

The Young Designer's Guide to Speculative and Critical Design

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ABSTRACT

Speculative and Critical Design (SCD) confronts commercial and traditional design practice. It seeks to change contemporary perceptions of products and norms, instead of reproducing and reinforcing them. For example, SCD explores the societal ramifications following from domestication of technology. Through the design of critical objects and speculative narratives, SCD attempts to spur social debate on what is a preferable development.

This article discusses SCD and its purpose, attitude, and foundation, as well as its postmodern background and contemporary context. The definition of SCD is fringed; SCD is commonly presented through examples, and there is little succinct methodology available for designers who want to understand or conduct SCD. This article attempts to give a clear description of the SCD position and to codify SCD practice.

KEYWORDS: Speculative Design, Critical Design, Discursive Design, Design for Debate, Design Criticism, Postmodern Design Theory

1. INTRODUCTION

Speculative and Critical Design (SCD) foregrounds the ethics of design practice, attempts to reveal concealed values and agendas, and explores alternative design values, forms, and representations [1]. This background implies some questions, which motivate the study of SCD in this article:

1) *Political and social changes:* During the last four decades, almost every aspect of design practice has been reframed [2]. To allow novel approaches, design education and practice need restructuring: When designers widen their scope towards larger-scale issues—ethical, political or social—it requires diligent self-reflection and a critical attitude towards *why* we design. One can ask if such restructuring is possible if designers invariably must adhere to the norms of commercial industry.

2) *Usage and experience:* The world is transforming into a tightly knit system of products and services, where

the *utility value* of products no longer is a differentiable factor. Instead, the *semantic* and *social* values are becoming increasingly important. When products evolve, and interpretations of their meaning change, the design process has to be rethought [3]. Today, more products and services are designed to be habit-forming or even addictive; some designers make products that exploit psychological tricks to get the user “hooked” [4]. One may question whether this is a *preferable* development and what alternatives are available.

3) *Aesthetics:* The 1960s marked the true influx of science fiction in popular culture [5]. Many ideas conceived in sci-fi are today real products. Inspired by visions of space travel and radical, futuristic utopias, engineers and designers developed technology that drastically transformed society. For example, Stanley Kubrick’s “2001: A Space Odyssey” exposed cinemagoers to the ideas of tablet computers, Skype-like video telecommunication, computers controlled with conversational interfaces like Apple’s “Siri”, and

brought up ethical issues concerning artificial intelligence as well. In the fifty years after the release of Kubrick's movie, these items transformed from speculative products of the imagination into commodities. Importantly, contemporary sci-fi is less radical and ambitious than the sci-fi of the 1960s and 1970s [6]. Without radical imaginative creativity in science fiction, one may question what will happen to future innovation, and whether there are other ways to encourage social dreaming and debate.

Relating to the topics and questions above: Speculative and Critical Design (SCD) confronts commercial and traditional design practice with new ideas [7]. For example, SCD seeks to challenge current perceptions of products and norms, instead of reproducing and reinforcing them. By exploring the social implications domestication of technology has on society, SCD practice strives to encourage public debate about what is a preferable development for the world; satire—either narratives or objects—provoke the public to engage in debate.

This article is structured in six sections. This first section argues why it is interesting to investigate SCD. The second section concerns how the research for this article was conducted. The third section introduces selected central terms and discusses how these relate; this section also discusses *traditional design*, a counterpart to SCD. The fourth section puts SCD in a historical perspective, while the fifth section describes the characteristics of SCD, with focus on the *ideas* and typical *features* of SCD practice. The concluding section pinpoints SCD's most interesting traits, discusses some of its possible pitfalls as well as its role in contemporary design practice, and suggests topics for further research. A main challenge for SCD is to clarify its terminology, particular the term "critical," and structure appliances within the design process.

2. METHOD AND RESEARCH GOALS

The findings of this article originate from a literature review. To get an overview of the subject, I first read "Design Noir" [8] and "Speculative Everything" [9], which are considered crucial, seminal texts about Critical Design and Speculative Design, respectively [7]. Aiming to stake out a methodological direction, I then did a narrow search using the keywords "speculative design"

and "critical design". Most of the results originated from the same "school". To get a wider perspective, I conducted another, broader, search that included the keywords "design fiction", "design criticism", "design research", "discursive design", "participatory design", and "design thinking", as well as philosophical terms such as "discursive theory" and "critical theory".

The primary goals of this article are to present SCD in a comprehensible way—beyond just a set of inspiring ideas—and to give an overview of SCD practice and its related fields. Its secondary goals are to situate SCD in a historic context, to situate it in a contemporary context, and to codify SCD practice.

Many literature reviews have a stem of canon texts that present exhaustive, categorical definitions of foundational terms. Such definitions are scarce in the primary sources used for this review—they are to some extent intentionally contradictory, as Dunne & Raby point out:

"Speculative everything is an intentionally eclectic and idiosyncratic journey through an emerging cultural landscape of ideas, ideals, and approaches. We hope designers interested in doing more than making technology easy to use, sexy and consumable will find this book enjoyable, stimulating and inspiring" [9]

This article will not attempt to explain these terms categorically but to give an interpretation and analysis of their essence.

3. OVERVIEW OF SPECULATIVE AND CRITICAL DESIGN

Mitrović describes Speculative Design as follows:

"Speculative Design is a Critical Design practice that comprises or is in relation to a series of similar practices known under the following names: Critical design, design fiction, future design, anti-design, radical design, interrogative design, discursive design, adversarial design, futurescape, design art, etc." [7]

In the following section, I introduce Discursive Design, Critical Design (CD), and Speculative Design (SD). I also discuss *traditional design*, a caricature of the commercially driven design practices, which serves as a counterpart to CD and SD. Following that, I analyze how

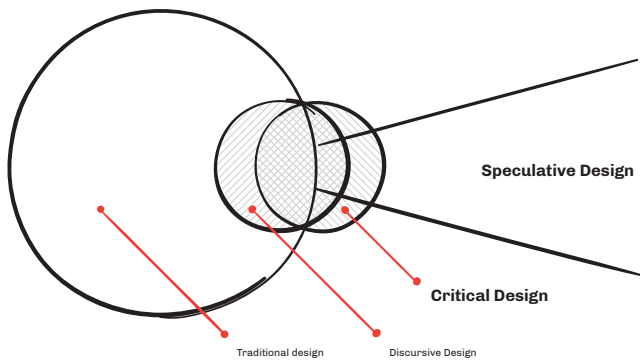


Figure 1: Traditional design vs. Speculative Design and its related fields as presented in “An Introduction to Speculative Design Practice”. The “cone shape” of Speculative Design practice is meant to denote its use in speculations about the future [7].

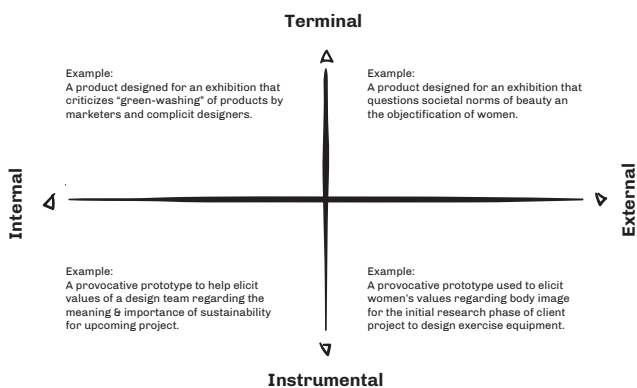


Figure 2: Types of discursive products [10].

CD & SD relate, and using this analysis, I develop the umbrella term Speculative and Critical Design (SCD).

3.1. Discursive Design

In “Discursive Design basics: Mode and audience”, Tharp & Tharp describe Discursive Design as the creation of products “whose primary purpose is to communicate ideas—they encourage discourse” [10]. Social debate is the fundamental goal and desired outcome of Discursive Design; making products that facilitate this debate is the primary activity of the designer. The term *product* is used in its broadest sense; it can refer to anything from a service concept sketch to a physical prototype. A product is *any* artifact serving a communicative purpose.

Tharp & Tharp situate discursive products within a two-dimension model, shown in Figure 2 [10]. On the first axis, they place the intended audience: either an *internal* audience, an esoteric group with specialized knowledge of a specific domain; or an *external* audience—the public. The second axis concerns the role of the product and the role of the designer:

- For a terminal discursive product, the job of the designer ends when the product is presented—the designer relies on the product itself to convey ideas that spark debate among its audience.
- On the contrary, an instrumental product serves as a provocative tool to stimulate discussion between the audience and the designer—either where the debate itself is part of a larger design research process, or where the product is able to steer the discussion in a given direction.

3.2. Critical Design

The term *Critical Design* was coined by Anthony Dunne and Fiona Raby at the London Royal College of Art [1]. It was first used in “Hertzian Tales”, as part of Dunne’s 1999 dissertation. Later, Dunne & Raby elaborated on the term in their 2001 book “Design Noir: The Secret Life of Electronic Objects”, where they write:

“Instead of thinking about appearance, user-friendliness or corporate identity, industrial designers could develop design proposals that challenge conventional values.” [8]

Importantly, Dunne & Raby do not understand *critique* as something overly negative: It can be a gentle refusal of what is given by society—a critique of norms; a shift towards *why* we design instead of *how* and *what* we design—a critique of design practice; a practice where the needs of the industry is not taken for granted—a critique of capitalist culture; or where critical questions can and will be raised—a critique of cursory attitude.

The goal of CD is to challenge what is given by society, and thus affect how the world develops: By provoking the public to think critically about norms and values, CD practice strives to encourage public debate. Etymologically, the word *critic*, one who passes critique, has always had *faultfinder* and *censurer* as its connotations [11].

3.3. Speculative Design

In their 2013 book “Speculative Everything”, Dunne & Raby elaborate on the B part of their “A/B manifesto” (Table 1) [9].

A	B
Affirmative	Critical
Problem solving	Problem finding
Provides answers	Asks questions
For how the world is	For how the world could be
Makes us buy	Makes us think

Table 1: Excerpt from A/B manifesto [9].

The manifesto is presented as two connected lists, where each element in one list has a direct counterpart in the other list. *A* represents what SD *is not*, whereas *B* represents what it *is*. Dunne & Raby stress that *B* is not a replacement for *A*—rather SD *complements* traditional design. They acknowledge that most design work falls into the “A”-category, and hold that most future design work should continue to do so. However, on their view, there has to exist another type of design practice, the “B”-part of the list, to widen the horizon of design and avoid that the world develops in a gradually narrower direction.

In order for designers to be critical, inquisitive, and apt at *problem-finding*, Dunne & Raby introduce the act of *speculation* [9]: an activity where conjecture is as good as knowledge, where futuristic and alternative scenarios convey ideas, and where the goal is to emphasize implications of “mindless” decisions for mankind.

3.4. Traditional design

Before discussing the characteristics of SD and CD, an introduction to its purported counterpart, *traditional design*, is warranted—as descriptions of what SD and CD are *not* are often easier to understand than descriptions of what SD and CD *are* (cf. Table 1).

The A-part of the manifesto, in the texts of Dunne & Raby [8, 9] and Mitrović [7], refers to what they respectively call affirmative and traditional design: design that solves problems for the industry, addresses the client’s needs, and conforms to the cultural, economic and technical expectations of society. On their

view, traditional design practice can, for instance, be user-centered, in the sense that designers strive to make products user-friendly. At the same time, they argue that these type of considerations are limited: As long as design practice is an instrument of the commercial industry, a successful outcome of design is *what is expected* by the client; the considerations of the user—or society—are actually subordinate.

Tharp & Tharp divide industrial design practice into four groups [10]: *Commercial design* is the field colloquially known as industrial design—design that is market-driven and problem-solving, and whose success is determined by whether or not the design provides a return on investment. This practice they regard as a diametric opposite to *Discursive Design*. The two other fields of industrial design—*responsible design* and *experimental design*—are positioned somewhere in between.

3.5. Analysis of traditional design

The main authors of SD and CD are vague in their descriptions of the purported counterpart; the terms commercial design, affirmative design, and traditional design resemble caricatures. I consider this vagueness a weakness, as it makes the counterpart less comprehensible. Therefore, I believe that some further details about the distinctions within, and definitions of, traditional design are necessary to better understand the term.

There are important similarities between what Tharp & Tharp term commercial design and what Dunne & Raby [8, 9] and Mitrović [7] call affirmative design and traditional design: First, they share the commercial aspect—the primary purpose of design is to make money for the industry. In this sense, they are also normative and “self-reinforcing”, as market expectations and commercial viability are what distinguishes success from failure.

Second, neither Dunne & Raby nor Tharp & Tharp hold that CD, SD or Discursive Design ought to replace traditional design practice. Last, the descriptions of traditional design and commercial design are somewhat caricatured: Both seem to consider e.g. Design Thinking (DT) as a traditional design approach, without any explanation of its meaning. For context, I will give a brief introduction to DT shortly.

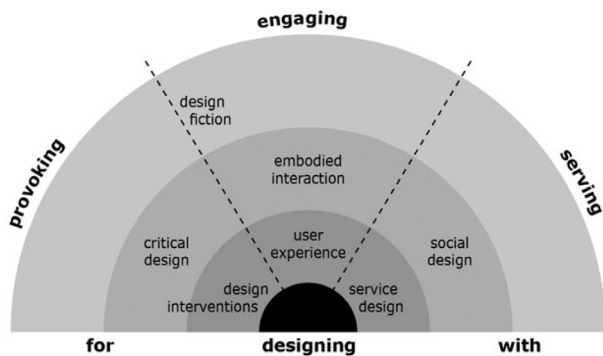


Figure 3: Sanders & Stappers relate different emerging design approaches in relation to different frames of time. The inner circle represents design for the world “as it is”, the middle circle represents design targeted at a near future, while the outer circle represents speculative futures [12].

Figure 3, proposed by Sanders & Stappers, positions different areas of design over different frames of time, as well as in terms of contrasting mindsets of user involvement [12]. The figure is analytical in presenting the areas as static, while in reality contents in areas are transgressive. From the inner- to outermost, the rings in the model correspond to design for: the world as it is today, the world as it could be in the close future, and the world as it could be in speculative futures. Further, the model positions different types of intent for design: *servicing*, *engaging*, or *provoking*. On my view, traditional design, as described in the previous paragraphs, corresponds to the centermost parts of this model. This adds an important aspect to the caricature of traditional design: It is mainly focused on design for the world as it exists today.

According to Sanders & Stappers, the contemporary design process already includes many activities that were not parts of the traditional product design process [12]: The design process used to start with a brief and a list of requirements; the modern design process also includes “pre-design”-research to determine the needs, as well as “post-design”-activities, such as user testing, to evaluate the result. On their view, the modern design process is an iterative activity that relies on divergent and convergent thinking. Mitrović uses a description of the traditional design process that also consists of iterative, divergent-convergent steps [7]. Traditional design—the counterpart to CD and SD—must therefore not be confused with the traditional product design process

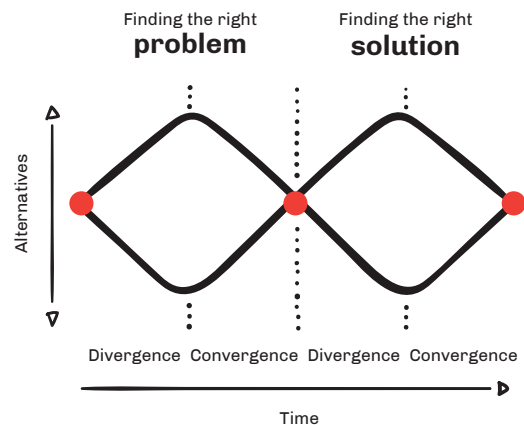


Figure 4: “Double diamond” model of divergent-convergent Design Thinking [13].

that Sanders & Stappers describe. Instead, it should be considered a modern—and standard—iterative design practice.

3.5.1. Design Thinking

This iterative design process consists of four divergent-convergent steps, and is called the “Double diamond” model [14]. According to Liu, the “Double diamond” model is essential to the DT process, even though it is not fully standardized and too static for reality. As shown in Figure 4 [13], the first step of the process is to diverge from the original problem definition, in order to find the right problem to solve. The second step is to converge to a new problem definition. In the third step, the goal is to ideate, and find as many solutions to the problem as possible. In the last step, one or many ideas are selected, combined if necessary, and developed in a refined direction. In addition to this model, DT is considered to be an innovation method that combines the possibilities of technology and the needs of people with the requirements for business success.

3.6. Analysis of Speculative and Critical Design

Now, I position SD and CD within a postmodern context, and analyze how both SD and CD are parts of Discursive Design practice, as well as how this relates to the philosophy of Michel Foucault. Then, I discuss how SD and CD relate to each other, and how the terms can be combined as Speculative and Critical Design (SCD). Finally, I compare SCD to traditional design.

3.6.1 Speculative Design and Critical Design are postmodern

The term “postmodern” refers to a movement characterized by “incredulity towards metanarratives,” a definition given by Jean-François Lyotard [15]. The purpose of discourses for postmodernism is to *deconstruct* such underlying metanarratives—not to agree on their meaning. Examples of such metanarratives are The Patriarchy, Christian ideals such as “love thy neighbor,” and “genes are deterministic for human development” or other modern maxims. Postmodernism rejects the idea that there is one definitive truth in religion, science, or philosophy. Postmodernism as a term is itself eclectic [16]. General skepticism towards established theories, anti-foundationalism, a self-reflective attitude, and operation on a meta-level are among its characteristics—so is the use of irony and satire. SD and CD adhere to these characterizations.

3.6.2. Speculative Design and Critical Design are discursive design practices

In CD practice, the designer aims to encourage critical reflection and to provoke new ways of thinking, by raising carefully crafted questions through the design of what Dunne & Raby call *props* [8]. SD strives to foster social dreaming and discussion on what the future should be [7]. Hence, the goal of CD and SD is to raise questions and encourage discourse, not to provide answers or create solutions—in the same way as in Discursive Design practice.

The term *discourse*, as used here, refers to the philosophy of Michel Foucault [17]. Foucault’s theories explain the relation between discourse, power and knowledge. On Foucault’s view, discourse is a way of organizing and producing knowledge, and language is the main means of exerting power, by influencing what is considered true. Discourses are closely connected with the power of who controls communication: The most powerful discourse defines what norms apply in society; if people are captivated by a discourse it has greater influence on what they believe. Therefore, by raising questions and encouraging debate in a way that enables people to engage with the ideas that are the foundation of divergent norms, Discursive Design practice tries to influence the overall direction in which society, as well as the design field, develops.

3.6.3. Speculative Design is critical—Critical Design is speculative, but with a smaller scope

Critical thinking that questions the practice of design is a major component of Speculative Design [7]. However, SD extends CD practice one step and borrows the narrative qualities of film and novels, to make the critical questions accessible to a broader audience. Although CD imagines alternative social, cultural, technical and economic values of society, and to a certain extent exercise speculation, its scope is somewhat limited by Dunne & Raby’s focus on the lack of aesthetic qualities in the interactions between humans and electronic objects. With SD they propose a bigger scope and highlight the opportunities of working with society-scale issues like alternatives to democracy or capitalism [9].

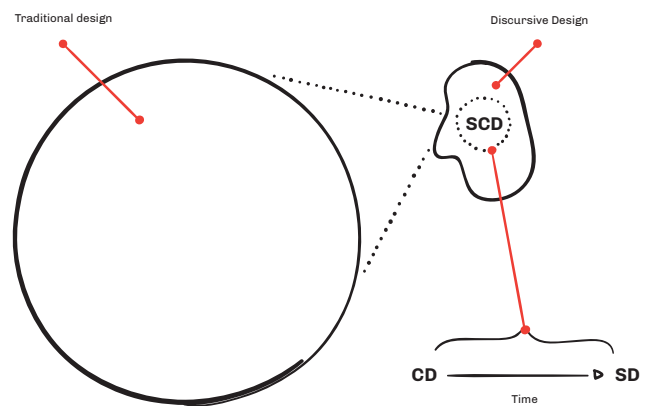


Figure 5: The figure above, drawn by the author, illustrates another way to look at these fields. SCD is the combined field of CD evolving into SD, which in turn is a Discursive Design practice—a meta field of design, existing alongside of traditional design.

Initially, CD practice primarily dealt with the development of the world in terms of how new electronic technology, and the use of it, affects the world aesthetically [7]. It seems that CD is colored by the time it was conceived. In the late nineties, it is no surprise one wondered how the emerging digital revolution would affect society, and it is unhelpful to base a definition of CD on its early applications. To consider SD as a mature extension of CD is not uncharted [7]. The critical mindset is vital in SD but the term *speculative* alone is limiting because of its possible connotations. In this context, it refers to being contemplative of conjecture [18]. Thus, I refer to it as a broader term,

	Traditional design	SCD
Attitude	Normative	Critical
Foundation	Information	Speculation
Mindset	Pragmatic Productive	Idealistic Dreaming
Purpose	Commercial Satisfy industry's need to make money	Discursive Spur debate on the development of society
Goal	Develop solutions Provide answers by solving problems	Explore ideas Find problems by asking questions
Intent	Serve a user In seriousness provide clarity	Provoke an audience Use ambiguity to make satire

Table 2: The author's comparison of traditional design and Speculative and Critical Design.

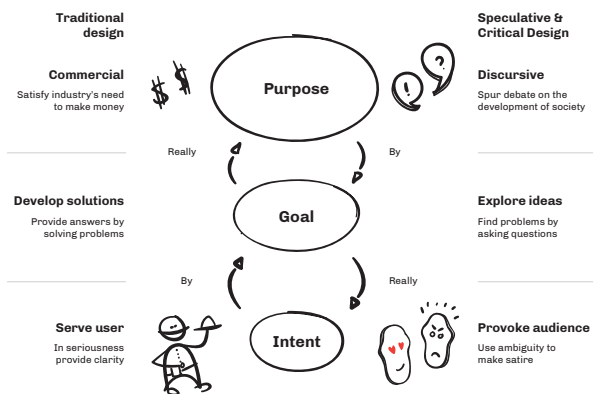


Figure 6: Elaboration on the different levels of goals.

Speculative and Critical Design (SCD), which in turn is a Discursive Design practice and a complement to traditional design.

3.7. Summary

In the preceding sections, I have given an overview of SCD and its related fields, as well as an introduction to traditional design seen as a counterpart to SCD. In Table 2, I propose an extension of the A/B-manifesto, intended to be clearer and less biased than the original. In Section 5, I will elaborate on its content from an SCD perspective.

Some of the labels could appear closely related, and deserve a short elaboration (Figure 6): *Purpose*, the

main driver and context of the design practice; *goal*, how the driver is satisfied; and *intent*, the ostensible goal of the designer.

- The traditional designer strives to serve a user, by developing solutions that solve problems and provide answers for the user. However, success relies on the solution's profit in a commercial context.
- SCD strives to spur social debate in a discursive context, by exploring ideas that ask questions to find problems in society. However, success relies on the designer's ability to provoke an audience.

4. THE GENEALOGY OF SCD

The *critical* attitude, per se, is nothing new. The ideas of William Morris, and the mid-19th century Arts and Crafts movement in Britain, were based on values challenging those of the contemporary industry [19]. Morris's ethos refused capitalist and consumerist ideas, an ideal that later became an inspiration for the Weimar schools of craft and after that the Bauhaus.

Skepticism towards consumer culture is also one of the key ideas of *Critical Theory* [20]. This suggests a clear link between Critical Theory and SCD. However, Dunne & Raby emphasize that this is not the case—the foundation of SCD is only critical thinking [9]. On their view, "all good design is critical", and every designer should question assumptions that are given. Bardzell & Bardzell are skeptical of this "opt out" from Critical Theory and point to how SCD "[transgresses] social conformity [...] in hopes of bringing about social emancipation", in the same way Critical Theory does [1].

Tharp & Tharp describe *anti-design* and *radical design*, two avant-garde postmodernist movements of the 1960s and 1970s, as predecessors of SCD [21]. In the same period, engineering and traditional design became increasingly close-knit and market-driven [22]. The anti-design and radical design movements were responses to this development. Mitrović makes a similar historical connection; the designer's role is more like an artist's than an engineer's [7]. Dunne & Raby acknowledge this link, but crave a bigger role for CD than the reactionary movements of the 1960s and 1970s:

"Critical Design must avoid the pitfalls of the 1970s by developing strategies that link it back to everyday life and fully engage the viewer." [8]

The narrative, “accessible” qualities of SCD is a response to this craving [7]. Inspired by the engaging, imaginary worlds of literature and film—and in particular the worlds seen in science fiction—SCD started using speculative narratives to bring disruptive and critical ideas concerning society into the discourse. For instance, Dunne & Raby refer to Margaret Atwood’s dystopian science fiction novel “Onyx and Crake” as the gold standard for speculative work [9]. The inspiration from science fiction seems closely related to a fascination with *social dreaming*.

Dunne argues that social dreaming was more common before [9]. Compared to contemporary sci-fi, 1970s sci-fi was more pioneering, and this, in tandem with the rapid technological advances of the period, fostered widespread social dreaming throughout society. While children of the 1970s dreamt about space travel [7], present-day children dream of Instagram likes and are anxious about losing “Snapchat streaks” [23]. By bringing narrative qualities of the science fiction into the world of design, and by envisioning utopian, as well as dystopian scenarios, Dunne & Raby attempt to re-ignite such social dreaming. Their hope is that consequential societal issues can be brought into public debate by “expressing the unthinkable” through the language of design.

In the same vein, there are links to Victor Papanek’s works in the 1970s [3]: Papanek famously named traditional design among the most harmful and phony professions, because of its links to capitalist culture—a culture where, according to Papanek, people are lured to lend money to buy things they don’t need, to impress people that don’t care. Papanek envisioned a greater role for design, where its role was integral to the world’s development in environmental and social terms [19]. Papanek was both utopian and dystopian: On one hand, he imagined worlds where idealistic organizations directed design, so that efficient use of resources and a broader public and social interest always was the basis for development. On the other hand, he envisioned the environmental hazards that unlimited production and consumption would cause.

According to Auger [7], SCD acts as a corrective to design as taught in most design schools—without a critical and philosophical foundation—which propagates to the naive way design is practiced by many

designers. If designers do not consider the implications of their work, they do so because of fallacies learnt in design schools: that all design is good, that design solves problems, and that design makes people’s lives better. SCD suggests that design can do all those things, but not if practiced “mindlessly”, solely as a means to reach commercial goals.

5. CODIFYING SCD

Dunne & Raby suggest no unique, freestanding methodology to use for conducting SCD, which probably is why they rely on examples and point to related fields to define what SCD practice is [1]. On their view, SCD must not be seen as a methodology, but rather as a *position* the designer “steps into”. In this position, the SCD designer draws from the “designer’s toolkit”¹ and adapts whatever method is suitable in a particular situation, to spur debate [7]. This section elaborates on the SCD position and attempts to codify SCD practice.

5.1. SCD position

In Section 3, I compared SCD with a caricature of traditional design practice. The descriptions of SCD in Table 2 and Figure 6 form the basis of the SCD position in terms of purpose, attitude, and foundation for design.

5.1.1. Purpose of SCD

SCD tries to make the activity of criticizing development available to a greater audience, to spur debate about what is a *preferable* future [24]. How does this preferable future differ from the *probable* future? The purpose of SCD is to express ideas that encourage discourse on how the world is today and how it should develop, and to question why we design at all.

5.1.2. Attitude of SCD

Critical thinking must be a basis for design practice; the designer should question everything [7]. In particular, designers must cultivate a critical attitude towards the *commercial industry, technology, and the*

¹ From the top of my mind, this could, for instance, be methods described in the Hyper Island Toolbox. Myriads of other design methods and toolkits exist as well. The Hyper Island Toolbox is available at <http://toolbox.hyperisland.com/>.

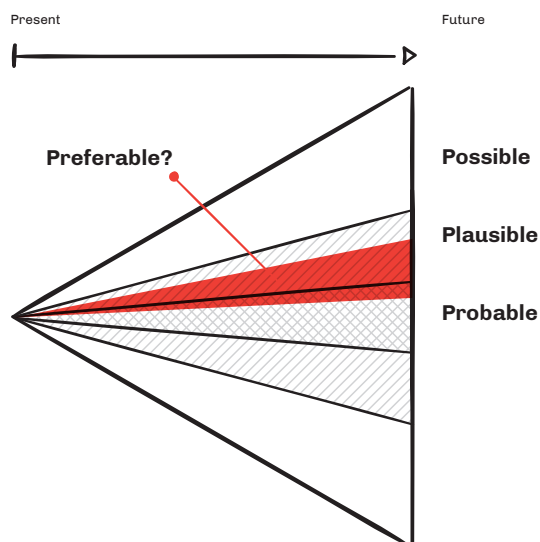


Figure 7: PPPP model by Dunne & Raby. Each cone represents a type of development for the future. Note how the “preferable” cone is misaligned with the “probable”. The purpose of SCD is to create debate on the position of the “preferable” [9].

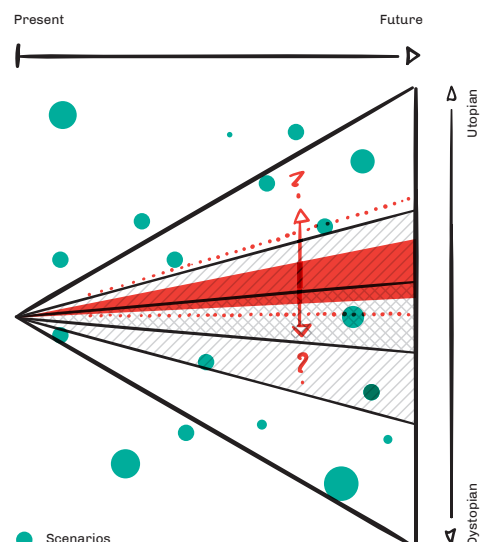


Figure 8: PPPP model with scenarios mapped over the cones. The scenarios are positioned as alternative presents or speculative futures and are to a varying degree utopian or dystopian. Adapted from Mitrović [7].

norms given by society. If designers “mindlessly” innovate based on available technology, the commercial needs of the industry, and not question development, it may cause wider, initially concealed, and possibly unwanted social implications.

5.1.3. Foundation for SCD

SCD makes use of speculations and conjecture, rather than information, as a basis for design [9]. SCD does not need to be productive in a commercial context. Instead, it should strive to be imaginative, and foster social dreaming on how the world might develop, as well as how the world *might have been* if prior development had been different.

5.2. SCD practice

This section codifies SCD practice in a three-step process.

5.2.1. Define a context for debate

SCD practice revolves around a *topic*—the context an SCD designer wants to put into social debate [9]. The first step is to define this context. Typical topics are contemporary, ethical issues created by the commercial industry, emerging technology, or social norms. “How society is dependent on technology” and “how a

‘big data’-driven economy affect social life” are examples of potential topics.

5.2.2. Ideate and find problems, and create a scenario

The next step is to ideate to find problems. To explore a topic, SCD practice uses series of “what if?”-questions [9]. For example: “how might this topic develop in the future?” or “what would the issue look like today if some prior development had been radically different?” Another way to explore a topic is through questions that lead to *reductio ad absurdum* arguments, e.g. “how might a continuation of development lead to a ridiculous, absurd, or impractical situation?”

To elaborate on these problems, the SCD designer draws from the “designer’s toolkit” and adapts whatever method suitable [7]. Brainstorming and the divergent-convergent “Double diamond” model of DT (Figure 4) are two of many potential methods that can be adapted to the SCD position.

SCD practice makes use of two types of scenarios: The design of alternative presents and the speculation about possible futures [7]. The first is effective to critique society in its current form, and the latter to critique the direction of development. The scenarios can be mapped over the PPPP-model (Figure 8).

The most effective problems form the basis of a scenario. To make the scenario stronger and support “suspension of disbelief”, there are several questions to consider when the problem is positioned in the PPPP-model [24]: what “rules” apply in the scenario, would the scenario be more effective as a utopia or a dystopia, and what “perceptual bridge” exists between the present and the scenario.

3: Materialize the scenario to provoke an audience

To provoke its intended audience to engage with and debate the topic of the scenario, the last step of the process is to materialize the scenario as either narratives, objects, or a combination of both [24].

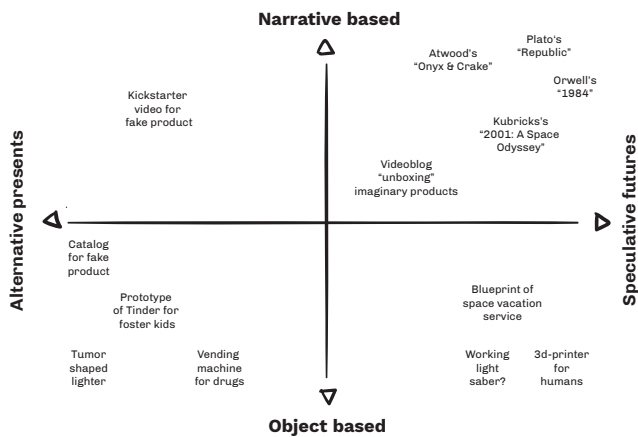


Figure 9: SCD practice uses scenarios in the speculative future or alternative present, which materialize as narratives or objects. Some novel examples, as well as examples from sci-fi and philosophy, are given for illustration.

The objects, or *props*, can be either physical or digital, and, as *prop* suggest, an object may be fake and non-functional, as long as it appears to be a real representation of a concept [9]. The prop could, for instance, be a product catalog presenting imaginary products, a map of a fictional area, or a website for a bogus event. However, to achieve *realness*, the prop must have a sufficient level of detail. It is up to the designer to decide which level of detail and functionality is appropriate; some scenarios might need props with a high level of detail to be provoking, while other scenarios may benefit from the imaginative qualities of simple sketches.

The narratives adopt techniques found in film, TV series, and literature to communicate the ostensi-

ble problems to the audience in a convincing and engaging way [7]. For example, they may take the form of documentary film, where a phenomenon in a made-up scenario is presented with the credibility and authority of the documentary genre. Commercial videos for fake Kickstarter projects, video blogs that “unbox” imaginary products, or regular written novels or comics where the stage is set in a utopian or dystopian world are other examples of possible fictional narratives. Often the fictional narratives make use of the props, in the same way that is common in conventional films, to facilitate suspension of disbelief.

To craft a prop or narrative, the SCD designer—again—uses whatever method applicable, and iterates until it is provocative enough to make the audience engage with the intended topic. In this process, there are various tools to consider, to make the audience engage on an emotional, psychological, and intellectual level [7]: Whereas traditional design often strive to make messages as clear as possible to enable users to think *less*, the SCD practice makes an effort to do the opposite; as a discursive practice, it is important to ask questions without dictating the audience’s perception of an answer or a solution [10]. Therefore, to enable the audience to entertain personal interpretations, the SCD scenarios are often open-ended, unclear, and complicated, and strive to provoke using dark humor and satire.

6. CONCLUDING REMARKS

In the introduction, I presented three problems as my motivation to investigate Speculative and Critical Design (SCD). The first problem considers the ongoing scope shift in the design field towards society-scale issues, and question if designers are apt for this transformation. The second problem concerns if commercial forces and a normative design practice contribute to a preferable development of the world. The third problem concerns the decline of radical, social, futurist thinking, and how this may constrain future innovation.

On my view, SCD offers no solution to any of the problems. It does, however, encourage social debate on all topics. As discussed in Section 5.1, Dunne & Raby propose that designers—by “stepping into” an SCD position—think critically about their practice, social norms, and commercialist goals. Given this position,

SCD designers should create alternative, speculative, futurist imaginations through the language of design, and in this way, spur social debate on how the world should develop.

As discussed in Section 3.7 and 4, most of the ideas of SCD have links to postmodernist philosophy and counter-movements throughout design history. Separately, the ideas of SCD are not new. The combination of ideas, on the other hand, is refreshing in a design context [25]. However, I do believe it is timely to ask *whom SCD is for*.

In Tharp & Tharp's model of discursive objects (Figure 1) [10], there are four quadrants. In Speculative Everything, Dunne & Raby use examples that exist in the upper-right quarter [9]: SCD projects that are *terminal* and *external*, and are designed to be stand-alone and exist in exhibitions. If this is the intended role of SCD, several problems follow.

First, as with the ideas of postmodern philosophy and Critical Theory, the underlying topics of these projects are complex—so are the ways the projects materialize. According to Bardzell & Bardzell [1], most people will not understand the ambition of SCD in its current form, and therefore they will dismiss it as art—which is unfortunate if the goal is to create social debate. Second, the “SCD position” is itself problematic: Although SCD is presented as an alternative to traditional design practice, Dunne & Raby suggest it as a moral high-ground in their writings (cf. the quotation in Section 2) and imply that the SCD designer should facilitate the masses to find a “preferable” development for society. In Section 4, I discussed the link between SCD and Critical Theory, and this is another—rather direct—example of a link to the philosophy of critical theorists such as Raymond Geuss [26]. In the same way Critical Theory has been criticized for elitism, it is at least reasonable to question if an elitist position is a good starting point to spur debate among the masses through the language of design².

However, there are other possible roles for SCD. Tharp & Tharp describe Discursive Design objects

that could be used to instigate debate in many contexts [10]: For instance, SCD could be applied in the bottom-left quadrant in Figure 1, as part of a co-design process, where users and designers collectively decide what is “preferable”. Bowen suggests using SCD within a design process, applying *instrumental* objects or narratives to provoke the participating designers and users, to open the possible “solution space” [26]. But then, SCD has another problem. Even though SCD is intriguing and inspiring, it is also eclectic and idiosyncratic, and therefore potentially confusing. As discussed in Section 5, Dunne & Raby rely on examples to explain SCD. Mitrović [7] and Auger [24] do this as well, and none of them give easy-to-understand insights in the methodology used to conduct SCD practice. As a consequence, SCD is unavailable for those who are not especially interested [1].

In this article, I have made an effort to present Speculative and Critical Design (SCD) in a coherent and comprehensible way, and to give an overview of SCD practice and its related fields. I have also presented some of its roots in design history, as well as its connections to postmodern philosophy. In Section 5, I gave a succinct description of the SCD position and codified SCD practice.

6.1. Further work

There are several possible topics for further work. First, in the contemporary design field, there exist multiple future-oriented design methodologies. Vision in Design (ViP) [27] is one of them. Still, many questions remain: How does this compare to SCD? What are the similarities and differences, and are there parts of ViP that can be incorporated into SCD—or the other way around? Second, critique of norms and normative behavior is a central component in SCD. However, SCD seemingly has many norms of its own, as most SCD topics revolve around the “domestication of technology” and other—to put it bluntly—“white man's”-problems [28]. Is then SCD applicable to the larger-scale, third world issues—and if so, how? Finally, are there other ways to codify and present SCD practice? What can be done to make SCD accessible to a wider range of designers?

Besides the need to respond to these questions, SCD represents ideas of Foucault in the following: “There are more ideas on earth than intellectuals imagine.

² Also, if the discourse theory of Foucault is considered in this setting, one could argue that designers practicing SCD use their position as designers to exert power over an audience. But that is another discussion.

And these ideas are more active, stronger, more resistant, more passionate than politicians think. We have to be there at the birth of ideas, the bursting outward of their force: not in books expressing them, but in events manifesting this force, in struggles carried on around ideas, for or against them. Ideas do not rule the world. But it is because the world has ideas ... that it is not passively ruled by those who are its leaders or those who would like to teach, once and for all, what we must think." [29]

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