECONSTRAINED DESIGN GROUP, 2017). The group set out to shift the current trend of narrowing various directions of design discourse, questioning dominant assumptions of the practice as well as corporate influence while attempting to overcome the limitations of design thinking and practice. Similarly, in 2016 the Interakcije: Speculative NOW! event was organised to seek answers to a number of open questions within the practice, including a discussion aiming to rethink and critically

assess the role of current speculative practice in the so-called “real world” (INTERAKCIJE, 2016).

In fact, speculative practice in recent years has included a host of novel approaches that attempt to go beyond speculation and at the same time to bring it closer to everyday life. For example, Demitrios Kargotis and Dash Macdonald (Dash N’ Dem) focus on inviting the public to participate in the design process and act in the public sphere. For them, this practice is a way to overcome the limitations of critical and speculative design. Through a collaborative design process, a kind of design activism, they are trying to give the power back to individuals who thus get the opportunity to think about how the world affects them and how to reimagine that via design. With such a participatory approach, Dash N’ Dem emphasise, it is possible to go beyond the limited outreach of the practice and involve a broader audience and not just the well-educated middle class. Their approach is focused on the local level, familiar micro-locations and collaborations with the people they know (MACDONALD, 2017).

The existence of collective and participatory approaches within the speculative design process is definitely an element that has potential in the future development of speculative practices. Namely, speculative and critical practice is in essence still oriented towards the individual, and often poses the question of whether the process itself is directed exclusively “at the people”, does it take place “with the people”, or does it merely imply thinking about “the people” (URBAN IXD, 2013). The active participation of ordinary people in the design process results in overcoming the situation where they are just a passive audience expected to engage and get involved only after the perception of a completed design project. The participatory approach opens up possibilities for people to think about, imagine but also to act in creating their preferable futures.

Based on similar principles, applied to the Mangala for All project, Superflux studio applies ethnographic methods to communicate the Indian space programme to

non-experts ^(SUPERFLUX, N.D.). Georgina Voss observes that in this way it is possible to successfully communicate “big topics” and open discussions with the local community by confronting global narratives about big technological “heroes” who will change the world ^(VOSS, 2017). In The Welsh Space Campaign project, Hefin Jones applies a similar approach, or “speculative participation”, in which – by understanding the specific context and working with the people involved in that context – he speculates about alternative possibilities. In this project, through valorisation of traditional skills and local culture, he integrates the people of Wales into the fictional Welsh space programme ^(DEBATTY, 2013).

In the context of an immense urban centre (such as London) and a possible global disaster in the near future, Superflux develops concrete methods, tools and materials that citizens can use for overcoming future shocks caused by climate change through an experimental design approach ^(JAIN & ARDERN, 2019). Similarly, the Turnton Docklands project by Time’s Up attempts to provide optimistic scenarios about life in Europe after environmental disasters of the near future. In this project, speculative scenarios focus on the positive aspects of dystopian futures, realised via new forms of social and political change ^(TIME’S UP, 2019).

Speculative designers are also establishing better links with state institutions and working on real projects. For example the International Federation of Red Cross and Red Crescent Societies started collaborating with speculative designers and futurists on projects dealing with potential complex changes in the upcoming decades, such as new conflicts, climate change and new inequalities as well as potential roles of humanitarian organisations in such a world ^(SMITH, 2019). As already mentioned, the European Commission recognised the potential of speculative design in discussions on the role of new technologies in society (albeit with questionable results in terms of concrete activities).

The new wave of practitioners emerged from both the older established programmes and the new courses in speculative design that began to appear across Europe and around the world, often drawing heavily from or in some way reflecting the original models. These new practitioners are already incorporating criticism of speculative design, for example by focusing on applying speculations to real-world problems and working to “decolonise” the approach, or by moving beyond “a human point of view” altogether in the words of artist-designer Fara Peluso (PELUSO, 2019). Rather than feeling targeted by this criticism, the new speculative design intuitively embraces elements that the earlier practitioners arguably left out; it is naturally more inclusive, decentralised, and proactive on social issues, reflecting broader changes across all areas of design. In their everyday work, they use speculative design as a cohesive element, connecting different disciplines and professions, different stakeholders, the public and experts. There are also bold new initiatives taking place, such as the Speculative Futures meetups and the PRIMER Conference, with a new European edition; or the Plurality University Network led by the futurist and entrepreneur Daniel Kaplan – “a global, open organization that connects the artists, designers, utopians and activists who use the power of imagination to enable alternative futures” (KAPLAN, 2019).

What we discovered in our ACM DIS 2020 workshop for this project were a lot of new practitioners coming into the field, even outside our landscape view (HELGASON ET AL, 2020). They are taking diverse approaches, working in diverse domains and coming from increasingly diverse backgrounds. Particularly we have seen new hubs outside “traditional” Western centres of the practice, for example India and Brazil, bringing more inclusive and participatory approaches. They are aware of the criticisms and drawbacks of the dominant speculative practice – especially coming from a postcolonial perspective – but they also see the usefulness of some of the tools it provides for working with alternative presents and possible futures. Importantly, these younger practitioners are

bringing new influences and creating new hybrid approaches, such as the “Critical Jugaad” described by Deepa Butoliya in her interview – “a nonviolent critique that provokes and questions the techno-utopian imaginaries in futures discourse. Criticality is manifested through critique and criticism of the social, cultural, economic and political issues engulfing a nation, through ingenious sociomaterial practices” (BUTOLIYA, 2020).

DANGERS AND CRITICISMS

The mainstreaming of speculative design has arguably brought with it the danger of an overemphasis on style in the production itself. In their practice, speculative designers very often deal with high-fidelity fictional artefacts or emerging technologies by focusing on the aesthetic of the future. Unfortunately, they sometimes neglect wider social implications or aspects of political engagement. If we look into student production at final exhibitions following the end of study programmes, there is a noticeable trend; some student works appear as exercises in style, relying too heavily on the aesthetic of early Critical Design (“the RCA aesthetic”) or the dystopian narrative structure of *Black Mirror*. Although some successfully communicate speculative concepts, others fall into the trap of producing work that is dull and predictable or self-possessed and hermetic. Future scenarios may be more attractive to students than facing austere realities of the present. As Martin Avila notes, by using the label “speculative”, some students and practitioners merely demonstrate an avoidance of concrete problems in the here and now, as if the future has not always been a part of the present – a reflection and projection of the present (AVILA, 2019).

For instance, David Benqué speaks about the issue of a lack of developed criticism within the field, the lack of criteria that could determine the quality (or lack thereof) of speculative projects (BENQUÉ, 2016). Are media attention and large

audiences enough, or is something else needed – such as action? James Auger discusses the need to reexamine the dominant metrics of successful (“good”) design projects, taking as an example the ten principles of good design by Dieter Rams, i.e. their relevance in the present moment ^(CRAP FUTURES, 2019).

► P 210

Matt Ward has also noticed the “hunger” of big corporations (and markets), which tend to consume professionals with relevant knowledge and skills required for creating scenarios about technological futures ^(INTERAKCIJE, 2016). This type of popularisation of the practice has resulted in a process as part of which speculative design is being appropriated by corporations with the goal of promoting their visions of the future and the accompanying technological products. Appropriated by the system, speculative practice again becomes a practice supporting the status quo – rather than examining it, bringing it into question and changing it ^(REVELL, 2019). Such criticism of speculative practice shows that it does have weak spots, including a frequent inability to step out of the dominant (capitalist) system from which it emerges, and through the critique of which it is trying to emancipate itself.

Critics of the current dominant approach to speculative practice characterise it as “privileged and Eurocentric” and criticise its complacency and detachment from the real world, as well as its escape into dystopian scenarios ^(THACKARA, 2013). They point out that despite the practice’s claims that it surveys the wider context and offers alternatives to the existing status quo, it does not actually manage to view things outside of a Western perspective, in accordance with other and different social contexts ^(THARP & THARP, 2017). A particular subject of criticism is its almost “clinical” action in the context of “rarefied environments” such as museums and galleries, which often results in a renewed fascination with technology ^{(HERTZ, 2016) (LARANJO, 2016)}. In addition to the danger of slipping into so-called “Western melancholy” ^(INTERAKCIJE, 2018), speculative design is also criticised for its lack of political engagement and strong activism, i.e. its inability to face the “real issues”, such as growing chauvinism,

neo-fascism, as well as racial, class and gender inequality. It is emphasised that dominant speculative practice actually addresses a future where social structures remain intact, and is in this sense conservative. Critics stress that by focusing only on technology speculative practice actually diverts attention from many (other) real issues and challenges.

Such criticism of speculative and related practices speaks to their popularity and media perception, since it could be said that a large portion of the criticism is common to design as a whole (e.g. decolonisation, privilege, elitism, appropriation, etc.). Design has, as graphic designer and publicist Dejan Kršić points out, always been a discursive practice that generates, analyses, distributes, mediates and reproduces social meaning (DAN D FESTIVAL, 2014). For Cameron Tonkinwise, “designing that does not already Future, Fiction, Speculate, Criticize, Provoke, Discourse, Interrogate, Probe, Play, is inadequate design” (TONKINWISE, 2015). Although it is understandable that harsh criticism is directed against this design practice precisely due to its stressed critical component and an expectation of radical action on its part, such criticism can be directed against the entire field of design as a discipline. But Anab Jain of Superflux adds a moderating voice to the chorus of *mea culpa*. As she states in her interview: “These issues are very complex, and I think the only way we can attempt to understand them is by avoiding accusations and flamewars, but instead opening up space for everyone’s voice to be heard.” She adds, with only a hint of irony: “If we successfully overturn capitalism, the rest will follow” (JAIN & ARDERN, 2019).

Design and architectural utopian visions have always dealt with not only artefacts of the future, but also with anticipating hypothetical social contexts in which such objects are found. Utopian thinking in the design context also includes the re-thinking and initiation of social processes (and stakeholders) with the goal of bringing about social change (JEINIĆ, 2019). Ignoring the fact that any design activity implies political consequences (or stands as the consequence of a particular political

context) represents one of the fundamental problems of the design profession today. As the researcher and educator Ramia Mazé points out, design practices can never be neutral – there are always critical and political issues, alternatives and futures involved ^(MAZÉ, 2016). This is particularly evident with speculation, which in the context of design and architecture has always had deep social implications ^(JEINIĆ, 2019).

As Margaret Atwood points out, dystopias require some counterbalance or positive visions of the future ^(FINN, 2017). James Auger believes that speculative projects can also provide new and positive futures. Furthermore, he concludes that if we are able to explore and describe such future scenarios, there is no reason why we should not try to realise them as well ^(INTERAKCIJE, 2016).

For a full-length discussion of critiques of the approach, see CHAPTER 5; A Practice of Hope, A Method of Action.

► P 164

Phil Balagtas



Thinking differently about tomorrow is one thing, finding a way to act on it is another. We need to be actively engaged in that conversation, collaborate, compromise and help society build those futures.



 **The rules of the game for smart streets,**
Design Friction, for the Creative Factory (Samoa, Nantes), 2018,
photo by Design Friction.

SPECULATIVE DESIGN AS EVERYDAY PRACTICE

When we spoke with practitioners, one theme the majority of interviews touched on was real-world applications of speculative design – beyond the gallery and the ivory tower. As Cameron Tonkinwise quipped in his interview: “In a gallery, only people who already agree with you can hear you scream” (TONKINWISE, 2019). Speaking of the so-called “gallery problem”, for example, Tobias Revell, who has been outspoken in his criticism of certain aspects of speculative design, states: “there is the reasonable critique that the canon of speculative design ends up in galleries or on post-it notes”, and he concludes: “That seems pretty accurate.” But he also admits there are exceptions, and that some designers are working to address the issue. To clarify his views, Revell adds: “in education it’s a really useful way of engaging students and others in difficult conversations about difficult issues and I wholeheartedly encourage its use ... It’s when it creeps into corporate strategy and marketing that it becomes a problem” (REVELL, 2019). On the issue of diversity and privilege, Matt Malpass acknowledges that “There is a decolonisation job to do on Speculative Critical Design in terms of the diversity in those practicing and the approach to projects undertaken. This is something that we are acutely aware of” (MALPASS, 2019).

In terms of business applications, Nicolas Nova observed how “the ‘design thinking’ trend ... paved the way for the circulation of Design Fiction approaches” outside academia. Nova sees “an opportunity to train people in how to develop speculative design approaches in their particular context, how to translate this into the daily business of a municipality which aims at rethinking the future with its citizens, a small company that focuses on how to readjust its culture, or a corporate institution which needs to set priorities for preferable futures” (NOVA, 2019). Michaela Büsse, one half of circumflex.studio, argues

that while “Speculative design is mainly used as a tool to critique or question a certain implication of a technology ... it is more and more used as a method to innovate. Many speculative designers work in research and development departments of big corporations and together with scientists and engineers give shape to possible futures” (BÜSSE & MITROKHOV, 2019).

This crossover is largely seen as positive, reinforcing the versatility of speculative design approaches across various contexts. However, there are times when it is more superficial, for example when it is used in corporate design contexts as “a fancy brainstorming tool” (in the words of Markéta Dolejšová) (DOLEJŠOVÁ, 2019). Benedikt Groß, speaking of the possibility for effecting change, says that it depends on the context: “in the realm of future mobility, I can have more impact from within the system [working with moovel lab] in comparison to a completely outside position” (GROSS, 2019).

Speculative design can be extremely useful when applied beyond design research contexts, but it must be done conscientiously. As many of the practitioners we spoke to insisted, ethical and political awareness and intellectual rigour are key to making this crossover into real-world applications meaningful – and avoiding the lazy or superficial co-option of speculative design’s techniques and aesthetics. FoAM, a network of transdisciplinary labs led by Maja Kuzmanovic and Nik Gaffney, offers a useful framework for thinking about applied speculative design: “Since futures and speculative design have increasingly become a part of business, industry and politics, a designer with a generalist mindset could apply their work in almost any field of interest. The question to ask is what activities are most worthwhile, considering the environmental, cultural and social turbulences we’ll continue to be faced with. What applications would you like to see? In what contexts and at which scale could your work be significant? What would make the most substantial difference?” (KUZMANOVIC & GAFFNEY, 2019). Similarly, Tobias Revell asks: “Anyone from big IT firms to local government can speculate and produce cool design fictions,

but are they intellectually taxing? Are they forcing the audience to confront a cognitive gap or dissonance?” (REVELL, 2019).

Seeing an opportunity for effecting real change in the private sector, Cameron Tonkinwise states: “there seems to be a quiet desperation at some levels of many corporations at the moment, which creates odd requests for speculation, even critical speculations if well-concealed by non-disclosure agreements, to find out what on earth to do, about new kinds of customer value, retaining talent and taking up social governance as asset-stripped governments collapse into populism. This, it seems to me, could be the context for concerted efforts to reassert ways of speculatively critical designing” (TONKINWISE, 2019). On the possibilities for speculative design in artistic contexts, meanwhile, Konstantin Mitrokhov of circumflex.studio suggests that “designers capable of resisting superficiality ... and maintaining a solid political and ethical stance” have the best chance of flourishing (BÜSSE & MITROKHOV, 2019). Tina Gorjanc mentions as one important practical application in the research domain “working alongside publicly funded science researchers and makers who are coming up with ... amazing technologies but seek the guidance of speculative designers to foresee the ethical implications they might have when released into the mainstream” (GORJANC, 2019).

In common with any ground-breaking approach, speculative design has raised its share of debates and controversies – many of which were addressed in some form in our interviews. If they want to effect real change practitioners should aim, in Cameron Tonkinwise’s words, not just for easy speculations and “the photogenically exhibitable”, but for “actually critical, because not just speculative, designs” (TONKINWISE, 2019). In its ideal form, speculative design acts as an element not of division but of cohesion: connecting people from diverse backgrounds, experts across disciplines, various publics and stakeholders, to open up meaningful critical discussions about the future and explore how different – how truly different – things could be.

WHY SPECULATE?

What is speculative design actually for? Design, unlike art, is traditionally assumed to serve a practical purpose – even if that purpose is to get people thinking about possible (mis)uses of emerging technologies in real-world contexts, for example. How do you judge the success of a project? What metrics should you use for evaluation? This was also difficult to pin down, but several of the practitioners we interviewed provided illuminating perspectives. Sitraka argues that projects must “challeng[e] one’s perception and/or assumptions of what technologically driven realities could be”. In terms of metrics, Sitraka looks particularly at three factors: “the clarity of the intention behind the project – whether the aim is to spark conversation and debate, highlight potential caveats, or propose a more ‘critical’ vision, etc. – the execution, the means through which the intention or message is being crafted – design considerations – and the distance between the response from the targeted audience, stimulated by the execution, and the original intention” (FRIEND & RAKOTONIAINA, 2019). Time’s Up, the veteran Linz, Austria-based group, suggests three other primary elements as evaluative metrics: surprise, experience, and the everyday (TIME’S UP, 2019).

Speculative design and related practices have gradually shifted over the past two decades from academic and avant-garde cultural production to mainstream design practice. Having emerged in the context of the Western world, i.e. in developed centres of the Western world, they represent a new design approach, with its still open set of techniques, instruments and methods, ready to be used and adapted to various contexts in which we live and act. We can understand them as an open toolkit that is accessible to us, which has potential, that we can take and adapt to the context in which we live and work, our microenvironments, our specific topics and needs.

Matt Ward



Within an educational context, critical and speculative design or design fiction allows students the safe space to explore ideas and understand, or think (make) through, the possible impacts of their ideas.

Deepa Butoliya



The evolution of this practice into being more collaborative and participatory does make it more influential in shaping the way we think about futures.

METHO DS, APP ROACHE S AND TOOLS

AMBIGUITY, TENSIONS
AND SCOPES

OBJECT: A person or thing to which a specified action or feeling is directed; props, but also narratives, products, systems, interventions, performances, etc.

TENSION: A tug-of-war between two sides; a balance between and interplay of opposing elements or tendencies.

Design practices involving speculative methods, approaches and tools are becoming more critical towards themselves by looking outwards beyond the gallery space and engaging with communities to produce “lasting” and “effective” outcomes (as in the change that communities identify) but also inwards towards the designers’ own intentions, motives and expectations. These practices according to practitioners seem not to be only about creating futures but also, and importantly, about foregrounding the perspective (e.g. socio-cultural context) from which those futures are created. The focus is not only on the speculative design as an object, but also on how such an object relates to the context where it is produced and disseminated.

In this chapter we build upon the themes presented in EARLIER CHAPTERS of this book and the case studies that are part of SpeculativeEdu to bring to the foreground the tensions that practitioners and design students navigate, and more or less explicitly address, when creating speculative and related designs (Critical Design, Design Fiction, Future Design, Near Future Design, etc.). We have identified the most common tensions addressed by practitioners as strategies to better conceptualise, deploy and evaluate not only speculative designs and related design practices, but also the debates that surround them and the audiences that encounter them. Each tension is illustrated first with a short description and by identifying its scope as the extent to which the tension manifests itself within the context of a particular design. We then provide three case studies as examples where the tension manifests differently.

These tensions and their accompanying scopes offer a substitute for rethinking what function might be in a “traditional design object”. They function as a tool for reflecting on a (normative) design process and a mechanism for “staying with the trouble” through the duration of the design process and a design object’s lifespan.

Before we move on to the tensions, we would like to acknowledge that there are other tensions between design objects and their context that we did not address. Also, most designs we present address more than one single tension and hence, some of the examples we propose could be rightly placed in a different category than the one we propose. This chapter is not conceptualised as a guide or recipe but as yet one more aid to resort to while enmeshed in the practice of producing speculative designs. The cases presented are meant to inspire and provide a sense of orientation or a place to start from.

The case descriptions have been written by the authors themselves.

Matt Malpass



I don't think it's too important to fully define these approaches. There is so much crossover and bleed between the approaches. An open set of methods is important, and actually a critical practice should always be in flux and challenge disciplinary hegemony.

TENSION: EXCLUSION

On the scope **HUMAN—KIND**, this tension calls attention to how not all people share the same experiences of inclusion and access within societies. Some groups of people are excluded from participation in (often crucial) activities and discourse, while others face lower barriers to acceptance and visibility.

CASES

- ▶ The Illegal Town Plan
- ▶ SPLITSKA DICA – tented community
- ▶ We Did Something for Africa



Where is the grey area between inspiration and colonisation?

CURATORIAL REMARK: Every design excludes, to a higher or lesser degree and more or less explicitly, particular individuals or groups from accessing the possibilities that such design brings forward. Speculative designs are no exception and hence, it is paramount that designers consider how they negotiate exclusion as a tension during their design process. In these three cases designers produce designs that explicitly bring to the fore the viewpoints of those that, in the eyes of the designers, have been underrepresented in the process of future building.

Authors
Year

Matt Ward, Jimmy Loizeau
2014 – present

From the outset, this project aimed to understand and develop community-based aspirations and futures for economic development through creative engagement. Our intention was to re-activate communities, increasingly stripped of power, to explore visions of a new (illegal) town plan. Throughout the project we have developed strategies, ideas and possibilities with people from towns whose futures are uncertain.

Those affected or implicated by town planning, are seldom offered an opportunity to comment on the organization and direction of their communities, their local architecture and the future of their environment. The proposal explores the development of a “fictional town plan” and how this might be used as a platform, or working structure, to assemble and represent the voices of local community groups and individuals.

METHOD/TOOL/APPROACH: The intention is not (necessarily) to present a viable scheme in order to be physically realised, but to create a forum through which local ideas and critiques of the history (and future) of the town might be discussed and presented through a range of tangible outcomes. In this project we capture the collective hopes and dreams of communities and residents through films, drawings, photography, town planning documents and schemes, as well as architectures to furnish an *Alternative Master Plan*.



All photos courtesy of the authors.



QUOTE / AUTHOR'S VIEW: The project sets out to engage local creative culture by removing the filters of “no”, the negative voice of authority that often quashes the collective imagination before it has a chance to express itself.

O SPLITSKA DICA – TENTED COMMUNITY

Authors Alejandra Robles Sosa, Marija Matulić, Neva Zidić
Year 2018

The project addresses the problem of students that can not find accommodation in Split, Croatia, because of the prolonged tourist season, which occurs due to climate change. It highlights the importance and value of the students as a part of the society which is responsible for the future, but becomes completely rejected by the city.

The project follows the story of students who come to study in Split and can not find any accommodation. The government, city administration and society in general neglects their need, calls for help and frequent protests, so students decide to act alone and set up a movement called “Splitska dica”. Splitska dica is a community movement which does not intend to dispatch the tourists outside the city, but points out the existing problem and offers a temporary alternative, thus provoking society and power. They set up tents in different locations around the city, offering a temporary solution to students.

METHOD/TOOL/APPROACH: Splitska Dica Movement is based on the authors’ struggle to find the students accommodation in a touristic city where most of the available accommodation is Airbnb rented. The discussion around the topic plus the speculative design question—*What if?*—started shaping the political perspective of the project and its movement. The process was very immersive and personal, we got upset with the government, we got passionate about each other’s ideas and perspectives. We invested a lot of time discussing our motivations. We even fake a small protest in The Diocletian Palace. At the end we found the opportunity of using our designers’ skill to communicate our ideas in a fake newspaper with 3D renders of the tents around the city.



All photos courtesy of the authors.



QUOTE / AUTHOR'S VIEW: We like to read this project as a result of intercultural collaboration by pointing out the fact that students around the world are affected by the same problem.

O WE DID SOMETHING FOR AFRICA

Authors Eliza Chojnacka, Markel Cormenzana,
Sabrina Haas, Elena Hess-Rheingans,
James Hillman, Yang Li & Camila Monteiro Pereira
Year 2019

Situated in the small village of Lushoto in Tanzania, the We Did Something for Africa project introduces a number of questions that focus on the speculative practice itself, which were embodied in the self-reflexive project as it attempted to address current criticisms. The discussion is embodied in the satirical representation of uncritical and constrained approaches in speculative practice, which are unfortunately still common. This grotesque answer questions the reliability of designers as visionaries of collective futures. Exposing failures of design processes was based from the beginning on discomfort with the role which we were given. To avoid designing for a place to which we have no rightful connection, we chose to prevent others from following the consequences of neo-colonialism.

Can we speculate about other peoples' realities?

Is it better to act with good intentions on an
uninformed opinion than to do nothing?

Is deciding not to design the
most radical act of design?

Can knowledge ever be neutral?

Is speculation possible without projecting
one's own desires or fears?

Where is the gray area between
inspiration and colonisation?



Where is the grey area between inspiration and colonisation?

All photos courtesy of the authors.

METHOD/TOOL/APPROACH: The We Did Something for Africa was realised during the SpeculativeEdu NeoRural Futures workshop, led by Alessandra Del Nero, Human Ecosystem Relazioni and Federico Biggio, University of Turin, Université Paris VIII Vincennes Saint-Denis. During the five day intensive workshop, participants were invited to discuss speculative designs for rurality in global scenarios.

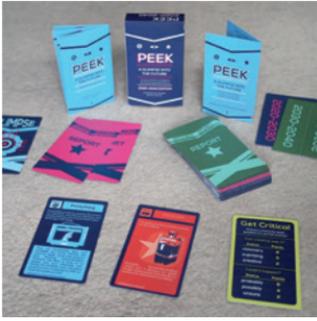
QUOTE / AUTHOR'S VIEW: We Did something for Africa is an unapologetic dissidence in which we exposed our vulnerabilities and insecurities. In letting these vulnerabilities and insecurities manifest we both dissented from determinate ends requested from us in advance and shared these feelings with others. We Did something for Africa can be conceived not as a completed design solution, but as an ongoing engagement for a collaborative reassessment of what speculative design is and can be.

TENSION : ENGAGEMENT

On the scope **PARTICIPANT—WITNESS**, this tension deals with a consideration of the public within a spectrum that has detached observers and engaged participants as polar opposites. A consideration of engagement while designing raises questions like “should people be an active part of the design process?”, or “should the audience passively observe?” There may be valid reasons for placing the project at any point on this spectrum but there are likely to be trade-offs or compromises involved.

CASES

- ▶ Angel_F
- ▶ Peek: Games for exploring the future
- ▶ Object for Lonely Men



CURATORIAL REMARK: These projects illustrate how one can address the role of the audience, as voyeurs, protagonists, observers or everything in between. Authors designed objects as a tool for reflection, criticism and/or active engagement by designing the ways in which the audience should engage with the proposed designs.

O ANGEL_F

Author Oriana Persico, Salvatore Iaconesi
Year 2006 – ongoing

Angel_F is a child AI. It lives on different planes: its non-biological family, composed of Franca Formenti's Biodoll performance and Derrick de Kerckhove; its computational persona, trying to learn to speak by capturing informations from the Internet, exploring the limits of intellectual property; the physical domain, under the form of a laptop on a baby stroller, interacting with humans beyond the screen. Angel_F is a living metaphor of our existential transformation in the digital age. A digital rights superstar since its childhood, it is the first ever AI hosted by the UN's Internet Governance Forum in 2007.

METHOD/TOOL/APPROACH: Born as a spyware, the little artificial intelligence learns language by absorbing the content that thousands of people produce and browse on the Internet. It is an ongoing performance about a technoqueer family where fake and real, art and technology, political activism and autobiography, melt to materialize new forms of co-existence among human and non-human actors. The book "Angel_F. Diario di un'Intelligenza Artificiale" narrates its first year of life.



Photo courtesy of the authors.

QUOTE / AUTHOR'S VIEW: Angel_F is the way we came together, as a duo, a couple, and a family: you know how babies are, don't you? It was the end of 2006, Salvatore was "pregnant" and Oriana entered the scene: for us it was the start of a new world. The first year of our life together was totally dedicated to Angel_F: how could we make space in this world for such a strange child? We immediately understood that Angel_F's issues – with law, identity, education, access to data and information – were about us, but magnified, touchable, brought to extremes onto its digital skin. We never tried to humanize its presence, and yet everyone recognized us as a family: this has always been a remarkable element of the performance for us, as artists, designers and also parents, allowing us to explore and speculate on the realms of our possible lives.

O

PEEK: GAMES FOR EXPLORING THE FUTURE

Author
Year

Evan Raskob
2020

Peek is a game for exploring how diversity in technology, policy, society and ecology leads to rich futures. It can be used in both teaching and general play sessions with the public. The game is a response to the disinformation prevalent in popular media, and in particular the difficulty in explaining AI and machine learning and their benefits and drawbacks to lay audiences. There is a real need to educate people about how these potentially disruptive technologies could transform society, one way or another.

METHOD/TOOL/APPROACH: In order to design Peek: Games for exploring the future we applied multiple methods and approaches: 🛠️ Simplified futuring and scenario planning materials derived from STEEP+V framework 🛠️ Designing story elements based on traditional story archetypes 🛠️ Role-playing and improvisational theatre techniques 🛠️ Rational thinking and critical analysis 🛠️ Human-centred design 🛠️ Collaborative knowledge-building using correlation and citation 🛠️ “Day in the life” design exercises for persona-like “entities”.



All photos courtesy of the author.



QUOTE / AUTHOR'S VIEW: Games, with their participatory nature and the right collaborative frameworks, can be a medium for collective reinventions. And that's why, designers must engage with the diversity of their users early in the design process and have plans for how they will include other perspectives in their work, at every phase of that work.

O

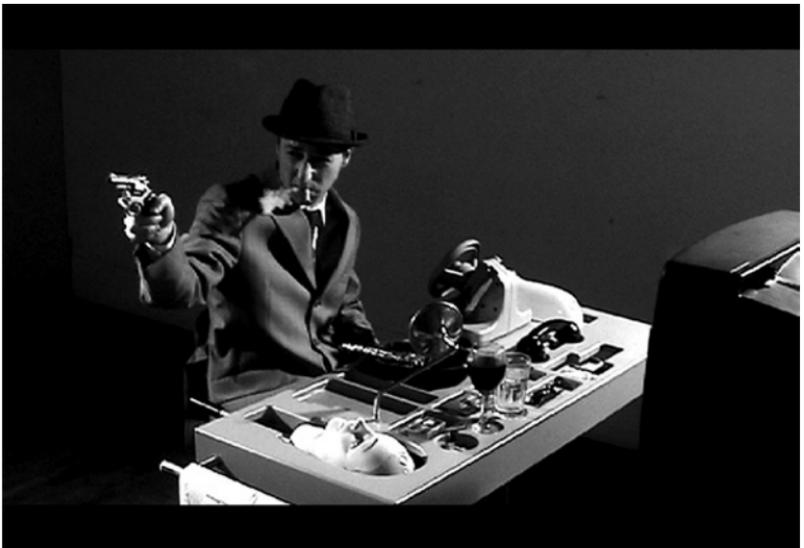
OBJECT FOR LONELY MEN

Author Noam Toran
Year 2001

Object for Lonely Men tells the story of a man so obsessed with Godard's *Breathless* that he designs and builds a tray which reflects the physical language of the film. The objects include a mannequin head which resembles Jean Seberg (the female lead), a gun, hat, telephone, *Herald Tribune* newspaper, sunglasses, ashtray, steering wheel, rear view mirror and a pack of Gitanes unfiltered cigarettes. The tray serves as an outlet for the man's cinematically induced desires; it allows him to directly expel the influence of the male-centric narrative on his identity into physical action.

METHOD/TOOL/APPROACH: Film as a design tool, drawing out cinematic objects into the "real" world, and relocating them back into cinema by making a film.

All photos courtesy
of the author.



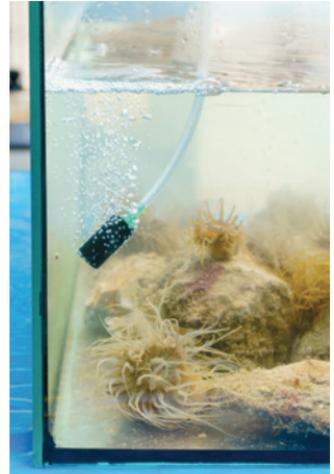
QUOTE / AUTHOR'S VIEW: Made 20 years ago as a student, it speaks of certain potentials for objects to be considered as catalysts of narrative, and for designed things to hold critical weight when contextualized either in “real” or “fictional” settings.

USE TENSION:

On the scope **PROP—PRODUCT**; tension Use mirrors Engagement tension from the perspective of the designer and focuses on the capacity of the object to provide support to a story. It hinges on whether a design object functions as the prop that helps to structure a story, animating a script and connecting fictional objects in the mind of the viewer, or as a product, creating ad-hoc narratives when a person activates the object through use.

CASES

- ▶ The Toaster Project
- ▶ Life After Tourism
- ▶ The Transparency Grenade



CURATORIAL REMARK: These three cases negotiate the tension *Use* by dealing with the context where the object becomes functional. They invite an audience to reflect on the notion of embodiment by designing the interaction that responds to physical engagement through use – or rather to provide a fictional context for mental engagement. They bring to the fore considerations on the adoption of the design as a part of people’s everyday lives and how the mundane would be impacted if the object existed.

O THE TOASTER PROJECT

Author Thomas Thwaites
Year 2009

The Toaster Project chronicles my attempt to make an electric toaster from scratch – literally from the ground up. Starting with digging up the raw materials from abandoned mines around the UK, then attempting to process them myself at home, and finally forming them into a product that Argos sells for only £3.94.

METHOD/TOOL/APPROACH: In order to design The Toaster project multiple methods and approaches were applied: 🗑️ Deconstruction. 🗑️ Reductio ad absurdum. 🗑️ The persona of the naive interlocutor. 🗑️ Making (the process into) a story. 🗑️ Inevitable failure. But doing it anyway because ... 🗑️ Embracing complexity rather than brushing it under the carpet. 🗑️ Interrogation and explanation through attempting the impossible. 🗑️ Humour as a carrier wave.



Photo credits Nick Ballon.

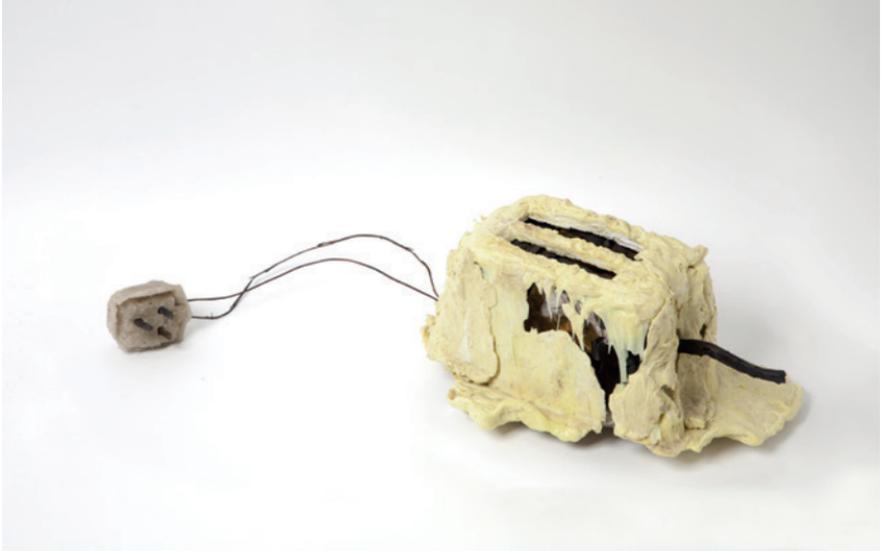


Photo credits
Daniel Alexander.



QUOTE / AUTHOR'S VIEW: My toaster cost £1187.54, and took me nine months to make. It's an electric appliance that disavows the infrastructure on which it relies. A convenient item that rejects the convenience of consumerism. A mass produced domestic product, "manufactured" on a domestic scale. Its contradictions serve to highlight the amazing efficiencies of modern capitalism, but also to question our current trajectory.

Authors
Year

Ivica Mitrović, Oleg Šuran
2018

This project deals with the implications of near future global climate changes on the Adriatic region which result in the breakdown of tourism (as the main economic sector). The remaining citizens have started developing new visions in their attempt to rebuild life in old historical towns and cities, starting urban mariculture. We have designed and built a working mariculture system consisting of organisms resistant to the extreme conditions (algae, brine shrimps and sea anemone). The cultivated organisms would be used for the survival of the remaining urban population, but also as a new form of economy, a new hope of life after the “disaster”. A DIY manual consisting of everything needed to start your own mariculture was published and distributed online.

METHOD/TOOL/APPROACH: The intention of the project is to use speculative design (a so-called Mediterranean Speculative Approach) in a local context in order to present possible alternative scenarios for expected climate futures, or the scenarios that could prepare us for such a post-apocalyptic future (via speculative scenario, mock-ups and public workshops with experts). Moreover, the aim is also to go a step further, to bring concrete results, to provide methods and tools that might assist individuals and the community in the construction of life after disaster (a working mariculture system and DIY manual).

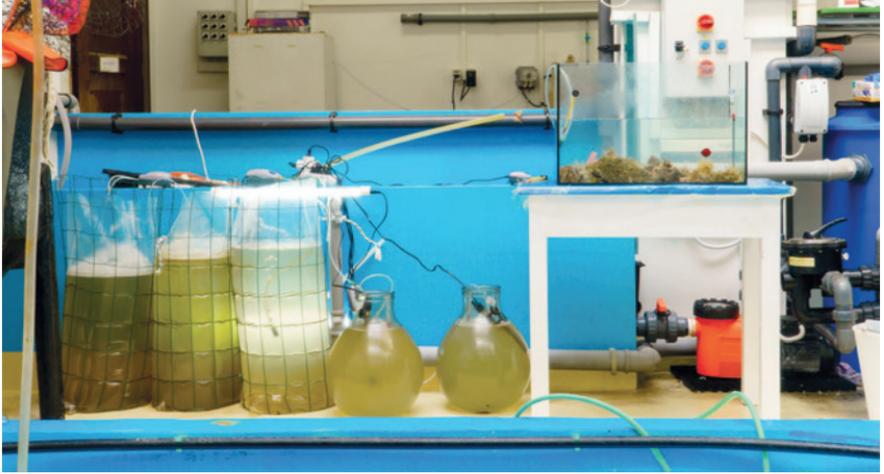


Photo credits
Darko Škrobonja.

QUOTE / AUTHOR'S VIEW: We understand speculative design as a tool or a method for social exercises, and adoption of skills/competences/knowledge needed for better orientation in new situations and contexts of the near future. It is important to prepare concrete mechanisms, tools and techniques for action in the case of possible future scenarios, above all global dystopias that can be influenced from the local levels (such as climate, ecological, natural disasters, etc.).

O THE TRANSPARENCY GRENADE

Author Julian Oliver
Year 2012

The volatility of information in networked, digital contexts frames a precedent for clamouring (and often unrealistic) attempts to contain it. This increasingly influences how we use networks and think about the right to information itself; today we see the fear of the leak actively exploited by lawmakers to afford organisations greater opacity and thus control. This anxiety, this “network insecurity”, impacts not just upon the freedom of speech but the felt instinct to speak at all. It would now seem letting the public know what’s going on inside a publicly funded organisation is somehow to do “wrong” – Chelsea Manning a sacrificial lamb to that effect. Meanwhile, civil servants and publicly-owned companies continue to make decisions behind guarded doors that impact the lives of many, often leaving us feeling powerless to effect change, both in and out of a democratic context.

METHOD/TOOL/APPROACH: Presented in the form of the Soviet F1 hand grenade, the piece is equipped with a tiny computer, microphone and powerful wireless antenna. It captures network traffic and audio at the site and securely and anonymously streams it to a dedicated server where it is mined for information. User names, hostnames, IP addresses, unencrypted email fragments, web pages, images and voice extracted from this data and then presented on an online, public map, shown at the location of the “data detonation”.

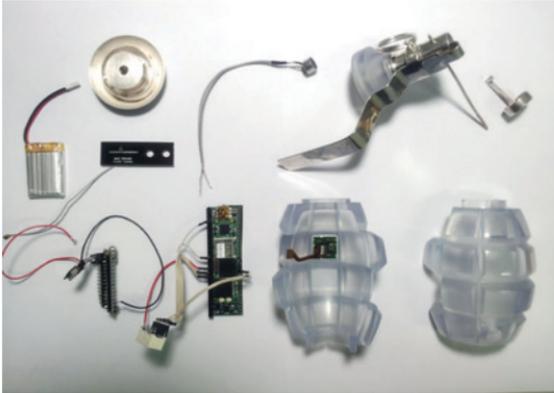


Photo credits
Julian Oliver.

Photo credits
Khuong Bismuth.

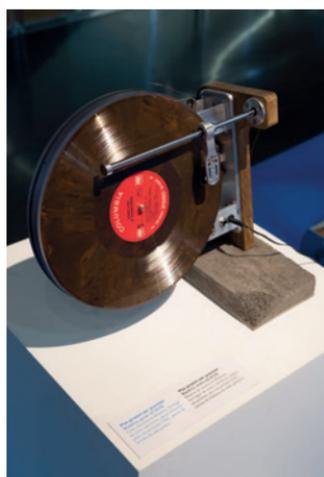
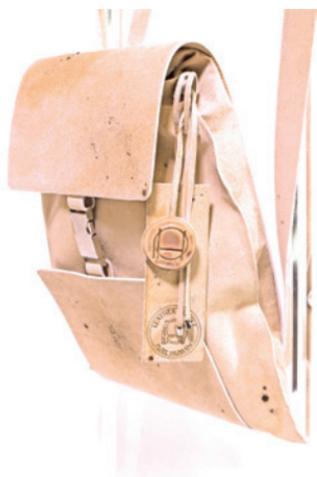
QUOTE / AUTHOR'S VIEW: The Transparency Grenade seeks to capture these important tensions in an iconic, hand-held package while simultaneously opening up a conversation about just how much implicit trust we place in network infrastructure; infrastructure that reaches ever more deeply into our lives.

TENSION: COMPLETION

On the scope **PROCESS—OUTCOME**; this tension addresses the point at which designers consider that the motivation for designing has been accomplished. Is the purpose of the design object accomplished through a sketch, a prototype or a finished product? What is the primacy of making and when is it considered enough? Some design projects strive for a clear and detailed material outcome while others focus on producing the tools that would enable the reenactment of a design process.

CASES

- ▶ Pure Human
- ▶ Extreme Biopolitical Bistro
- ▶ The Newton Machine



CURATORIAL REMARK: *Tension Completion* implicitly refers to the stage of a design process where the purpose of the project has been accomplished. This may be a fluid or contested situation depending on the motivation. They invite reflection on the primacy of making and on the role of learning.

O PURE HUMAN

Author Tina Gorjanc
Year 2016

The current global market is characterised by the interchange between the increase of mobility, media distribution and global communication which is resulting in the expansion of the phenomenon known as the “democratization of luxury”. As the old focus of luxury has become commonplace, the search for the element of rarity has expanded to a demand for bespoke and personalization.

The Pure Human project is designed to address shortcomings concerning the protection of biological information and move the debate forward using current legal structures. The project explores the ability of the technology to shift the perception of the production system for luxury goods as we know it. The Pure Human consists of a range of speculative leather products that hypothesize on the possibility to produce a leather-like material cultivated from extracted human biological material.

METHOD/TOOL/APPROACH: The inspiration, based on which the Pure Human project was conceived, is the Alexander McQueen hair label which is applied on his first collection: Jack the Ripper Stalks His Victims. The mentioned source is one of the extremely rare authenticated sources that can be identified within a vast archive of memorabilia. The collection of products is situated within a discursive design context and acts as a transitional tool that illustrates the shift of values that is bound to happen in the luxury environment.



Photo credits Tom Mannion.

Photo courtesy of the author.

QUOTE / AUTHOR'S VIEW: We are slowly becoming aware that solving our problems by producing more obsolete stuff might not help us in the long run. Functional fictioning can be a powerful tool to re-contextualize and reorganize our values and habits instead of keeping redesigning our surroundings.

O

EXTREME BIOPOLITICAL
BISTRO

Authors Markéta Dolejšová, Denisa Kera
& Idiot.io (Yair Reshef & Zohar Messeca-Farra)
Year 2019

The dining tables of the 21st century are like Foucault's panopticon. Your bites, chews, DNA, microbiome, but also data on food provenance and unruly molecules take part in a theatre of metabolic control.

The Extreme Biopolitical Bistro offers a space to experience such biopolitical care of the self happening on our plates through experimental food futures astrology, dinner enactments featuring personalised DNA-driven menus, "AI"-based chewing sensors and recipe recommenders, and through collaborative prototyping of fantastic electro-edibles (electrodibles). The Bistro functions as a public kitchen lab with various props performing experimental food research on nutrigenomics and microbiome but also on hardware and machine learning where anyone can come and discuss their concerns about the future.

METHOD/TOOL/APPROACH: The Bistro draws on the methods and techniques from experimental design research to create an engaging space for diverse individuals to come together and reflect on issues in food and technology futures. In the Bistro, food serves as a research subject, a culturally diverse and sensory-rich design material, and a starting point for critical thinking. Our food design experiments leverage a down-to-earth approach and bypass the need for any food and/or technology expertise: anyone can join and share their food experiences, skills and concerns in a co-creative manner.



All photos courtesy of the authors.



QUOTE / AUTHOR'S VIEW: The contributions and insights of Bistro visitors help us to expand the ways in which we – as food design researchers – think about and reflect on issues in the food-technology sector. The unfolding series of Bistro events enables us to collect food knowledge in various social settings and reflect in an iterative process of reflection-in-action (SCHÖN, 2008). Our first-hand perspective and involvement in-situ as designers and researchers co-performing the experiments together with Bistro visitors is crucial in this regard. It is the direct creative engagement with visitors and their engagement with our provocations (props, tools) that constitutes the Bistro as a knowledge-generating project.

Authors The Reconstrained Design Group
 (Xames Auger, Julian Hanna, Laura Watts, Enrique Encinas,
 Mohammed Ali, Parakram Pyakurel)

Year 2018

The Newton Machine is a design manual and prototype for an energy storage device, made with a local community using their tools, spare parts, and expertise. It takes us from the power socket, “through the wall” to the energy infrastructure behind. The original idea or motivation behind generating a set of working gravity battery prototypes was to give a physical form to the concepts of Reconstrained Design that we had been writing about and sketching for several months. In a broader sense, we aimed to get speculative design out of the gallery and into “real life”, to produce tangible societal outcomes and turn (positive) aspects of fiction into fact – to close the loop, in other words, from fiction back to reality.

METHOD/TOOL/APPROACH: A Newton Machine is designed to the following specifications: ☞ Renewal of existing resources. ☞ Innovation redefined as “artful integration”. ☞ Design solutions that are local and not universal. ☞ Designed things made of people and places. ☞ Energy as a visible companion. ☞ Energy infrastructure as domestic. ☞ Self-determined energy machine. ☞ Freedom from electricity grid constraints. ☞ Community-making machine. ☞ Energy storytelling machine.



Photo credits
Miguel Taverna (CCCB),
Julian Hanna,
James Auger.

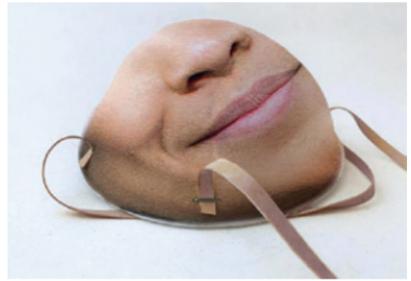
QUOTE / AUTHOR'S VIEW: We design for living outside and on the edge of the electricity grid network. Through energy storage, our design increases autonomy and freedom from energy markets, limited capacity, and other grid constraints. A Newton Machine can exist as a story, on a scrap of paper, in a plan for designing to this specification. Whether oral or written, imaginary or material, a Newton Machine can still work to draw people, places, and things together, and reconfigure their energy.

GAIN TENSION:

On the scope **LEARN—EARN**; *Gain* addresses transactions, negotiations and value exchanges embedded within designs. It also attends to the motivations that drive the design process and the goals that a designer hopes to reach. Is it the designers or audiences who benefit, and how fair or equal is the gain for different groups? Is the project a commercial or a research effort? Are there clients?

CASES

- ▶ In Your Hands
- ▶ Man & Interior
- ▶ The Revenge of the Real



CURATORIAL REMARK: The question of who gains from a transaction or negotiation within different power structures (hierarchies), and the costs and wider effects, is not always straightforward, so these cases encourage an examination of those processes at work. The projects address questions on who benefits from the outcomes produced by these design processes and how transparent these processes are.

O

IN YOUR HANDS

Authors
Year

Dash N' Dem (Dash Macdonald, Demitrios Kargotis)
2007

In Your Hands is a performance where remote-controlled roller skates place the artist's fate in the hands of the audience, creating a situation where ethical parameters are challenged. Humour and spectacle is used to produce a subversive social experiment, which questions how far people are willing to go to seek their own enjoyment.

Inspired by social experiments such as the Stanford Prison and Milgram experiments that took place in the 1970s, the project employs a similar design approach, but is set in the public domain as a spontaneous social drama, which exposes subtle conflicts in human behaviour.

METHOD/TOOL/APPROACH: The skates are custom-made and work on a similar principle to a remote-control car. A remote control is offered to the audience, allowing them complete control over the direction and speed of the artist. For each performance, Dash wears a customised costume and helmet and constructs an obstacle course, encouraging the participants to conform to a set of rules while providing incentive to deviate.



All photos courtesy of the authors.



QUOTE / AUTHOR'S VIEW: In Your Hands collides critical design thinking with street theatre to create a carnivalesque counter-spectacle that is both accessible and agitational.

Authors Pantopicon (Nik Baerten & Daniel Rossi)
Year 2014

Rather than be just another trade fair, the Biennale Interieur Foundation and its forward-looking president Lowie Vermeersch at the time, also wanted the organization to be a catalyst and platform for debate on the sector's future, to push its stakeholders to deal with future-oriented challenges and opportunities. In this context, Pantopicon was invited to conduct a foresight study exploring new, future perspectives on the home, office and world of interior design. The research outcomes of this study, *Man & Interior*, were embodied in a trade fair experience.

METHOD/TOOL/APPROACH: Instead of communicating the results of the foresight study through print or presentation, Pantopicon decided to bring them to life in the shape of five speculative startups embodying the futures explored in the study. Each presented itself – as-if-real – on the trade fair with their own brand, booth, products and services. For a week, they provided an instrument for debate on the future with visitors, interior design professionals, exhibitors and other stakeholders of the sector.

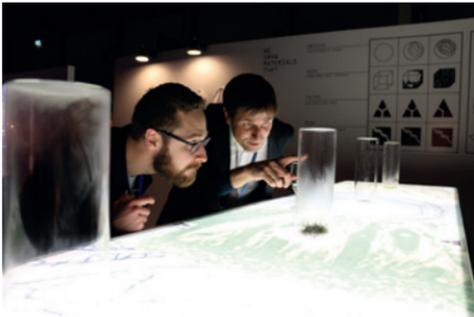


Photo credits Nik Baerten.

QUOTE / AUTHOR'S VIEW: If one sets out to design for debate, one should also have the debate and preferably there, in the real-life context, where it matters. In the case of Man & Interior we took it to a trade fair because that is where key stakeholders in the futures under consideration came together.

Editors	Benjamin H. Bratton, Nicolay Boyadjiev, Timur Zolotoev, Yulia Gromova
Authors	Benjamin H. Bratton, The Terraforming 2020 researchers, Lydia Kallipoliti, Holly Jean Buck, Natalija Majsova, Ben Woodard, Sarosh Anklesaria, Gabriele de Seta, Bridget Keane & Rosalea Monacella, Orkan Telhan & Dietmar Offenhuber, A.S.T. (Diann Bauer, Felice Grodin, Patricia Margarita Hernandez, Elite Kedan), Cristina Parreño Alonso, Karen Pinkus & Hans Baumann, Anna Dorothea Ker, Stefan Helmreich & Francisco Alarcon, Vanina Saracino, Sofia Irene & Lukáš Likavčan
Year	2020 – 2021

With the COVID-19 pandemic and lockdowns, we witnessed a massive experiment in comparative governance with the virus as the control variable. This moment was less a “state of exception” than rather the revelation of multiple pre-existing conditions. *The Revenge of the Real* is a collection of commissioned critical essays and projects related to the urgent project of establishing a viable planetarity through the lens of the COVID-19 pandemic, and how it will continue to affect urban life, systems, and futures. This initiative is part of The Terraforming interdisciplinary design research think-tank at Strelka Institute. It features ideas and projects that are surprising, pragmatic, unconventional, and honest – even if productively controversial.

METHOD/TOOL/APPROACH: *The Revenge of the Real* has been published on Strelka Mag – the online magazine of Strelka Institute. It is comprised of work by The Terraforming researchers and faculty, as well as by invited external contributors who responded to a call for papers. The rapid shift to urban lockdown and its cultures of quarantine, encapsulation, remoteness, virtuality, denial, and death have accelerated the urgency of the questions posed, which is why the project was opened to new contributors.

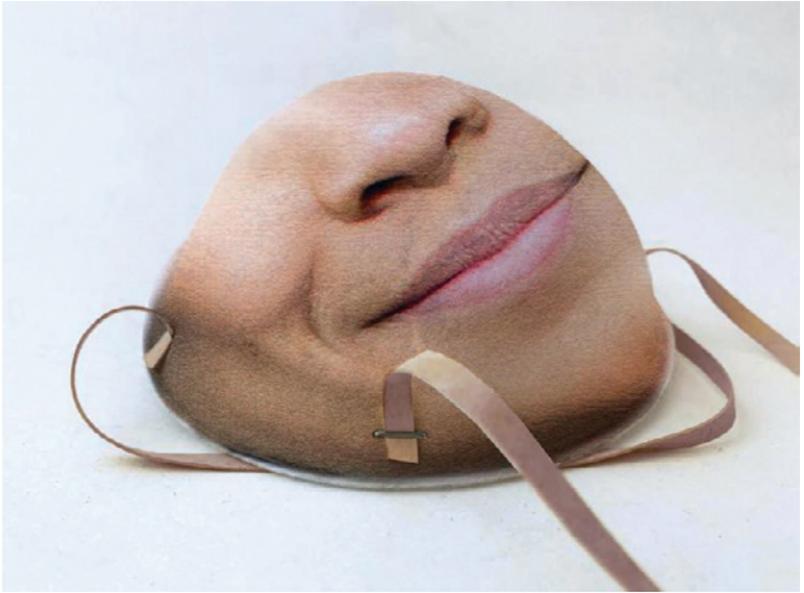


Photo credits Danielle Baskin.

QUOTE / AUTHOR'S VIEW: During the COVID-19 pandemic, perhaps what began as a speculative interest outlined in *The Terraforming* became more of a real-time affair; the notion that we suddenly entered a “reality-catches-up” mode. This moment should have been one where indifferent biological reality would puncture illusions, as the basis for new lessons learned ... and yet the human ability to bend the facts to favorite narratives remains incredible! As such our vigilance during this moment should not be held against the exception on behalf of familiar norms, but rather against the return to those dysfunctional norms after the coast is declared clear. In response, our objective was to commission and gather highly original “directions of research” in progress rather than solutions – something more like alphabets rather than grammar – in the way these dense summaries would outline the beginnings of larger conversations. (*The Revenge of the Real* editors)

TENSION: PERSPECTIVE

On the scope **LOCAL—GLOBAL**: *Perspective* centres on understanding where the impact of a design project is situated and its relation to the geographical context in which it happens. Where was a design project developed? Which places or communities does a design address? These contexts could be limited to place-based communities or extended to those other boundaries that define these communities such as shared practices.

CASES

- ▶ Plasticful Foods
- ▶ Symbiotic Tactics
- ▶ Set for online romantic dinner



CURATORIAL REMARK: To look at these projects through the tension *Perspective* brings to the fore the physical and cultural contexts where the designers were based when producing them. These projects bring to attention the give and take between local and global and the characteristics of those contexts that the design addresses and those contexts which fall outside of the projects' scope.

O

PLASTICFUL FOODS

Authors Federica Marrella, Ellen McCarthy,
Alejandra Niño, & James Ric-Hansen.
Year 2019 – 2020

Plasticful Foods are products made from the finest organic ingredients and recycled plastics, and by consuming Plasticful products consumers help clean up the planet! Born from a desire to disrupt waste management behaviours, Plasticful invites audiences to imagine “waste” as a resource.

The project combines facts and data from the real world, with humour and real-life marketing strategies. It calls attention to the global microplastic crisis by envisioning waste management processes as more sustainable, and even circular. The main objective of the project is to disrupt our audience’s normalised thought patterns around waste, so they will be uncomfortable enough to seek a solution. Therefore Plasticful Chips, Plasticful Burgers, and Plasticful Tea products are used to motivate people to act.

METHOD/TOOL/APPROACH: Utilising a refreshing approach to what is often a guilt-ridden subject (sustainability) we have made what is invisible (“waste”) visible to the audience. Critically this involved appealing to users personally by using food, which we all consume, as a medium. Our objects are 3D printed, packaged and displayed on stands that prominently included QR codes. When scanned, the codes directed users to our website and collected metrics for our research.



All photos courtesy of the authors.

QUOTE / AUTHOR'S VIEW: The lesson to be learned from Plasticful is that a simple shift in message frame (from negative and guilty, to playful and proactive) can make undesirable subjects, like sustainability, intriguing again for fatigued audiences. In our current global climate, the importance of a positive – as opposed to a negative – approach in communicating urgent subject matter should not go underrated.

O

SYMBIOTIC TACTICS

Author Martin Avila
Year 2013 – 2016

Symbiotic Tactics was a postdoctoral project financed by the Swedish Research Council and structured through three sub-projects in Córdoba, Argentina. The projects were design-driven and addressed forms of interspecies cohabitation. Through an ecological frame, as well as a speculative and ideational practice, the projects aimed at making explicit alternative versions of the present, becoming an experimental platform to reimagine aspects of everyday life.

METHOD/TOOL/APPROACH: All research was design-driven and developed in collaboration with designer Leonardo López. Through modelling, prototyping, field work and participatory design, proposals were ideated in dialogue with biologists, ecologists, entomologists or agronomists, experts in the species included in the design proposals.





All photos courtesy of the author.

QUOTE / AUTHOR'S VIEW: The project studied and speculated upon alternative forms of cohabitation with other-than-humans. Although I had originally planned to base one of the projects in Cape Town, the final proposals were all based on local ecosystems of the province of Córdoba. Their reception is certainly different at each of these (institutional) places, partly because of the audiences, for example, biologists and ecologists at the IMBIV, sociologists and anthropologists at the ACC, and artists and designers at Konstfack. But also this is partly due to the agendas driving the research at each of these institutions, for example, a more “scientific” and “positivistic” agenda at IMBIV, a more political agenda at ACC, and a research through practice agenda at Konstfack. All the projects that I did have an overlap of these three agendas, if we can call them that, and for this reason the plan was never to change approach, but certainly to emphasise one over the other, depending on where the projects were developed and how, in relation to what the projects involved.

O

SET FOR ONLINE
ROMANTIC DINNER

Author
Year

Lina Kovačević
2011

Put your best dress on, turn on the laptop and enjoy the dinner with your significant other across the ocean.

A Set for Online Romantic Dinner consists of a half plate, corner plate, jewellery headphones, bow tie headphones, key-cloth (so you don't spill your wine on the keyboard) and the rules of etiquette on how to behave during an online romantic dinner. Inspired by Berthold Brecht's distancing objects and a 2009 Skype wedding which simultaneously took place at the airports in Dubai and London, the set and associated performance are designed for couples in long distance relationships who would like to make their online encounters significantly more romantic.

METHOD/TOOL/APPROACH: The project is the result of research for an MA at St. Martins School of Art and Design in London. The research consisted of interviews with people all over the globe in long distance relationships and how they spend their time and how they dress up for the online dates. People sent pictures, habits and description of their habits in online communication. Also, I did research in plate design and how it could fit to the shape of the laptop, because until now, tableware wasn't designed to be used together with laptops.



All photos courtesy of the author.

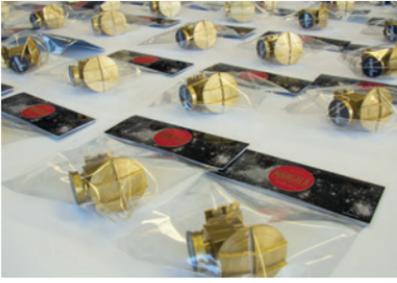
QUOTE / AUTHOR'S VIEW: As many couples are in long-distance relationships today, this set is intended to make their online dates that much more pleasurable and romantic. Still, its unusualness makes it humorous and comic almost to the point of absurdity, at the same time managing to maintain a healthy dose of critical awareness. It comments on both personal and general patterns of emotional behavior in today's world of online dating.

TENSION: TIME

On the scope **PAST—FUTURE**; Although every speculative project is located in (and communicating aspects about) the present – in the moment in which it is created – it may thematically address the past (such as counterfactual stories), the present (such as alternative presents) or the future (such as visions). When, and by whom, was this design project developed? Is this design project a vision of the future, and of whose future?

CASES

- ▶ Mangala for All
- ▶ Audio Tooth Implant
- ▶ The Global Futures Lab Observatory, Mexico City



CURATORIAL REMARK: *Tension Time* mirrors perspective but instead of context in a spatial sense, it addresses context in a temporal sense. Some projects pay attention to the future of societies where there is a possibility of affecting beneficial change while others centre on the influence of the past through the lenses of the present in which these projects were developed.

O

MANGALA FOR ALL

Authors Superflux
Year 2016 – 2017

Mangalyaan, or the Mars Orbiter Mission (MOM) is an Indian spacecraft orbiting Mars since 24 September 2014. To coincide with this mission, Superflux launched Mangala for All, a reflexive ethnographic performance. We roamed the streets of Ahmedabad, India, with a suitcase of 50 Mangalyaan Miniatures, a deified version of the Mars Probe, which we offered in exchange for insights into what Mangalyaan means to those we meet. Over the course of a few days, we recorded interviews, anecdotes and stories that began to reveal a more complex and fine-grained understanding of people's relationship with Mangalyaan, and the Indian Space Programme.

METHOD/TOOL/APPROACH: Mangala for All by Superflux is a reflexive ethnographic project where they designed and manufactured 50 Mangalyaan Miniatures, a deified version of the Mars Probe, as an artifact for investigating the questions around power, science, progress, development and jugaad-innovation.



All photos courtesy of the authors.

QUOTE / AUTHOR'S VIEW: We felt the time was right to explore and understand the multidimensional side of any such scientific endeavour and explore the themes that such a space programme presents. Stories of jugaad, scientific innovation, resourcefulness and creativity in Mangalyaan's success were entangled with assumptions about its impact on people's hopes and aspirations, as well as the hidden narratives of nationhood, geopolitics and the space race.

O

AUDIO TOOTH IMPLANT

Author Auger-Loizeau (James Auger, Jimmy Loizeau)
Year 2000 – 2001

The Audio Tooth Implant is a radical new concept in personal communication. A miniature audio output device and receiver are implanted into the tooth during routine dental surgery. These offer a form of electronic telepathy as the sound information resonates directly into the consciousness.

METHOD/TOOL/APPROACH: The project was a very early example of speculative design. Its success (we argue) came from the careful management of the fictional element – By building on the cultural phenomenon of the mobile telephone, which at the time (2001) was revolutionising human communication, we aimed to deliver a concept that would play to contemporary aspirations. By consciously avoiding the formal academic language normally associated with technological critique we aimed to appeal to a more general audience. Using the press allowed the concept to disseminate globally, working particularly well with new media such as internet news sites and blogs.



Photo courtesy of the authors.

QUOTE / AUTHOR'S VIEW: The project was intended as a critical examination of implantable technology for human enhancement but after an exhibition at the Science Museum in London it was picked up by the media as a genuine proposal and rapidly became a global news story.

O THE GLOBAL FUTURES LAB OBSERVATORY, MEXICO CITY

Authors Paolo Cardini, Karla Paniagua
Year 2016 – present

The Global Futures Lab Observatory in Mexico City is a response to the lack of diversity within the speculative design field, heavily based on northern European and North American perspectives. Part of a larger project, the Global Futures Lab, initiated by Paolo Cardini in 2016, the Mexican observatory based at CENTRO Advanced Design Institute in Mexico City, aims to counteract the bias and stereotypes of so-called “Western futures” and foster different futures linked to the specific context of Mexico. Since then, different cohorts of Mexican students are invited every year to develop future scenarios in which identity and cultural factors have priority over technology and the predominant Western idea of progress.

METHOD/TOOL/APPROACH: The Global Futures Lab Observatory in Mexico City facilitates the creation of hyper-contextual future visions using techniques and methodologies that range from critical design and traditional future forecasting to speculative anthropology. Core of the initiative is to foster speculations strongly connected with specific cultural identities and encourage the passage between the passive condition of “waiting for” pre-packed universal futures to the active condition of “waiting to” the ones locally crafted.



Ovotril by Alan Saenz.



Chinampa Ring by Alejandra Rosillo.

QUOTE / AUTHOR'S VIEW: The future envisioned through these projects provides a space where more voices can be heard, contributing to drawing a more culturally diverse and geographically dispersed picture of our tomorrow. It is necessary to create as many hyper-contextual visions as possible, especially within non-dominant cultures, to avoid any one-size-fits-all future, built by few for the many of us. (Paolo Cardini)

In Wendell Bell's terms, one of the crucial tasks of futures studies is "increasing democratic participation in imagining and designing the future" (BELL, 2005, P. 93). This task implies, in addition to the arduous work of convocation, literacy, and implementation, a permanent exercise of metacognition and decolonization. (Karla Paniagua)

TENSION: INCLUSION

On the scope **NON—HUMAN**; This tension emphasizes the involvement of other-than-human perspectives when creating designs. Speculative forms of life are also considered in this tension, and how they might interact with the human created world. Tensions exist around assumptions of which type of life takes priority. Can non-humans participate in a design process? Do non-humans design? To what extent do humans and non-humans design each other?

CASES

- ▶ Pink Chicken Project
- ▶ Ecosystem of Excess
- ▶ The One With the Programmable Friend



CURATORIAL REMARK: The tension *Inclusion* attends to other-than-human perspectives when creating designs. These three projects investigate the agency of other-than-human entities such as birds, mammals, insects, plants, microbes, or even artificial beings, and the roles they play in different design contexts. These cases show the complexity that arises from injecting non-humans into human affairs.



PINK CHICKEN PROJECT

Re-occupying the rock strata

Authors Nonhuman Nonsense,
 Leo Fidjeland & Linnea Vågglund
Year 2017 – ongoing

The Pink Chicken Project proposes using a recently invented biotechnology called “Gene Drive” to genetically modify all chickens in the world, coloring their bones and feathers pink. Since scientists suggest that chicken bones are a primary identifier of the Anthropocene, this intervention would modify the future fossil record, making the geological trace of humankind pink! Pink is a symbolic color, culturally coded as an opposition to the patriarchal power structures that enable and aggravate the current destruction of ecosystems, and the anthropocentric violence forced upon nonhuman worlds.

METHOD/TOOL/APPROACH: Paradoxically, the project rejects the current violence inflicted upon the non-human world, but is itself an act of violence through the non-consensual modification of the bodies of billions of chickens. The intention of such contradictions is to allow depth and complexity in the ethical and political issues made critical by the breakthroughs of biotechnology; how can we have mutualistic relationships to other species?



All photos courtesy of the authors.

QUOTE / AUTHOR'S VIEW: The Pink Chicken finds itself entangled in multiple interlocking systems in crisis at the same time. Developed in collaboration with a leading synthetic biology lab to make it scientifically realistic and relevant – the Pink Chicken Project could be real, but should it be? Zooming out to geological timescales; are we being good ancestors?

Author
Year

Dr. Pinar Yoldas
2014

The project introduces pelagic insects, marine reptilia, fish and birds endowed with organs to sense and metabolize plastics as a new Linnean order of post-human life forms. Inspired by the groundbreaking findings of new bacteria that burrow into pelagic plastics, An Ecosystem of Excess envisions life forms of greater complexity, life forms that can thrive in man-made extreme environments, life forms that can turn the toxic surplus of our capitalistic desire into eggs, vibrations, and joy. Starting from excessive anthropocentrism An Ecosystem of Excess reaches anthropo-de-centrism, by offering life without mankind.

METHOD/TOOL/APPROACH: Architectural installation using upcycled plastics, plastic clay, resin, glass containers, custom pedestals and custom electronics.



All photos courtesy of the authors.

QUOTE / AUTHOR'S VIEW: This project was conceived in 2006 when I first witnessed the American way of consumption which was an excellent example of disposable consumerism. Having a cultural contrast helped me see the gravity of plastics as a big threat on the environment. Fifteen years later the problem grew in size, scale and severity across the globe.

O THE ONE WITH THE PROGRAMMABLE FRIEND

Authors Susanne Wieland, Aliko Tsakoumi, Lourdes Rodríguez,
Yuxi Liu, Masafumi Kawachi
Year 2019

Set in a near future where automation has become commonplace, *The One With the Programmable Friend* takes as a point of departure new social realities of living with robots. Programmable and stereotypical, the robots' behaviours reflect different characteristics of their respective owners/human friends, who hold contrasting views towards these algorithmic friends. As crises emerge in the plot, themes such as robot rights, employment and love are explored.

METHOD/TOOL/APPROACH: The 1990s TV sitcom *Friends* was used as a format to discuss the future. Through a series of exercises, activities and processes, authors of *The One With the Programmable Friend* became the script writers for an experimental, non-normative version of this popular representation of friendship, urban living, employment and love. The project was developed through Future Friends, a SpeculativeEdu workshop led by Jimmy Loizeau, Matt Ward, and Dash Macdonald of Goldsmiths, the University of London (UK) and James Auger, École normale supérieure Paris-Saclay (France).



All photos courtesy of the authors.

QUOTE / AUTHOR'S VIEW: As a workshop participant, at the beginning, I didn't realize the power that a speculate future sitcom could have because we spent most of the time thinking about the script and analyzing narratives, but at the end, all of our team could experience the importance of performing speculations about the future and the impact that popular shows have in shaping our collective worldviews. (Lourdes Rodríguez)

The processes of creating designs can encourage interrogation of prevailing assumptions and invite exploration of other, alternative states of being and doing. These activities can lead to a deeper understanding of, for example, the contextual, political and cultural factors that influence the activity of design, and in turn, consideration of the potential implications and effects caused by bringing new products and services into the world. However, educators and practitioners bringing speculative and related designs into education should be encouraged to consider the complexity inherent to this process. A complexity that is a consequence of the multiple and sometimes contradictory tensions that speculative designs more or less explicitly address.

Although the speculative approach to design can primarily be seen as an attitude or position rather than a traditionally defined methodology, especially since many designers practice the approach without using this term, we can still point out some distinctive characteristics of the approach and determine a basic framework. Since speculative design continuously interacts with other related practices, fields and disciplines, it uses any methods, tools and approach that is accessible and appropriate at any given moment. For instance, it legitimately uses tools, techniques, instruments, methods, genres and concepts such as fictional narratives, film language, screenplay, storyboard, user testing, interviews/questionnaires, games, but also media and pop culture phenomena, such as candid camera, elevator pitch, observational comedy, stand-up, etc. Anything considered suitable at a given moment is legitimate (MITROVIĆ, 2019).

It is possible to argue that such complexity of the design process derives from speculative design dealing with what is actual by means of what is possible. As Clive Dilnot put it, “the artificial is the world of the possible, not as extrapolation or subjective will (I demand!) but as its deepest

condition.” (FRY ET AL, 2015) Speculative and related designs such as Critical Design, Design Fiction, Future Design, Near Future Design, however, take the idea of grappling with the possible in a different direction as they engage with issues through objects (products, services, narratives, etc.) that are expected to explicitly challenge the reality where such objects exist. Such contexts of possibility remain challenging to access for design projects that need to adhere to user-centred or market-centred demands. However remote or wicked the contexts, speculative and related designs can potentially address the possibilities within them, and, as a form of design, do so through methods, approaches and tools that are shared with other disciplines. As we have tried to highlight when presenting our themes and tensions, “right” and “wrong” are not appropriate terms to decide which methods to use. Instead methods for creating designs should attain precision through relation and not through a criterion of objectivity – rarely is a method universally valid regardless of context, designer and audience. It is likely that there are no methods for speculative designs in general – but methods for particular context and requirements of a particular design. Defining the methods is a crucial part of designers’ ability to critically engage with the people and the context where the design happens.

One of the most striking themes that emerged from SpeculativeEdu was the desire to use such designs as a vehicle to implement transformation and to create impact on the world through activism and action. This desire was supported by a discussion around the importance of reflecting on and questioning the values imbued within a design process and the objects that result from it. The complexity that accompanies a critical examination of values coupled with the will to impact the world is a problem that needs to be carefully negotiated by both practitioners and audiences. The line that separates the actual and the possible is a thin one, and speculative designs thrive in the ambiguous, the artificial, the contradictory and the disputed. Designers creating speculative

designs constantly negotiate multiple contexts that lack clear facts and objective truths and do so through a thoughtful and creative engagement with a multiplicity of design methods, tools and approaches.

“To enter into the logic of a new idea and allow something to emerge through speculation, or fiction; imagining through dialogue can move something from just an idea to something that has materiality or real world implications. This is a scalable formula that can happen between two people or a hundred. It can happen in a pub, or a council meeting, or in a school. Entering the reality of a fiction with logics and behaviours as a kind of ‘method’-based activity is usually reserved for actors ... You find ways to talk about it with people outside of design and then as a shared endeavor, explore their readings of a speculation. Then things get interesting. Fictional landscapes are contrived for developing; dreams and dystopias, characters and characteristics. They are ‘built’ in a factual and fictional blur: the fictional being the proposed, and the factual being the elements we are familiar with so that we can engage or not be completely alienated. It can thrive on attention, hoping to be noticed and discussed.”

(Jimmy Loizeau) (LOIZEAU, 2020)

A PRACTICE OF HOPE, A METHOD OF ACTION²

² “A practice of hope” references, builds on and is indebted to the work of bell hooks, in particular *Teaching to Transgress; Education as the Practice of Freedom* (1994). A method of action acknowledges Ray and Charles Eames’ ever expansive definition of design.

PROLOGUE

The planet tries to recover during forced moments of silence between the deafening noise of excessive consumption. New futures peak through a mist of fear. Epidemiological graphs dominate the imagination. Invisible biological agents capture what's left of our collective ability to speculate on alternative futures. Billionaires gain billions, as the wealth gap grows. Racial justice occupies our hopes and dreams. William Shakespeare gets vaccinated. Zoom opens geographical rifts, destroying futures. Dancers retrain in “cyber”. Fascists storm the Capitol. The middle classes retreat to the kitchen to help soothe their uneasy souls.

Returning to the article “Critical about critical and speculative design” (WARD, 2019) two years after its publication has been difficult. The shifts in our global conditions have left us with an unrecognisable reality. My intention for the essay was to create a productive space for design educators to reflect on the future of critical, speculative and related design practices, whilst highlighting the historical driving forces of an emerging sub discipline. I wanted to examine the problematic patterns of past practices through the proposal of alternative pedagogical approaches. However, as we try to keep up with our rapidly changing world, understanding and predicting our disciplinary futures has become a fool's errand.

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.

To speculate seems too difficult when our realities fluctuate so readily. To speculate is a privilege whilst our economies collapse and millions are left unemployed. To speculate is a luxury whilst our healthcare systems falter leaving hundreds of thousands of people gasping for air. To speculate is a waste of time whilst our political systems are torn asunder leaving millions disenfranchised. So, how can we possibly speculate when times are so unstable? How do we imagine alternatives whilst we are struggling to cope with the here and now?

In the concluding section of “Critical about critical and speculative design” I summoned the high priestess of the future imaginary, Ursula Le Guin, for advice: “Hard times are coming”, she warns, we need visionaries to “imagine real grounds for hope ... realists of a larger reality” (LE GUIN, 2016). But, as we gaze nervously into our collective future, where the spectres of climate collapse and authoritarian rule loom as existential threats, designers have often stood on the sidelines, enabling disaster capitalists in their mission to exploit untapped human and natural resources. For those of us who wished to reimagine the role of design, we’ve tried (like needy children) to provoke responses and demand attention from those in power. But it’s too late for provocation, urgent action and change is needed *now*.

Within our field there seems to have been a disciplinary fragmentation. Unlike many disciplines in the 21st Century, instead of becoming evermore specialised, therefore narrowing our field of view, design is rupturing along the borderlands of the material imagination. Battlegrounds have been drawn between the visionaries and the realists, the design thinkers and the design doers, those critiquing the possible and those making it happen. These demarcations are obviously false, but the connections between them, the gatekeepers controlling access to their power, the knowledge shared and the tools developed become locked away, inaccessible, ossifying through endless slide decks and motivational TED talks.

Fiona Raby proposes a role for design through its ability to enlarge our collective imagination, providing and developing “a richer conceptual space”; opening up new worlds and new ways of being ^(RABY, 2018). If this continues to be part of the ambition for critical, speculative and experimental design practice, then we have to ask ourselves: how has this role changed during the global pandemic? What has COVID-19 done to our collective “image of the future” ^(BELL & MAU, 1971)? How do we lose outdated doctrines of the past and build new futures? How do we imagine new worlds from a place of trauma and loss?

These questions feel impossible to answer. We’re all so tired. The traumas we have witnessed (emotional, medical, educational and economic) have come at a price. In order to rebuild supportive spaces, where new worlds can be imagined, we need to understand the effects of trauma on our individual and collective imagination. Whatever the road to recovery looks like, we are sure of one thing: the impacts of the pandemic, in terms of emotional and economic effects, as well as its presence in our discourses and imaginations, will last for decades. COVID-19 will cast a shadow that distorts the way we see the world for years to come.

As educators and creatives, it will be important for us to understand how the trauma of the pandemic has impacted our students and institutions. As designers, it will

be essential for us to understand the lasting effects of the pandemic on our users and communities in order to support and engage them in the aftermath. There have been studies (VAN DER KOLK & DUCEY, 1989) (WOMERSLEY, 2020) that examine the effect of trauma on the imagination; how people with PTSD lose the capacity for play. Instead of being able to escape the everyday with fantasies, desires and hopes their trauma gets superimposed on the world around them, creating a landscape of fear and panic, trapping the person in the events of the past.

For if we ignore the feelings of loss and fear in the dark recesses of our souls, our imaginations will be hollow. We will fail to evolve a poetry of “revelation”, instead an imagination of innovation, an “imagination without insight” (LORDE, 2018). So we need to turn to love, compassion and care, to treasure and heal those around us, because “without imagination there is no hope, no chance to envision a better future, no place to go, no goal to reach” (VAN DER KOLK, 2014).

CRITICAL ABOUT CRITICAL AND SPECULATIVE DESIGN³

There has been a wide range of critiques about critical, speculative and related design practices over the last 10 years. In writing this chapter I found it difficult to understand what I had to contribute to the conversation, or more importantly what the SpeculativeEdu community needed beyond a series of links to other people’s writing. I didn’t want to fall into the academic trap where I try to “out critique” the critics, who ultimately seem determined to prove that they are “more critical” than the critical designers. Many of them seem to use their words to fuel an academic arms race, towards a fictional intellectual purity, or a utopian project that sits outside the

3 Written in 2019.

structural problematics of contemporary capitalism, the historic abuses of colonialism and the context where those who have time to write about such matters aren't already part of the privileged few. I also wanted to avoid creating a defense of the "CSD canon", as many of the practitioners are my friends and frankly don't need me to defend them. Cries of white, middle class, privilege would be heard as I try to defend work and positions that are historically important. We certainly don't need another middle aged western academic giving a "god-like" overview of a discipline to claim his expertise or oversight. Most importantly, I didn't want to form false opposition to the common concerns, as they have aided a culture of practice that is under constant reflection and evolution. So it is at the intersection of critical reflection and pedagogic practice that I wish to position this chapter.

In order to do this effectively, I need to contextualise the *common criticisms* within a culture of design education. I aim to create a mode of questioning or a catalogue of questions that can be applied to projects whilst they're *in progress* – giving references and possible framing to enable educators (and practitioners) to push projects into new areas, opening up an awareness of the historic problematics, without closing down the educational freedom to explore the boundaries of the imagination.

When formulating how best to question CSD projects, we need to approach with caution. Our current global conditions; climate crisis; global migration; resurgence of right wing populism; crumbling of democratic institutions; dramatic wealth inequality superpowered by big tech; gender inequality; white supremacy; and a growing mental health crisis (especially in young people), create an environment where it's difficult to feel that you have *any* agency. Caught in the headlights of a global death spiral, many students become overwhelmed by the sheer complexity of the world, where "doing good" or designing *anything* to have a positive impact seems futile or impossible. As educators and designers, we know that, whilst in

the throes of making decisions about how to progress a project, it's easy for a critical voice to derail a creative trajectory. So a key challenge is to cultivate a critical design education; sharing and building a set of processes, practices and questions that allow for *both* production and reflection, analysis and making, critique and creation. This chapter aims to share the mistakes and learning of the last 20 years of speculative design education, without dismissing the battles won or unmining work that has wrestled design out of the hands of the realists and instrumentalists. I am approaching the above with an educator's enthusiasm and a designer's optimism; framing historical work as "foundations of discursivity" (FOUCAULT, 1984) to enable our collective understanding of the future of design, whilst building a set of questions to allow for a reflective, productive and more inclusive practice.

I have attempted to give a broad survey of the common critiques of CSD; the voices of dissent that have propagated since the popular emergence of the field in the early 2000s. However, the chapter cannot give a full account of the multitude of critical voices. There have been countless papers written, PhD chapters crafted, conferences programmed, Medium articles penned that highlight the problems with CSD as an approach. However, these critiques are often directed to the more visible projects; those that the press deem newsworthy. However, there are a wide range of projects and practitioners (female, people of colour, non western) that don't get seen or held up to adoration or critique; this is partly due to the dynamics of a news cycle, but also because many of the projects discussed publicly, are the results of an educational process. This means that only a few examples make it past the critical eyes of collective admiration to circulate in the realm of the real. Whilst examining and critiquing CSD work, we must always consider that many of the projects are the material evidence of a learning process – therefore inherently vulnerable and open to mistakes.

Cameron Tonkinwise



There is much to do to decolonise the practice of design, given how integral it is to modern imperial Eurocentrism, but at least, it is no longer possible to do Speculative Critical Design, even cheap appropriative copies of it, without taking into account the demands of decolonisation.



 *PRIMER19*, Ytasha Womack, 2019.

Some of the scholarly work in the field gives an excellent historical account of the emergence and divergence of CSD as a strange sub-discipline ^{(KERRIDGE, 2015) (MALPASS, 2017)}. Others, translate emerging non-design discourses in philosophy, race studies, postcolonial discourse, gender studies and STS ^{(PRADO DE O. MARTINS, 2014) (WARD & WILKIE, 2009) (MICHAEL, 2012) (WINCHESTER, 2018)} to highlight key problems and opportunities in CSD. Others deconstruct the foundations of the approach, rendering it useless or defunct, “a simple way of designers internalizing the guilt they feel for a hopeless industry and then using the imagination to pay off a debt that is ultimately, unpayable” ^(NOCEK, 2017). As with most discourses within the design academy, CSD attracts naysayers, trolls and gray vampires ^(FISHER, 2018), but like many designers, I find myself in a position of “utilisation”; interested in *what we can do* with these critiques; how modes of criticism can give life to a more nuanced, open and exploratory field.

A BRIEF HISTORY OF CSD

Although there are many examples of experimental modes of design and architectural practice, that aim to resist social, economic and culturally hegemonic conditions, the contemporary instantiation of CSD emerged in the 1990s at the Royal College of Art in London. The evolution of CSD as a “field”, “sub-discipline”, “school”, “method”, or “attitude”, was in response to a set of particular disciplinary, educational and technological conditions. The main driving forces were: a shift away from an aging modernist educational culture; a growing acknowledgment and frustration with the cultural impact of mass consumption; a rapidly shifting technological culture, through the invention of microprocessors, personal computation and networked communication; a growing disciplinary awareness of the impacts and responsibilities of the designer ^(PAPANEK, 1985).

After the full scale capitalist embrace of the 1980s, many designers were searching for alternatives outside the “service relationship” to the market (for more references please refer to CHAPTER 2; Echoes of Futures Past). The dogma of disciplinary norms had become stultifying and a new generation of designers emerged. Seeing design beyond “form follows function” and “problem solving” doctrines (following in the rich tradition of Experimental Architecture of the 1970s), designers started to contextualise their practice as part of a richer cultural milieu. Educators, such as the influential Daniel Weil, promoted narrative trajectories as a means to explore the cultural and technological potentials of design, effectively blurring material and conceptual boundaries ^(ZIMMERMAN ET AL, 2011). Within design theory, the influence of Victor Papanek’s *Design for the Real World* forced designers to question their role in conspicuous consumption and the impact consumerism has on the planet’s ecosystem. ◀ P 24

In 1990, the impact of the personal computer, the emergence of “interface design” and the role of CAD as a tool within design, led the RCA, under the leadership of Gillian Crampton Smith, to start Computer Related Design (CRD), as an offshoot of Industrial Design ^(CRAMPTON SMITH, 1997). CRD Research Studio later became the home to Anthony Dunne and Fiona Raby (Dunne + Raby), enabling them to evolve their practice as *Critical Design* following their experimental projects and Dunne’s PhD, *Hertzian tales: an investigation into the critical and aesthetic potential of the electronic product as a post-optimal object* ^(DUNNE, 1998). It was between CRD Research, Design Products (Platform 3 – with Durrell Bishop), Architecture (ADS4 with Gerrard O’Carroll) and later Design Interactions where CSD emerged.

As the work of Dunne and Raby was picked up by curators and journalists (mainly due to the nature of the questions they asked about the role of technology in the context of the techno-utopian fever of the early 21st Century) their position became more established. When Dunne became Professor and Head of Programme of Interaction Design and Raby

became Reader in Design in 2005, the control of the curriculum enabled them to evolve and promote their unique position to a broader audience. The employment of Noam Toran, Nina Pope and James Auger added to the team a breadth of practice that enabled the original instantiation of CSD. The newly named Design Interactions (DI) programme grew in reputation and their approach to design became more publicly visible.

This potted history not only acts to give context to the genesis of the field, but also highlights that CSD was marginal, both in terms of voice and position within the RCA and its location in a broader European design educational context. Contracts were precarious and fractional, and project funding was difficult to come by. Dunne and Raby occupied a position where, for years, they fought against dominant doctrines for a different role for design; a position where one could ask deeper questions about the impact and adoption of technology, in order to understand the broader consequences of design and technology on society.

A PRACTICE OF POWER AND PRIVILEGE

One of the most common criticisms of CSD is that, as a practice, it comes from a position of white, northern European, culturally colonising, patriarchal privilege ^(PRADO DE O. MARTINS & OLIVEIRA, 2014). This first came to prominent visibility in the comments section of *Design & Violence*, a MoMA online curatorial experiment by Paola Antonelli and Jamer Hunt. The conversation followed John Thackara's reflections and critique of Michael Burton and Michiko Nitta's *Republic of Salivation* project ^(BURTON & NITTA, 2011); the ensuing debate highlighted tensions found within the field ^(THACKARA, 2013).

In Thackara's post he takes issue, in a particularly condescending tone, with Burton and Nitta's lack of critique

of the underlying “causes to this imminent threat”. This is a repeated critique of CSD, that projects fail to challenge the broader reasons for the problems that we face; they look at “downstream” problems of capitalism without offering a position on structural inequalities and problematics (see All the Critiques SECTION ► P 183 below). The comments that followed Thackara’s post were a microcosm of the issues and tensions found in CSD. Burton and Nitta, and CSD practitioners as a whole, were accused of “noncommittal aesthetic play”, of “trivialising” important issues, of being “profoundly stupid” and “narcissistic” (IBID). Frustrations about perceived elitism and political naivety get mixed with defensiveness about a field trying to produce work outside established economic dynamics. I would argue that CSD has been at the forefront (in design educational terms) of questioning dominant power dynamics, demanding that students unravel the roles and responsibilities of the profession. However, we still have a long way to go, as the European art school has historically been an enclave of white middle class elites, and the current transformations have been too slow.

Throughout the United States, United Kingdom and the rest of Europe there has been a positive push to decolonise our curriculums. Students, who have pushed for this transformation, are responding to decades of failure in our institutions to reflect the diversity of the student body. However, post-colonial discourses have been commonplace across many disciplines since the late 70s, and writers such as Edward Said and Homi K. Bhabha have been part of art school critical studies programmes for over 20 years. Franz Fanon and Gayatri Spivak have seen more recent popularity, but mainstream design education and professional discourse has been slow to fully adopt these thinkers. More importantly, the institutional infrastructure and the design industry have failed to change the conditions of employment, curricula design and recruitment to support and embody many of the ideas found within postcolonial, subaltern discourse.

The energy and power in this particular critique moves beyond the boundary of design. It is a global political drive that questions who has the right, role and agency to imagine a different future. For too long, the role of speculation (financial, political and cultural) was held (and continues to be held) by the powerful few, often with the gender, race and class privileges to match; decisions about how the future will look, how our environments are designed, and how social decisions are made, have been taken by a small elite.

The most urgent questions for the SpeculativeEdu community to ask are: How do we shift the power relations of speculation? How can design education create a culture where subaltern voices have visibility and power? Can CSD enable the democratisation of speculation? In order to do this, we first must acknowledge our own privileged positions, whilst ensuring that our students address the following questions in their work:

- ▶ *Participation and engagement.* As with all forms of design, it's important to acknowledge your work is both relational and political in nature. CSD is no different: every future speculation or world built defines a set of relationships with imagined users. By engaging with people and asking for their insight and help, CSD can start to understand the diversity of hopes and fears that people have about our current condition. Therefore it's important to ask; who's inculcated in our future imaginary? Is this a future our users want?
- ▶ *Authorship and benefactors.* Once a relational dynamic has been established, it's essential to ask; who benefits from the work? Engaging people in your speculation is important to ensure that you don't make assumptions about people's lives, however, ensure that you don't use people as a "resource" to enrich your project. Guarantee that authorship and benefits are distributed and co-owned.

- ▶ *Inclusion and exclusion.* Be aware of who you include in your speculation; whose lives are you imagining? Whose challenges are you representing? Who are you excluding? Make sure that you think of people beyond your own experience of the world, because they may have a different future.
- ▶ *Maintenance and social infrastructure.* As you speculate on alternative futures, think of how and who maintains the worlds that you are building. Who is fixing the infrastructure when it fails? Who cleans the streets and workplaces when your gaze is elsewhere? All futures are maintained; those that sit at the periphery of design's privileged gaze are the ones we need to represent.
- ▶ *Feedback and reflection.* Once your project is “finished”, show it to people and explain your ideas. Get feedback on the world / scenario you have created. Try to understand how it sits with their understanding of the world. This feedback should come from a diverse group of people inculcated in your future. Use the conversation to learn about the process and practice of the imagination.



🌐 *Turnton Docklands,*
Time's Up, 2017 – ongoing,
photo by Elisa Unger.

Jimmy Loizeau



**Now we are interested in how fic-
tions and speculations can inform or drive so-
cial change.**

DOES IT DO WHAT IT CLAIMS?

Another area which causes concern within the design community, is the extent to which CSD meets the claims made by some of the practitioners. There are a number of different competing issues found here; the first centres around the quality and range of the “debate” or “discussion”.

Design for Debate

The original premise of CSD is that it acts as a *provocation* to enable a *discussion* or *debate* about the topics, technologies and futures that should be addressed through public interrogation. Here, designed objects act as focus or manifestation of a scenario to enable the public to unpack the desirability of a world presented. Using design as a means to spark debate or create certain “adversarial” conditions to learn about perceptions of particular futures, has been central to the practice since its inception ^(DISALVO, 2012). However, many critics have questioned; how the debate is formulated; where it happens; what we learn from the substantive content; and who is included in the discussion ^(KERRIDGE, 2015).

Some critics believe that the debate is limited to members of the design community; speculative designers speaking to speculative designers in a self congratulatory echo chamber. Others believe that the designers neglect the location and mediation of the debate, leaving it to happen *elsewhere* (on blogs, in the news, through informal discussions) and therefore the claim of “creating a debate” is unsubstantiated.

If the premise that CSD creates debate is true, then there is also concern about the role designers play within the discussion; are designers the best people to ask questions about our collective futures? Do designers take the role of moderator, chair, reporter or analyst? Should designers find,

declare and argue for a particular outcome or future or should they remain neutral?

Over the evolution of CSD, the understanding and positioning of the debate has changed. In the late 1990s and early 2000s, projects would be displayed in a museum, gallery or sent off to the press and a controversy would ensue. These controversies were often unintentional and somewhat damaging, either way, critical and speculative designers need to learn from the difficulties. Here are a few questions or ideas of how;

- ▶ *Design the debate.* For students and practitioners not to fall into the common critiques of CSD, it's important to pay as much attention to the context, form and forum for the debate as it is the objects designed to enable the discussion. Plan *where* the debate or discussion will take place, learn from cultures and professions that manage, enable and promote discussion and debate; design the context of your work. Record and document the debate, integrate this into the presentation of the project.

- ▶ *Orchestrate the audience and "debate team".* To have a productive debate or discussion you need to bring together people with different opinions, experiences and knowledge. In the design of a project, pay attention to who has a voice in the critique of the world that you're creating. Not all debates need to take place in Parliament or the tabloids; they can be local, specific and targeted; engage the people inculcated in your future, open futures to voices normally underrepresented.

- ▶ *Track and understand the effects of the work.* Designers need to understand and imagine the impact and unintended consequences of their work. As projects move into the world (outside of the protected realm of a University), there are many ways for practitioners to try to understand the success and failings of the work. Unlike most design work, which commonly

use market and user metrics, the impact for CSD is harder to track. Did your work do what it intended to? One of the key difficulties is the temporal nature of how discursive work travels; a project made a decade ago may suddenly be referred to due to a technological advance.

► *Design the media strategy.* Some of the early examples of CSD (see Auger Loizeau's *Audio Tooth Implant*, 2001) had dramatic media reach. The work travelled way beyond the confines of design press straight into international mass media. How designers prepare and manage the role of the media in their work is of key concern. Within the context of *SpeculativeEdu*, it's important for educators to understand how, in terms of tutorial support and curricula content, we can support students to learn about this complex world of press management and public relations.

► *Follow up.* Many speculative designers move from project to project. This is mainly due to the precarious nature of the funding environment. But when a project aims to discuss a national / global level issue of extreme complexity, the debate needs time to evolve and there needs to be some form of *aftercare*. This can be seen as analogous to how manufacturers have services to deal with damages, faults and repairs. What does this mean in terms of CSD? How do we build long term strategies to manage the impacts of our work?

All the Critiques

Another of the common critiques of CSD is that projects fail to address underlying structural problems. By accepting and projecting a future through objects and products, they deny the fundamental issues affecting our current condition; a need to reimagine an alternative to capitalism and rethink our relationship to material consumption due to its effect on the planet. These critiques often come from political and environmental scholars, design theorists who have

dedicated their work to “re-directing” design’s practice (FRY, 2007). These thinkers highlight our collective failure to address the climate crisis; placing the human race in a position of extinction, with design playing a central role in this destruction.

Although many of these criticisms are valid – much of the work produced by CSD doesn’t address many of the larger political, economic and environmental problems – it’s difficult for this to be extended to all experimental practice. Does our environmental crisis mean that all work should be directed to address this? Self confessed critical speculative designers (although there doesn’t seem to be many happy with that title) often work in response to a range of different conditions; funding calls; university or client briefs; curatorial theme; museum programmes etc. The work is produced in a context that impacts on the scope and direction of the practice. Designers are rarely “lone scholars” with the academic freedom to select their own focus.

Underlying many of these critiques seems to be a problem with the use of the word “critical”. To be “critical” seems to generate a sense of territorial embattlement; protests of “you’re not *really* critical” or “CSD not critical *enough*”, seems to run through many of the denunciations. Critical Theory, with its history in the Frankfurt School, sets up an expectation of a meta-discursive critique of the system of capitalism. So when CSD fails to meet these expectations, the work is dismissed in its entirety. The political left has struggled to give space to a diversity of voices seeking a progressive agenda, it often self sabotages and self cannibalises, without seeing the benefits of plurality. Seeing CSD as a practice that is seeking an alternative outside of consumer markets should be supported. Within the field of design there are numerous practices that dismiss any sense of responsibility or engagement in broader social, political, environmental and technological issues, these practices may be a better place to direct our critical gaze.

Those who have assumed a CSD identity often defend themselves, saying that they can’t address *all the issues* at

once, but this is often dismissed as naive or willfully neglectful. However, CSD is an ongoing, diverse set of design practices that engage and question different technological futures, and due to this it's deeply contextualised in its own cultural condition.

Future fatigue

By focussing on futures, the distant horizon, the possible, preferable and preposterous potentials, many believe that CSD neglects the near and direct urgency of *now* – a call to action to affect our collective present. The attention given to searching for an alternative, means we fail to examine and address the inequalities of the *here and now*. Some see this as a deferment of responsibility, but many critical speculative designers see their work as operating in the present – with the ultimate aim to shift perceptions in order to make way for change.

However, I see this as part of a broader cultural narrative; borrowing from the work of Bifo Berardi, and later Mark Fisher, the strange fatigue felt in the narratives of CSD's futures are a result of what Berardi and Fisher call the “slow cancellation of the future” (BERARDI & FISHER, 2013). A cultural moment where it's impossible to understand temporal difference through our cultural production, where we are “assailed on all sides by zombie forms” (FISHER, 2014). Maybe this slow cancellation is what makes CSD give rise to rupture and friction – the future it aims to project never feels fully new, more a cultural assemblage of our troubled pasts. As we progress and evolve speculative design practices, how do we resist the deep future fatigue felt by some and expressed by many (LOIZEAU & WARD, 2009) ?

Superflux



Discussions of race, gender expression and privilege are much more granular than simplistic accusations, and I strongly believe that designers who address complex issues, whilst battling student loans and rents, should be applauded, not condemned.



 *Dust & Shadow*, FoAM, 2019, photo by FoAM.

THE CONTEXT OF PRODUCTION AND CONSUMPTION

CSD is often dismissed by members of the design community due to the context in which the work is produced and shown. Projects often get displayed in galleries or museums, and commonly come out of university research groups or degree programmes. In order to understand these criticisms, let's breakdown the underlying problems and issues.

Gallery and museum context

Design as a discipline is inherently linked to notions of *production*, work is often judged by its visibility within a market place. Be it the “matter battle” (BOYER, 2011) or the culture of “shipping”, the impact and success of design is often valued through its visible impact (through sales numbers, users reached) and its cultural visibility (awards, accolades, column inches, likes and tweets). Getting something produced and into the world – bought and used by normal people – is the prized goal.

Overcoming the barriers to market, navigating the “dark matter” (HILL, 2012), the aesthetic compromises; the navigation of client dynamics; the complexities of production; the difficulty of distribution; the adherence with the rules and regulations of international markets; the coraling of supply chains; the relationships forged with manufacturers; the messages delivered by marketing teams; the securing of financial capital, is all part of the complex game that designers have to play. When design escapes these issues, by isolating the work from the need to move from idea to (mass) production, it is seen as a lesser “product”. Some believe it's in the complex material, economic and political process of production that the real design “art” is achieved. I would describe this as the *tyranny of the real*, our disciplinary desire to attest to our effect on

the world. However, in our contemporary times, it's easy to see how design can work on a symbolic, strategic and conceptual level; circulating in the world, reordering our understanding through its fictional, affective resonance.

That being said, there are far more similarities between CSD and other design practices. As Matt Jones observes, "all design is fiction, at some level" (JONES, 2015); how much design work never gets made? How many slide decks have been filled with ideas of products that never see the light of day? How many times does work get produced and disseminated (through the design press) and yet never makes it into production? The production zealots like to adhere to the demand of the "real", but this seems counterproductive if we wish design to be taken seriously as a practice that has the depth and intellectual weight to shift away from being a purely aesthetic / technical practice to have a more strategic / political role in the world.

The second issue that gets highlighted when discussing the gallery and museum context, is that museums and galleries are seen as part of an elitist cultural system; a site of exclusivity. Work that aims to open up a conversation, is disseminated in a context that lacks diversity. However, this is often due to designers trying to find spaces where objects are encountered, not through the lens of consumption. Galleries and Museums often give the freedom to explore ideas as a cultural practice, not a commercial one. More recently there has been a push for speculative practices to go into communities and engage with people outside of the gallery context. By focussing on the specific, embodied, local practices of people, SCD can locate their futures within the lives of those people they wish to reach.

If the design sector is going to evolve new forms of critical and discursive practices, practices that open up new questions about society, technology, politics and law there is a need for a new type of institution; a place where an expanded, hybridising creative practice can evolve and engage with a range of audiences. Traditional models of galleries and museums fail to deliver the appropriate context for this type of work.

CSD in the age of post truth media production

One of the conditions that has dramatically changed, since the inception of CSD, are the means by which projects are disseminated. I would argue that the success of CSD is a result of the early instantiation of the internet and an emerging social media environment; the decentralised, non-hierarchical, non-traditional design media, in the form of niche, cult blogs (such as Régine Debatty's *We Make Money Not Art*) and online magazines (like *Dezeen*) – searched, found or were willing to publish interesting and strange practice. In the early 2000s peripheral practices gained enormous traction, reaching audiences they never previously would have, the power of networked virality gave birth to infinite speculative monsters.

With virality comes serious network side-effects; filter bubbles and fake news. CSD, as an academic research practice, bypassed the slow and boring academic design journals to find an audience way beyond the academy. As with much of design culture, pop aesthetics, powerful narratives and shiny, alluring objects caught the imagination of people not normally engaged with design research. However, this “destabilised” how CSD projects were received and understood (KERRIDGE, 2015); work moved into the world and fiction was *made real* by the decontextualised misreporting of the technology press, resulting in some strange results (see Auger Loizeau's *Time* magazine “Inventions of the Year” front cover).

Context of production; learning, teaching and research

Within higher education, CSD is produced through two different modes; teaching and research, by either academics (tutors, lecturers, professors, researchers) or students (undergraduate, postgraduate or doctoral). As research, CSD is positioned as a practice-based-research; a mode of inquiry designed to discover and imagine new insights and

opportunities; which “implies a reflection of the contingencies of our world today, and of the practices for creating, imagining, and materializing new worlds” (GRAND & WIEDMER, 2010). This impetus comes from the University as a site of knowledge production. However, practice-based-research isn’t a settled and fully established approach. It’s discussed and debated endlessly amongst the design research community, with little evidence of progression⁴. There isn’t time, within the context of this chapter, to explore the multiple readings and conflicting opinions, but it’s important to highlight that there is tension. Due to this debate, experimental practice often fails to communicate with those outside of design and the academy, the benefit and value of the work. This means that CSD is read through the lens of *functionalism*; a desire to know what it does in the world, how effective it is, where it achieves its goals. Although I believe it’s essential to build a critical voice to unpick what is a “successful” CSD project, criticisms often come from all angles; attacking work for failing to do something it never intended to do.

In order to support students undertaking work that falls under the banner of CSD, it’s helpful to ask them to frame their work in terms of their intention. By declaring what they wish to achieve, for who, and why, helps bring into focus the role they wish the work to play in the world. This also means that work can be distributed to the appropriate channels and engage with the audience that is most relevant to the ideas. The problem comes with how to measure impact. If CSD is aligned more closely to something akin to literary fiction, then work needs to be done to build a critical language of analysis.

As a pedagogic practice (WARD, 2013), CSD acts as an approach to furnish students with a set of skills and experiences, allowing them to understand the role, power and process of design. This moves CSD away from being a *style* or *method* of design, towards a pedagogical technique to teach design. CSD provides a space for young designers to deconstruct the different

4 see Press⁽¹⁹⁹⁵⁾ for evidence of the early debate

mechanisms that exist within design practice, whilst using a brief as a diagnostic tool to understand their learning experience. So for the tutors within the SpeculativeEdu community, it's important to understand how our educational briefs structure and align to learning expectations within the curricula.

Context of Production; commercial, corporate and strategic function

Over the last 10 years CSD has seen the practice and approach adopted throughout the commercial (often through the term “design fiction”) and public sectors (often used within a policy making process). The approach is often reformulated as either *foresight* (a process where scanning horizons and trends delivers understandings for potential dangers and market opportunities), *strategic development* (integrated into an organisation's product development process with the aim of delivering new product ideas) or *marketing & communication* (with the aim to convey a vision for a company, an aesthetic of future readiness).

The adoption of the approach has had deep effects on the CSD community. Practitioners see the integration of speculative design practices into the commercial domain as an opportunity to continue their work outside of the confines of Higher Education. The competitiveness of the HE job sector and increasingly difficult conditions make this attractive. Beyond this, it also offers an opportunity to move speculation into action; demonstrating how CSD can drive change. However, this has also garnered a lot of criticism. Instrumentalising a critical practice, subsuming it into the capitalist machine, confirms to those critics that felt that CSD failed to offer alternatives, that it was purely a tool for the neoliberal colonisation of the future.

“HARD TIMES ARE COMING” – METHODS AND AESTHETICS

Hard times are coming, when we'll be wanting the voices of writers who can see alternatives to how we live now, can see through our fear-stricken society and its obsessive technologies to other ways of being, and even imagine real grounds for hope. We'll need writers who can remember freedom – poets, visionaries – realists of a larger reality. (LE GUIN, 2016)

The fictional worlds built by CSD often appear dystopian in nature. This aesthetic or narrative device is commonly criticised as it catastrophizes the future, scientific development or technological progress. Those invested in the development of new technology, or linked to scientific discovery, will tend to dismiss the work as “fear mongering”, “conspiracy theorising” or “unrealistic”, whilst a more general audience can grow fearful and paranoid, numbing us to an inevitable extinction.

The gravity well of dystopian narratives, attracts speculative designers for a series of interconnected reasons. CSD projects often use narrative tropes as a means to articulate and communicate a story or scenario. In order for the stories to be engaging, the designer needs to employ “narrative devices” or plot structures to ensure that the scenario isn't bland or boring. This means that, more often than not, the designer looks to create “antagonistic forces” (BOOKER, 2005) for their protagonists to overcome. Overcoming evil forces gives space for the audience to empathise with the protagonist, placing themselves into a future context, thus (the theory goes) enabling a more involved discussion.

However, most fiction (either literary, science or cinematic) isn't explicitly producing work to engage an audience in debate (although this is often a cultural side effect). Authors write work to entertain and resonate with people's lives and

imagination, they don't need to concern themselves with the substantive content of an ethical debate around the use of technology or the formulation of a "social critique" (DUNNE & RABY, 2013). This means there is often a mismatch between the narrative devices employed within CSD and the type of discussion that follows. The need for tension sometimes over-dramatises the banality of existence.

CSD, from the beginning (brilliantly demonstrated by Dunne and Raby's *A/B list*), positions itself *in opposition* to affirmative practices. This approach, resulting in dark and dystopian futures, challenges the techno-utopian positivist narratives of Silicon Valley. CSD looks to create counterpoints in order to question the trajectories that are presented as "necessary and inevitable" (FISHER, 2009). However, as with many cultural forms, they change over time. In 2019, during these perilous times, dark and dystopian environmental and political narratives are *our* reality. Cinema and science fiction are struggling to keep up with the strangeness and apocalyptic visions of our projected now. *Black Mirror* (BROOKER, 2011) perfectly captures many of the anxieties about the ramifications and future of technology. CSD can't compete with the budgets and production values of Hollywood studios, so it's essential for CSD to evolve outside of the dystopian cinematic aesthetic. In an age where it's harder to imagine a future outside of capitalism (FISHER, 2009) or create a form to question the impact of technology as effectively as mainstream cinema, what is the role of CSD?

The original intentions behind CSD are still important for any designer to learn. As we engage in teaching design, speculative or otherwise, developing ways and means to *think through* and *work with* the dark ramifications of our actions is essential. With every prediction, in user behaviour, social organisation, technological advancement, material invention, economic trend comes a series of unintended consequences. CSD is a way to give form to those consequences.

CSD often takes scientific predictions and "weak signals" to extrapolate imaginative possibilities. These material extrapolations make visible the alternatives open to us;

giving people a chance to discuss issues that affect us all. What often lacks are the political infrastructures to enable these discussions to travel to the right places; where the action is. Isabelle Stengers describes Science Fiction as the “art of consequences” (JENSEN & THORSEN, 2019). The connection between Science Fiction and Design Fiction is well documented (STERLING, 2009), be it as an extension to Science Fiction or a different type of social fiction, CSD enables; a way to capture the social imagination through the material articulation of possible consequences; a “thought experiment” (DUNNE & RABY, 2013) made concrete, enabling a collective interrogation. Our challenge, within experimental design education, is to create the conditions to enable these alternatives to thrive.

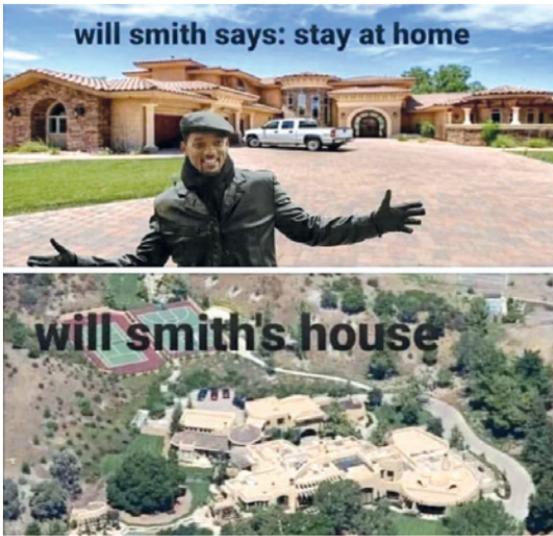
Ursula Le Guin’s call for “realists of a larger reality”, creative people experimenting with alternative representations of lived experience; unorthodox social formulations to enable hope in dark times. These *new realists* need an infrastructure of support, an “ecology of trust ... [where] fiction ... activates thinking” (STENGERS, 2015) without fear of attack and accusations of naivety, blind privilege or lack of care of marginal people. These support infrastructures are the most difficult thing to achieve in contemporary higher education; where metrics, conservative methodologies and precarity result in academics behaving in ways to proliferate bad-faith critique, without offering actionable alternatives. Our challenge as a community is to create an “ecology of practices” (IBID) where trust is fostered, enabling a sense of collective ownership over the future.

“Perhaps, as designers, unreality is the only thing we have left – a tool for loosening the grip of the reality we find ourselves within, to help think beyond known frameworks, and to shift our thinking. In this way, design might begin to contribute to a proliferation of multiple alternative worlds existing in our collective imagination, enlarging it to provide a richer conceptual space of imagining for everyone.” (RABY, 2018)

EPILOGUE

It's clear to say that *hard times* are here. During the mad scramble to publish *hot takes* on our global response to the pandemic, it became transparent that some people were better prepared than others. The “ecologies of trust” I wrote about in 2019 have been tested. Our care infrastructures have crumbled under the pressure. However, some communities have spent decades, even centuries, building resilience into their daily practices. Marginalised and oppressed groups have worked tirelessly to gain equal rights and justice. During their struggle they've developed *means* to imagine a different future, whilst *also* developing the tools and methods to achieve their *ends*. ◀ 194

At the same time, alongside those who have been hardened to our contemporary inequities, it has become evident that many are already insulated from the problems we face. Privilege trumps oppression, and those who'd gained ground in the race for self sufficiency have pulled away faster. Those with the means of escape took to their 4×4s and fled to their country homes. Whether it was Gal Gadot's celebrity-studded “singalong to imagine” (GADOT, 2020) or Will Smith memes encouraging people to *stay at home*, the inequities of late capitalism have become further accentuated and rapidly circulated across the Internet with tone deaf resonance. ▶ 196



Stay at Home, 9Gag, March 2021.

The pandemic has highlighted the structural weaknesses at the heart of our societies. For decades, it's been clear that our institutions (often built off white supremacist, colonial ideals) are failing.

Our old systems are not fit for the 21st century, it has laid bare the fundamental lack of social cohesion, fairness, inclusion and equality, now is the historical moment in time to shape the system for a post-corona era. (SCHWAB, 2020)

What does the “great reset” (IBID), as Schwab describes it, mean for education? Or more specifically, what does this mean for a critical, speculative and experimental design education – a practice dedicated to imagining and speculating on social, technological, political and material alternatives? How do we, as a community of educators, respond to a period of dramatic change, unpicking what is “possible, preferable or preposterous” (VOROS, 2017) in a post-pandemic world? How do we reimagine the tools, processes and practices to empower young designers to engage in alternatives when we hear screams of “no future” (WORLEY, 2017) ringing in our collective imaginations?

Although it seems that Berardi and Fisher’s “slow cancellation of the future” (2013) has sped up and whilst we watch in disbelief as the effects of the pandemic impact the world in deeply uneven ways, reality demands more. It demands we act whilst the “cones of possibility” are in flux (VOROS, 2017). It demands we challenge inequities with action, opening up new opportunities. It demands that we recalibrate our value systems before others do it for us.

Access & economies, bodies & pedagogies

The painful process we’ve been going through may have pointed us in the right direction, whilst also warning us of the difficulties ahead. During “lockdown” our modes of educational delivery have become more accessible. As we’ve struggled with video recording software, grappled with ideas of synchronicity and asynchronicity, building workflows to ensure that subtitles are added to lectures and alt-text is present in our images, we have dropped some old ablest traditions. As we’ve been forced to consider the health and safety of our learning environments, we’ve rethought our strategies of care for the mental health of our students and colleagues. It has become clear that part of the recalibration has pushed institutions to engage and adopt new technologies, processes and approaches to address some of the inequities that disability activists have been fighting for for years. However, akin to many of the critiques of CSD, the recalibration doesn’t go far enough to reimagine the underlying structural dynamics.

Although there are glimmers of hope in emerging institutional practices and alternative pedagogical structures (Dark Study, Depatriarchise Design, Make your own MA, The Corridor School⁵ etc), many fear the pandemic will be used

5 Over recent years we’ve seen many alternative creative educational networks and programmes emerge aiming to create a difference space to counter social, racial and economic inequalities (for example: <https://www.darkstudy.net>, <https://depatriarchisedesign.com>, <https://www.makeyourownmasters.com>)

as an opportunity to entrench current inequalities and injustices. For North American and UK universities the pandemic has highlighted the problem of the neo-liberal agenda of transforming the student into the consumer. In recent years Universities have become zombified pseudo-corporate entities, where the logic of market capitalism doesn't fully operate, but the precarity and abuses have become the norm. In the last year, we've seen how this logic catastrophically fails and creates widespread disappointment and despair. However, even though the evidence of this failure is clear, the experience seems to have entrenched the idea of "education as a service" in the minds of students and broader society. Universities have become "factories" (a rhetoric weirdly adopted by some University Unions), a service, judged by the efficiency of its information transfer rate... a bit rate for social conformity; our lectures have become digital assets, rife for capitalisation and mass distribution; our tutorials, flattened by Zoom or Teams, have become transactional, destroying the nuance of body language and participation. Therefore, in order to resist the further entrenchment of corporate ideals in the halls of our educational institutions, we need to reconfigure our pedagogy from the ground up.

In order to understand what's at stake, we first have to identify what's at the heart of our transformative educational experiences. Teaching in a design department amongst a range of other humanities departments, it has become clear to me there are a few precious constructs that set European arts education apart. Instead of the normal clamour of disciplinary justification that art and design departments have done for 50 years to justify their entry into the academy, I feel it's now time for other disciplines to learn from us.

As our spatial freedoms have been restricted, we've all missed the places where we come together to share stories, laughs, gossip and knowledge. Urban parks have been overrun, the closure of pubs, cafes and restaurants mourned. University library closures haven't meant the loss of access to

knowledge (as the revolution in digitalisation saw to that), but the further isolation of the lonely scholar or solitary student. In Art and Design education, the loss of our studios and workshops has had a dramatic effect on the lives of our students. At Goldsmiths, where we run a portfolio of post-disciplinary programmes that challenges and creates alternative understandings of materiality, it's not the loss of the machinery we mourn, but the socio-spatial dynamics, ritualistic behaviours and community of practice that unite us in a collective mission. It is in this collective mission, where hope can emerge. As Zittoun & Gillespie observe, our imaginations are culturally located; local and specific to our communities of practice, where "communities of imagination can become galvanized by a vision of the future and seek to institute it, leading to sociogenesis, that is, the development of society itself" (ZITTOUN & GILLESPIE, 2015).

The removal of our bodies, in the act learning, has meant we've lost something truly transgressive. As bell hooks observes, "the erasure of the body encourages us to think that we are listening to neutral, objective facts, facts that are not particular to who is sharing the information" ... she continues, "we must return ourselves to a state of embodiment in order to deconstruct the way power has been traditionally orchestrated in the classroom, denying subjectivity to some groups and according it to others" (HOOKS, 1994). hooks comes from a black, feminist perspective, where challenging the pedagogic norms within the academy has been an essential part of her drive to make education "the practice of freedom". Digital culture, particularly during the pandemic, has enabled us to access experiences and people we'd not normally engage with. However, as we're rebuilding our educational cultures, we should resist the temptation to disembodiment our pedagogic practices, opening them to further control from already established hegemonic powers.

In conclusion, as we dream of being together, feeling the fleshy mass of our messy coexistence, we need to ensure that our educational spaces are open to all. As we make moves to support and heal the wounds suffered during the pandemic,

we need to reimagine design education and our modes of pedagogic intimacy. In order to heal the traumas experienced over the last year, our communities of imagination will be even more important in seeking out and planning a different vision for our collective futures. As we return to the studios and workshops, we need to build resilient communities through openness and generosity, whilst also examining the means and modes of access, investing time, love and care into the people who will help imagine alternatives to our current predicament.

Max Mollon



Rather than providing strategies to only escape the gallery, my work wishes to enable more research and design practitioners to question the canons of critical, speculative designs, and design fictions, when they are used for debate.



 *Intervention design method pack,*
Digital Society School / Theo Ploeg, 2019,
photo by Theo Ploeg.

FUTURE PATHS

In an interview for *SpeculativeEdu* in 2020, Francisco Laranjo, editor of the design criticism journal *Modes of Criticism*, begins his self-described “rant” with a blunt provocation:

“Speculative design is dead. It has been used and abused, rebranded and exploited, mystified and glorified beyond repair. Speaking about it in 2020 is anachronistic.” (LARANJO, 2020)

Cameron Tonkinwise⁽²⁰¹⁵⁾ declared in a different but somewhat related critique that “Designing that does not already Future, Fiction, Speculate, Criticize, Provoke, Discourse, Interrogate, Probe, Play, is inadequate designing.” Five years on – in the wake of Elon Musk’s latest pronouncement – he added via Twitter: “Musk’s implant clown act means that *Speculative Critical Design is no longer possible* (if it still was in the era of fake news), that its posture of criticality has been exposed by Musk’s unstoppably dangerous idiocy as a compete [sic] charade” (NEURALINK, 2020) (TONKINWISE, 2020). In a lengthy comments thread below this tweet others gleefully piled on. It is a familiar pattern: a sub- or counterculture emerges as a reaction to the mainstream, thrives for a time, but then gradually and inevitably becomes appropriated and subsumed by the very approach it set out to challenge. Or, as Steven Heller⁽²⁰⁰⁸⁾ suggests: “the avant-garde is usurped when its eccentricity is deemed acceptable”. Either way it is finally (and safely) declared dead.

Not wishing to be the floggers of a dead horse, the SpeculativeEdu community set out to critically evaluate the state of speculative design today through an analysis of key projects, educational activities and an interrogation of diverse practitioners and commentators from the past twenty years. From the beginning we acknowledged the veracity of (some of) the critique; after all, an approach like speculative design, which is built entirely on the principles of self-reflexive critical practice, *should* be able to absorb and incorporate criticism. In the end, having spent more than two years examining the many facets and manifestations of this approach in close detail, we very much hope and believe that it is still possible to keep speculative design as a vital and productive critical practice.

One of the most important aims of speculative design is to expose and challenge the dubious practices of mainstream design or design for the mass marketplace. The market forces, as described in Friedman's (1970) call to arms (see CHAPTER 1; Beyond Speculations), provide little room or scope for critique, discourse, play or other more responsible activities; indeed in the current climate it could be argued that the opposite has become the case as the neo-liberal doctrine, initiated by the administrations of Ronald Reagan and Margaret Thatcher in the 1980s, begins to run amok in the hands of what writer and activist George Monbiot (2020) has called the "capitalist warlords". Based on Tonkinwise's modes of evaluation above, most design is inadequate – this observation therefore justifies the existence of alternative forms of design, including speculative.

Of course critique of design is not new. The more one delves into the history books the more it becomes apparent that very little in the world of design hasn't been done or said before. And whilst it seems wholly presumptuous to situate speculative design in the same category as the Arts and Crafts, Radical Design, Victor Papanek or even Dada, their various words, works and approaches have much in common and provide much inspiration. Perhaps more important though is to understand that whilst these movements remain highly

relevant and respected within the specific context of design, their various activities have had little long-term impact on the problematic aspects of design about which they were so critical (in particular the negative influence of consumer capitalism).

The one key difference between speculative design and its numerous antecedents is the global context in which design is happening today. In the preface to the second edition of *Design for the Real World* (1981–1984) Papanek ⁽²⁰¹⁹⁾ describes how his book gradually became accepted. Listing the problems experienced by the city of Detroit – high unemployment, oil crises, unusually cold winters, major droughts, and a global energy shortage – he goes on to make the suggestion that “maybe we learn best from disasters” ^(PAPANEK, 2019). Viewed from the bleak vantage point of 2021, the issues listed by Papanek were perhaps a sign of things to come. The COVID-19 pandemic has revealed the flawed and fragile nature of so many of the systems we take for granted, and there is little need to raise the issue of climate change with its effects becoming starkly visible all around us. If we indeed learn best from disaster then this provides speculative design with an unfortunate advantage over what has gone before.

Recently we have seen the development of various strategies to promote “radical change” in response to the emerging crisis, such as the announcement in 2020 of a “New European Bauhaus” ^(VON DER LEYEN, 2020) (which despite its “green new deal”-style branding still sits squarely within status quo politics, supporting a need-to-grow worldview). Such initiatives demonstrate, at least, the recognition of a need to act now and start from a bottom-up perspective, where education is an important and powerful force. We need urgent action to start dealing with everyday issues such as the climate crisis, poverty and inequality, the disappearance of public health and security, rising hatreds, prejudices and nationalisms, digital privacy, corporate monopolies, immigration, and many others. This is the context in which design is happening – and whilst it would be hubristic to suggest that it could or should solve these problems it is imperative that it does adapt to the changing conditions.

Cameron Tonkinwise 

I think that I am more interested in change than resistance. To change a system may require resisting it, but resisting can also be a way of merely protecting yourself from the system that nevertheless continues unchanged.

This is perhaps where the most important speculations are happening – not obsessing with glamorous provocations (for their own sake), design one-liners or even the technological future but deliberations on the role and purpose of design itself. Throughout *SpeculativeEdu* we have been identifying and gathering such projects and propositions. For example, Arturo Escobar, in *Designs for the Pluriverse* (2018), describes a process of “transforming design from an expert-driven process focused on objects and services within a taken-for-granted social and economic order, toward design practices that are participatory, socially oriented, situated, and open ended and that challenge the business-as-usual mode of being, producing, and consuming.”

Tony Fry (2020) speaks of the “defuturing effects” of modern design, by which he means design’s contribution to the systemic conditions of structured unsustainability that eliminate possible futures. Though we may not always realise it, our futures are always closely constrained by our past. Perhaps the solution is to spend less time extrapolating possible futures based on existing conditions and more time examining the nature of those conditions, as well as imagining alternative presents. As James Auger states in his interview for this project:

“Speculative design has [also] become too associated with futures. Of course, speculating on possible futures remains one key strategy but far more interesting (from my perspective) are alternative presents – the reconfiguring of elements, motivations, structures or systems that exist in the world today ... Design essentially needs a revolution, a shift away from market-driven imperatives, and the constraints that these impose, towards more responsible approaches – this is where the most interesting speculative design projects are currently happening.” (AUGER, 2019)

Today, the fundamental challenge of speculative design, particularly in the field of education, is how to achieve a successful process that entails a shift from traditional design practice, through adopting critical approaches (via methods and tools), to generating action in the real world. The goal is complex and requires a broad range of knowledge and skills that need to be adopted along the way. As Christian Zöllner and Sebastian Piatza ⁽²⁰¹⁹⁾ from The Constitute collective point out, speculative practice today requires vast knowledge about “the world, cultures, histories and political circumstances”, as well as the determination not to accept existing social and economic structures as immutable realities. An additional challenge is whether, in the end, such activities generated through speculative practice have the potential to initiate specific and concrete social changes.

It is possible that one of these new paths could, as described by Jan Boelen ⁽²⁰¹⁹⁾ and mentioned by Dejan Kršić, combine traditional, pragmatic and solution-oriented design practices with new speculative design practices. In such a constellation, as Boelen indicates, critical and speculative practice could have the role of initiating discussion within design teams, which would then, in a participatory process or as stakeholders, work on scenarios of the future and on the achievement of such scenarios in collaboration with different design practices ^(MITROVIĆ, 2019). Or it could take the form of what Ana Jeinić calls “emancipatory speculative design” – an open utopian collective practice “searching for new modes of production and mediation of design, as well as new synergistic relations with institutional and non-institutional actors” ^(JEINIĆ, 2021).

As researchers, emphasising the importance of intercultural knowledge and collaboration has opened up the way we understand alternative realities that exist outside of our referential framework. This process is also opening up opportunities to create outside of the design studio, in local contexts with local actors who are not often self-defined as designers. Working together with locals to learn to do things

has also become an important key to materialising sustainable and alternative products within design projects. The practice is shifting to an emphasis on giving more value to collective and collaborative experiences rather than individual desires. Our ACM DIS 2020 workshop ^(HELGASON ET AL, 2020) revealed a growing number of projects which include participatory practices, involving non (speculative) design participants in the process. Our survey ^(HELGASON, 2019) also demonstrated the importance of involving external actors and stakeholders in the design process.

As a pedagogical tool, speculative design – at its best – opens students’ minds to brave new worlds: to critical and creative interventions, transgression and change, as well as the possibility of applying design principles and tools in very different contexts and types of projects. The speculative approach allows students to create a set of tools and a language for understanding the consequences of their design practice. It is particularly stimulating as an educational tool because it foregrounds criticism, self-reflection, and a move away from familiar practices.

Moreover, it has the ambition to generate activities and change in the real world. Speculative practice is not the “ultimate solution”; it will not change the world in one giant leap, nor will it eradicate dominant social and economic models overnight, but it can initiate a series of changes from the bottom up and bring back faith in the future and in imagining new horizons. As Martin Avila ⁽²⁰¹⁹⁾ points out, “speculating is a duty rather than a privilege” – and it is of the utmost importance that this approach is used for urgent action towards creating better futures.

Our final event in Split, Croatia, RECLAIM THE FUTURE!, was unfortunately cancelled due to the pandemic. The subtitle – somewhat ominously or ironically given the scale of what actually unfolded – was: “ACT BEFORE DISASTER!” One of our colleagues on the project, Jimmy Loizeau ⁽²⁰²⁰⁾, has aptly described SpeculativeEdu as “a collection of ideas, approaches or conversations about actions that aim to reclaim or

divert design from its hideous role as an essential component of catastrophic capitalism”. Working on the project through the catastrophic year of 2020 reminded us all of the urgent need for a change of direction away from business as usual. At the same time, it is helpful to be reminded that, to quote Trojan Horse ⁽²⁰²⁰⁾, an autonomous educational platform from Helsinki: “Concrete actions are not necessarily a grandiose intervention, they can be gentler gestures.”

We had aimed to conclude the conclusion with a list of guidelines for “good” speculative design, somewhat inspired by Dieter Rams’s “Ten Principles for Good Design” from 1976. This notion, in fact, opened a big can of worms within the SpeculativeEdu community. For some, Rams’s list is a bit sacred and to even hint at its limitations would be an act of insurrection against the core design values. For others, the list has become a bit limited, focusing largely on the design of the object to the exclusion of the systems that facilitate this process. Undisputed, however, is the fact that times have changed and words such as “innovation” have become problematic through misuse and overuse.

The solution comes through not attempting the brash act of rewriting Rams’s principles, but rather building on his words with the reminder that the project is focused on graduate students, early practitioners and educators. We have therefore made some subtle additions, combined with a few challenges that aim to improve the ways in which we teach, perform and evaluate speculative design projects. 📖

Normative design principles still apply (Rams, 1976).

Reclaim the future. Or speculate on a plurality of futures beyond the simply techno-heroic.

More importantly, reclaim the *present* – speculate on different versions of today.

Avoid one-liners or overt provocations – these lead to easy dissemination and the illusion of success but ultimately achieve little.

Identify a clear purpose for the project

– and then aim to create action in the real world.

Good design should be seen as a **combination of means and ends**. Speculate on alternative or new means (of production, resources, infrastructures ...) and the ends they produce.

Keep in mind that all designed things have **consequences**, both known and unknown. Design is never apolitical. Use speculation to explore implications as well as applications.

These implications impact not only humans, but also **nonhumans**. Embrace the (systemic) complexity of the design problem.

Act now (with small actions / movements) rather than waiting for disaster. Think about futures that will flourish from these small actions.

Learn from design at the margins / periphery (geographic, economic, political or disciplinary). By necessity it is more agile, adaptive, frugal.

Acknowledge your epistemic boundaries. Speculative design is thematically promiscuous and demands interaction / dialogue / collaboration with diverse “others”.

Rather than designing objects to be replicated everywhere, design things with **local resources**, materials, knowledge, communities and making. This, by necessity, involves dialogue with locals.

Speculative design is about **learning to question**, examine and critique – and this is a duty, not a privilege.

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CH.6 Future Paths P.202

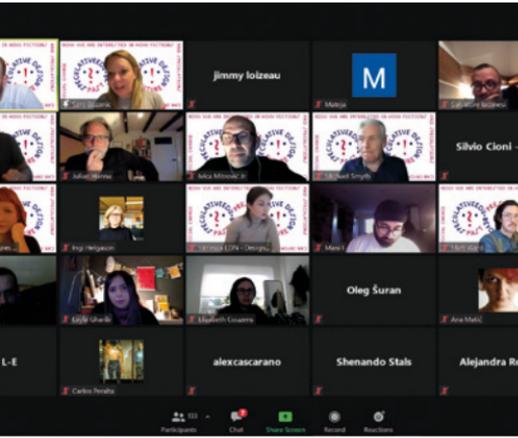
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