

BEYOND
SPECUL
ATIVE
DESIGN:
PAST —
PRESENT
— FUTURE

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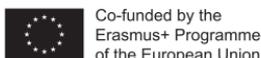
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A PRACTICE OF HOPE, A METHOD OF ACTION²

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.

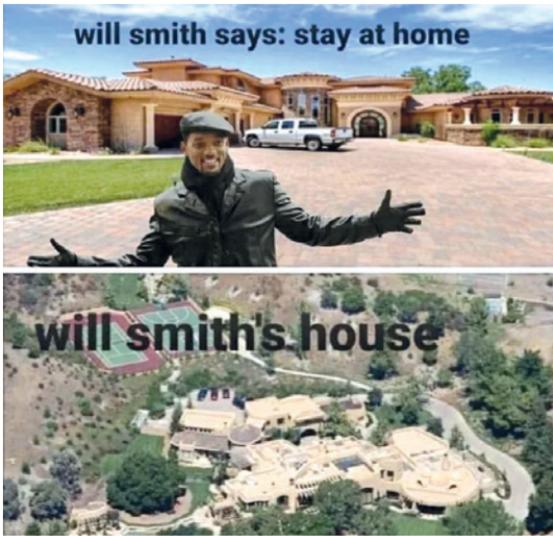
Ursula Le Guin’s call for “realists of a larger reality”, creative people experimenting with alternative representations of lived experience; unorthodox social formulations to enable hope in dark times. These *new realists* need an infrastructure of support, an “ecology of trust ... [where] fiction ... 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.

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Auger, J & Loizeau, J. (2001) Audio Tooth Implant. Design project. Auger-Loizeau website.

Bell, W. and Mau, J. A. (Eds.) (1971) *The Sociology of the Future*. Russell Sage Foundation.

Booker, C. (2005) *The Seven Basic Plots: Why We Tell Stories*. Continuum.

Boyer, B. (2011) Matter Battle!, Blog post. http://etc.ofthiswearesure.com/2011/01/matter_battle/

Berardi, F. & Fisher, M. (2013) *Give me Shelter*. Interview, Frieze. <https://frieze.com/article/give-me-shelter-mark-fisher>

Burton, M. and Nitta, M. (2011) Republic of Salvation. Project website. <http://www.burtonnitta.co.uk/RepublicOfSalvation.html>

Brooker, C. dir. (2011–2019) *Black Mirror*.

Crampton Smith, G. (1997) Computer-Related Design at the Royal College of Art: 1997 Graduation Projects. *Interactions*, Nov / Dec, 1997.

DiSalvo, C. (2012) *Adversarial Design*. MIT Press.

Dunne, A. (1998) Hertzian tales: an investigation into the critical and aesthetic potential of the electronic product as a post-optimal object. RCA, PhD Thesis.

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

Foucault, M. (1984) What is an Author? In Rabinow, P., *The Foucault Reader*. Penguin. https://www.open.edu/openlearn/ocw/pluginfile.php/624849/mod_resource/content/1/a84o_1_michel_foucault.pdf

Fisher, M. (2009) *Capitalist Realism; Is There No Alternative?* Zero Books.

Fisher, M. (2014) The Slow Cancellation of the Future. Lecture at MaMa, Zagreb. Youtube. <https://www.youtube.com/watch?v=aCgkLICTskQ>

Fisher, M. & Ambrose, D. (ed) (2018) *K-Punk: The Collected and Unpublished Writings of Mark Fisher*. Repeater Books.

Fry, T. (2007) *Redirective Practice: An Elaboration*. Routledge.

Gadot, G. (2020, March 19) Gal Gadot Leads Star-Studded Singalong to Imagine, YouTube. <https://www.youtube.com/watch?v=4sFLqGfSnVQ>

Grand, S. & Wiedmer, M. (2010) Design Fiction: A Method Toolbox for Design Research in a Complex World, in Proceedings of the DRS 2010 conference: Design and Complexity, Montreal.

Hill, D. (2012). *Dark Matter and Trojan Horses: A Strategic Design Vocabulary*. Strelka Press.

hooks, b. (1994) *Teaching to Transgress: Education as a Practice of Freedom*. Routledge.

Jensen, C.B & Thorsen, L.M. (2019) Reclaiming Imagination: Speculative SF as an Art of Consequences (Interview with Isabelle Stengers). *NatureCulture* 5.

Jones, M. (2015) Jumping to the End – Practical Design Fiction. Interaction Design Association. Wired. <https://www.wired.com/beyond-the-beyond/2015/03/design-fiction-matt-jones-jumping-end/>

- Kerridge, T. (2015) *Designing Debate: The Entanglement of Speculative Design and Upstream Engagement*. Doctoral thesis, Goldsmiths, University of London. <http://research.gold.ac.uk/12694/>
- Le Guin, U.K. (2016) *Freedom*. In *Words Are My Matter: Writings About Life and Books, 2000–2016*. Small Beer Press, 113.
- Loizeau, J. & Ward, M. (2009) *Future Fatigue; atemporality, immortality and design for the warm facilitation of the end*. [In conversation: The Amersham Arms, New Cross, London.]
- Lorde, A. (2018) *The Master's Tools Will Never Dismantle The Master's House*. Penguin.
- Malpass, M. (2017) *Critical Design in Context; history, theory and practice*. Bloomsbury Academic.
- Michael, M. (2012) *What Are We Busy Doing?: Engaging the Idiot*. *Science, Technology, & Human Values* 37(5), 528–554.
- Nocek, A. (2017) *On the Pragmatics of Political Aesthetics*. In *Aesthetics and the Political in Contemporary India [unpublished talk]*. *Deleuzian Explorations Conference*, Deleuze Studies in India Collective, Tata Institute of Social Sciences Mumbai.
- Papanek, V. (1985) *Design for the Real World: Human Ecology and Social Change*. Thames & Hudson
- Press, M. (1995) *It's research, Jim ... The European Academy of Design Design Interfaces Conference*.
- Prado de O. Martins, L. (2014). *Privilege and Oppression: Towards a Feminist Speculative Design*. Paper presented at the Proceedings of DRS 2014: Design's Big Debates, Umeå, Sweden.
- Prado de O. Martins, L. & de Oliveira, P. (2014) *Questioning the "critical" in Speculative & Critical Design*. Medium post. <https://medium.com/a-parede/questioning-the-critical-in-speculative-critical-design-5a355cac2ca4>
- Raby, F. (2018) *Stitching Worlds, Building Walls, Designing Drones*. In Kurbak, E. (ed) *Stitching Worlds; Exploring Textiles and Electronics*. Revolver Publishing.
- Schwab, K. (2020) *Countering Covid-19 Shocks in Fragile Contexts*. Video on WEFForum website. <https://www.weforum.org/great-reset>
- Stengers, I. (2015) *Gaia, the Urgency to Think (and Feel)*. Presented at Os Mil Nomes de Gaia: do Antropoceno a Idade da Terra. <https://osmilnomesdegaia.files.wordpress.com/2014/11/isabelle-stengers.pdf>
- Sterling, B. (2009) *Design Fiction. Interactions* – *Design Fiction* 16.3 (May-June 2009).
- Thackara, J. (2013) *Republic of Salvation (Michael Burton & Michiko Nitta)*. *Design & Violence Website*. MoMA. <https://www.moma.org/interactives/exhibitions/2013/designandviolence/republic-of-salvation-michael-burton-and-michiko-nitta/>

- van der Kolk, B.A. and Ducey C.P. (1989) The Psychological Processing of Traumatic Experience: Rorschach Patterns in PTSD. *Journal of Traumatic Stress* 2(3).
- van der Kolk, B. (2014) *The Body Keeps the Score: Mind, brain and body in the transformation of trauma*. Penguin.
- Voros, J. (2017) Big History and anticipation: Using Big History as a framework for global foresight. In R. Poli (ed.) *Handbook of anticipation: Theoretical and applied aspects of the use of future in decision making*. Springer International.
- Ward, M. (2013). Design Fiction as Pedagogic Practice. Medium article. <https://medium.com/@matthewward/design-fiction-as-pedagogic-practice-9b1fbb7ae2b>
- Ward, M. (2019, July 23) Critical about critical and speculative design. SpeculativeEdu. <https://speculativeedu.eu/critical-about-critical-and-speculative-design/>
- Ward, M. & Wilkie, A. (2009) Made in Criticalland: Designing Matters of Concern. In F. Hackney, J. Glynnne & V. Minton (eds.), *Networks of Design: Proceedings of the 2008 Annual International Conference of the Design History Society* (UK). Universal Publishers. 118–123.
- Winchester, W.W. (2018) Afrofuturism, inclusion, and the design imagination. *Interactions* 25(2), 41–45.
- Womersley, G. (2020). (Un)imagination and (im) mobility: Exploring the past and constructing possible futures among refugee victims of torture in Greece. *Culture & Psychology*, 26(4), 713–731.
- Worley, M. (2017). *No Future: Punk, Politics and British Youth Culture, 1976–1984*. (n.p.). Cambridge University Press.
- Zimmerman, J., Koskinen, I., Redstrom, J., Binder, T., Wensveen, S. (2011). *Design Research Through Practice: From the Lab, Field, and Showroom*. Elsevier Science.
- Zittoun, T., & Gillespie, A. (2015). Imagination in human and cultural development. Routledge.

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