# SPECULATIVE AND CRITICAL DESIGN AND STRATEGY
John Jung

*Speculative and Critical Design (or speculative design, for short) is good at creating platforms to explore different topics. The strategist Dan Hill might call a speculative design project a Trojan Horse—it is a project that contains other projects.[1] I am currently using speculative design as a platform to learn about issues around race, gender, and inclusivity. As a white male who is privileged in many ways, my goal is to be better able to participate in conversations where non-majority voices can be heard. In this case, speculative design's frame of "the future" is an opportunity to think more critically about my work in the present.*

*These are my speaker notes for a presentation at the 2019 Symposium on the Future of Libraries, at the American Library Association's annual mid-winter conference. I deviated from these notes slightly during the actual talk. Slides are available at johnjung.us/scd_and_strategy.pdf.*

## Introduction

Today I'd like to talk about two approaches to design that have some useful overlap—speculative and critical design on one hand, and strategy on the other.

I think this is interesting territory because it is a space that design thinking might move into more and more in the next few years. Speculative design is a way that design can be used to try to understand the social, cultural and ethical implications of emerging trends. It's got a different focus than traditional design processes do. Anthony Dunne and Fiona Raby are two important designers who do this kind of work. They describe speculative design as "critical, not affirmative", "problem finding, not problem solving", and "design in the service of society instead of design in the service of the user."[2]

Good research and strategy inform successful design projects. I think that one of the great things about speculative design is that it encourages you to do better research and strategy work.

This illustration is a futures cone, which is one way to think about what speculative design is trying to do—it's trying to explore realistic scenarios at different points in the future, where each scenario is more or less probable, plausible, or preferable. We're not concerning ourselves with

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

2   Anthony Dunne and Fiona Raby, "A Manifesto," accessed February 16, 2019, http://www.dunneandraby.co.uk/content/projects/476/0.

things that are impossible, because speculative design isn't fantasy.

So, how are we going to spend the next hour? I'm going to start off by putting design into context. The word "design" can mean a few different things, and I think that approaches like speculative design make more or less sense depending on what you think design is, or what you think a designer ought to be doing.

Then I'm going to show some previous examples of work that I've done. I think that this work leads up to speculative design nicely, and I hope that looking at some of these projects will be another way to put this approach into some context.

I'll also talk about two projects from other people that illustrate aspects of speculative and critical design well. The first is the Driverless City[3,4,5,6,7,8], a project about the impact of self-driving cars from the Illinois Institute of Technology. To me this project is an ideal example of how design can encourage conversations around important topics. The second is the Low2No project, which Dan Hill talks about in his book Dark Matter and Trojan Horses. Low2No was a development project in Helsinki. It was an attempt for an urban development to go from low carbon output to no carbon output. I think it's a great example of how an experimental approach can generate a range of valuable outcomes.

One of the things I want to do with this presentation is to try to find ways that organizations like libraries can get exposure to new methods without taking on an undue amount of risk. So I'll close out by talking about a project that a fellow designer and I are starting, which will explore speculative design and climate change in a reading group. I think that incorporating something like this into library programming could be a low-risk way for a library to explore this area of design while exploring an important problem.

## My Background

Before that though, I want to introduce myself. Me, giving the last presentation of the day, the only thing that is standing between you and a nice dinner out somewhere.

My name is John Jung. I have a small side business for design consulting. I do projects on the weekends. In spite of the fact that it's a small business I think I have been able to do some interesting work. I did storytelling work for the innovation department of a global consumer package goods company. I designed a website for a high performance, distributed computing project. The website promoted software that helped scientists transfer, process and store large amounts of data—one use case was for data from the particle accelerators at places like CERN. This was an

3   Illinois Institute of Technology, "Driverless City - Coordinated car-following control video," https://vimeo.com/220861581.

4   Illinois Institute of Technology, "The Driverless City - Delivery Space Narrative," https://vimeo.com/220713718.

5   Illinois Institute of Technology, "The Driverless City - Parking Space Narrative," https://vimeo.com/220713710.

6   Illinois Institute of Technology, "The Driverless City - Commuter Space Narrative," https://vimeo.com/220713709.

7   Illinois Institute of Technology, "The Driverless City - Street Space Narrative," https://vimeo.com/220713714.

8   Illinois Institute of Technology, "The Driverless City Scenario Builder," https://vimeo.com/220697336.

All videos accessed February 16, 2019.

interesting project because I got to come in while the software was still in its very early phases, and I got the chance to participate in the process of figuring out what it's benefits should be to researchers, and how to communicate those benefits to them effectively. Because this is a side business, I think of myself as lucky enough to not have to chase work, and I make sure I have time to explore areas of design that I find interesting.

My educational background is in art and design, and I have a degree in design methods from the Institute of Design. Additionally, my full-time job is in a library. My interest in libraries comes from working in one. I'll show library-related examples of my work in a few minutes.

**Framing Design**

At this point I want to provide some context around what I mean when I say "design", because the word can mean so many different things. I'm going to borrow this framing from the designer Hugh Dubberly[9]:

Design as art

The Ecole des Beaux-Arts is an example of this approach, which was dominant through the 19th century, and still very much alive today. In this way of doing design, a designer is someone who makes objects that are beautiful and desirable. I think Jony Ive from Apple is one of the best-known examples of a modern designer working like this—there's an obsession to detail in that company's products that people appreciate. Often, when you say that you're hiring a designer, people will think of a graphic designer or maybe a product designer, and this is the type of person who comes to mind.

Design as science

There are other ways to think of design though, which brings me to design as a science. The design methods movement in the 1960's is where my graduate degree got its name. The people doing this work framed design as a way that repeatable procedures could be developed to solve problems. The approach is very rational. The rational approach to design lives on in things like usability testing, and also in models of the design process where you see a sequence of steps going from research to idea generation, to prototyping and implementation.

9   Hugh Dubberly. "Introduction to Design Thinking," accessed February 16, 2019, http://presentations.dubberly.com/design_thinking.pdf.

But there is a problem with thinking of design as problem solving, because it leaves a lot of unanswered questions. These are questions like, whose problem is it? Who defined it? Who gets to frame the solution?

Design as rhetoric

In the 1970's, designers started talking about wicked problems: these are problems that are so difficult that we can't agree on definitions of the problem in the first place. Issues around climate, race or poverty all qualify. These problems for which there seems to be no stopping point—there is no imaginable way to stop working on them.

I think it's especially useful to think of design as a thing that sets the stage for conversations here, like in the Horst Rittel quote—"solving problems like these is an argumentative process where you raise questions and issues, assume different positions, and argue points in different ways to try to make progress.[10]"

Here the designer is a person who helps to facilitate conversations. This approach isn't just for massive problems—when design incorporates ethnographic methods like interviewing or observing people, and where the idea is to get some kind of new insight into people to help the design process along, designers are doing this kind of work.

Thinking of a designer as a person who tries to facilitate conversations very much appeals to me—so I'm going to show some examples of my work where I've tried to do that.

**Previous Work: Three Workshops**

Persuasive Design

The first project I'm showing is one that's about persuasive  design. I co-presented this at the I2C2 conference in Manchester, in 2014, with the librarians Isabel Gonzalez-Smith and Leo Lo. I2C2 was about "innovation, inspiration, and creativity in libraries." We decided that, at a conference like this, it would be easy for participants to go home, excited to try something new, just to be disappointed when they encountered resistance back home.

Because of that we pitched a session on persuasive user experience design. We focused on Robert Cialdini's model of persuasion[11], introducing participants to the seven ways his model describes persuasive arguments.  Then, for an activity, we introduced a game we called the library persuasion game. This as a deck of two different types of cards.

10  Horst Rittel, "On the planning crisis: Systems analysis of the 'first and second generations'". Accessed February 16, 2018, http://www.csun.edu/~vasishth/Rittel-Planning_Crisis.pdf.

11  Robert Cialdini. *Influence: The Psychology of Persuasion.* (New York: Harper Business, 2006)

There was a small set of seven, one for each of Dr. Cialdini's methods of persuasion. There was also a larger set of 50 idea cards—these were more or less ridiculous ideas for things libraries could try. In the game one person acts as "the persuasive librarian" and the other person acts as "the boss". The persuasive librarian's task is to convince the boss that one of those ideas is worth pursuing. When we did a demo in front of everyone, we used "chainsaw carving in the library" as an example.

This was a great experience—we brought along lots of extra decks of cards for anyone who wanted them, and we gave them all out. It was also interesting to see how people responded to the game. Rather than using persuasion as a way to exert influence over others, a lot of people were excited to bring the game back to their coworkers and managers and play with them—they wanted to use the game as a way to have a conversation about wild ideas and trying new things.

So, this is an early experience where the game we made (a "design artifact" to use designer lingo) helped create an environment where certain kinds of conversations could take place.

Brainstorming

The next thing I did was to team up with the designer Kathy Zadrozny to put together a brainstorming workshop. We did this workshop in two different places—at the Designing for Digital conference that is held every year in Austin, and later on for the Library UX Chicago group, a local user group for librarians interested in library assessment, UX and design thinking. The idea here was that, because brainstorming is such a fundamental design skill, we wanted to give people a chance to practice and develop it.

In the workshop, participants play the role of new employees of a fictional company, Flipman Foods. Through a series of memos, Walt Flipman, the CEO, guides new employees through a series of exercises that take them through a design thinking process—from gathering research, to generating ideas, to selecting an idea and then communicating it succinctly back to a group.

These workshops are fun to give, and based on feedback, they're fun to participate in. When we put a workshop like this together, there is a basic pattern we're copying—there is a way someone runs a workshop to introduce people to design thinking in three hours. They break the design process down into steps, like research, ideate, prototype, implement. After doing this, I wanted to build a bridge between this kind of workshop experience and some of the large design projects that I admire, where people are using design to confront really difficult problems.

Speculative Design

This last project is from last summer, where I gave a workshop in Speculative Design at the UXLibs conference in Sheffield. The theme of the conference was inclusivity, so I took this as an opportunity to explore how speculative design intersects with issues around inclusivity.

In this case the stakes of the conversation are pretty high—I want to be as self-critical as I can be in a situation like this, because as a person who is privileged in many different ways, I realize I bring a lot of baggage into the room with me. I reached out to Isabel Gonzalez-Smith, who I worked with on the persuasion workshop. Isabel has written about the experience of academic librarians of color.[12] She provided resources and advice about how to start building skills in this area. She's given me a lot to work on, and I'm fortunate to have her in my network.

In the workshop itself, we started by looking at the range of speculative and critical design. One of the things I find especially striking is the way these projects can be arranged on a continuum, with what I'll call "empathy-building" projects on one extreme, and provocative or confrontational work on the other.

Killing Me Softly[13] is a choose-your-own adventure game about microaggressions by the librarian Fobazi Ettarh. To me, this game was designed to build empathy. You play as one of two characters—Alex is a white, able-bodied gay man, and Leslie is a black, straight woman with a disability. In the story of the game you start a new job and experience coworkers saying things that are more or less hurtful. You get to choose how to respond, but as you play Alex or Leslie's stress level increases.

In comparison, United Micro-Kingdoms[14] is a project that seems to have been designed to be deliberately provocative. It explores a fictional future England that has been divided up into four states, each with its own technology and political identity. Although the project includes small, toy-sized models of the modes of transportation from each state, the point of the project is serious—to debate the desirability of different political approaches, and to weigh, for example, the pros and cons between authoritarian and liberal forms of government. In these cases designers or people leading discussions should build skill in facilitating difficult conversations. And while in practice a group might more or less agree (e.g., they might generally preferliberal forms of government.) But working in a provocative manner and getting beyond broad strokes, it seems clear to me that speculative design could surface differences of opinion that would be quite difficult to confront and discuss.

After looking at those examples, I chose an activity based on a project from a group called the Yes Men, who are an artist/activist duo who do culture jamming. One of their projects involved making a future version of the New York Times and then going out and distributing it on the streets

12 Juleah Swanson, Azusa Tanaka, and Isabel Gonzalez-Smith. "Lived Experience of Academic Librarians of Color", College and Research Libraries, Vol 79, No 7. (2018)

13 Fobazi Ettarh. "Killing Me Softly". Retrieved February 16, 2019, http://fobettarh.github.io/Killing-Me-Softly/.

14 Anthony Dunne and Fiona Raby. "United Micro-Kingdoms." Retrieved February 16, 2019, http://www.dunneandraby.co.uk/content/projects/666/0.

of New York. The stories were things like "Iraq War Ends", "Maximum Wage Law Succeeds", and "Nation Sets Its Sights on Building a Sane Economy."[15]

For our activity we took blank copies of the cover of the New York Times. Each had a different date from some time in the future. I told the group that their job was to brainstorm headlines and stories for this future issue of the paper. I told them that they didn't have to explore issues around inclusivity if they didn't feel comfortable doing it, but if they'd like to try, they could. Thanks to the librarian Amy Killebrew for thinking of this activity as a quick way to let people experience speculative design.

One especially interesting conversation came out of this activity—one group was brainstorming about a future vaccine that would prevent people from being able to perceive differences between them. Everyone would seem exactly like them. This was especially interesting to me because there was genuine disagreement, and a good conversation in that group about whether or not that would be a good thing.

Every year, UXLibs publishes a yearbook[16] that contains write-ups of sessions. One of the most important outputs of this workshop was the write-up, where I got to do some sense-making based on the experience of doing speculative design with a group. This gave me a chance to explore other people's work, who are doing things like looking at speculative design from a feminist perspective.

**A Definition of Speculative Design**

Here is a quote about speculative design from Anthony Dunne and Fiona Raby, who I mentioned earlier—

"Speculative Design "aims to open up new perspectives on what are sometimes called wicked problems, to create spaces for discussion and debate about alternative ways of being, and to inspire and encourage people's imaginations to flow freely"[17]

This is definitely territory I'm interested in exploring.

**Case Study: The Driverless City**

Now I'd like to show an example of a project that I did not work on. I did have the chance to experience this as a participant though, and I think it's a great example of the kind of conversation that speculative design should be trying to facilitate. This project explores the effect of autonomous vehicles on a city and its people.

15 The Yes Men. "New York TImes Special Edition", Accessed February 16, 2019, https://theyesmen.org/tags/new-york-times.

16 Andy Priestner, ed. *User Experience in Libraries Yearbook 2018.* Self-published, (2018)

17 Anthony Dunne and Fiona Raby. *Speculative Everything: Design, Fiction, and Social Dreaming.* (Boston: MIT Press, 2013)

Autonomous vehicles will be incredibly disruptive, even beyond the massive displacement of jobs for people who drive taxis, buses and trucks, which will be massive in itself. This is the kind of issue that citizens should familiarize themselves with, and they should have conversations about this technology to be more informed voters. When I first experienced this project it was in that context: it was trying to create an environment where people could talk about what the effects of this kind of technology might be.

There was a slide presentation that gave an overview of the project and the technology, and a design artifact—The Driverless City Scenario Builder, which is a beautifully designed set of tokens designed to generate stories and stimulate conversations about the future.

There was also a series of videos about the technology from different perspectives. One, which I'll show in a minute, was about its impact on parking.

Finally, there was an artifact for brainstorming—wall-sized mind maps connecting different concepts around self-driving cars to one another. After prepping us for a discussion with the slide presentation and the video, we got split up into groups to think through these issues, using the mind maps as a guide, and came together afterwards to talk about them. It was remarkable to me how this worked sometimes—one group talked about how crime would be different in a world with self-driving vehicles, and all of the data we expect that they will generate.

Thinking from the perspective of ethnographic methods, where researchers often interview people and groups, this was a way to make the future feel real enough that we could have a conversation about it.

**Case Study: Low2No**

The MacGuffin

A project at this scale brings me to strategy. Dan Hill is one of my favorite strategists. In his book he described certain kinds of "strategic plays", things that he did to allow him to explore certain issues on projects. And I think this has a lot to do with why you might want to use speculative design on a project.

Dan starts by talking about the Low2No project (from "low carbon to no carbon"), a mixed-use development in Helsinki. He started by calling some of the tactics they used what they called MacGuffins—this is an idea from the movies, where a MacGuffin is "an object, event, or character in a film or story that serves to set and keep the plot in motion despite usually lacking intrinsic importance." One of my favorite MacGuffins is

the briefcase from Pulp Fiction. The audience never gets to see what's in there. The contents are just an excuse to put the plot of the movie in motion.

Trojan Horses

He called another one of his strategic plays "the trojan horse"—this is where a project contains other projects. Low2No was a mixed-use development, but it was also—

—a platform for exploring how to use procurement more creatively.

—a chance to rethink food culture in Finland in terms of food retail and food production that emphasize local, organic and sustainable approaches including urban agriculture.

—a chance to provide new futures for the Finnish timber industry.

—a way to develop new ownership and tenancy models.

—a way to explore carbon accounting.

—an opportunity to build communal facilities such as shared saunas which reverse trends towards privatized saunas.

—a chance to introduce the built environment industry to participatory design processes.

—a challenge to enable organizational change within the client organizations, and so on.

Each of the things he mentioned was its own strategic element, and the idea was that the things they learned could be replicated elsewhere. Getting back to my experiences with speculative design so far, it has allowed me to—

—develop my thinking about strategy.

—explore academic work that look at design from a critical perspective and giving my work a better foundation.

—present at conferences.

—familiarize myself with the work of speculative designers around the world.

—collaborate with local designers I haven't worked with before.

—develop relationships with artists through a project at a local arts organization.

—assemble a sequence of readings for a reading group to explore issues around inclusivity in libraries.

—think about the power differences that occur in my interactions with others. This is something I would like to do in my life and in my work. If I am doing an ethnographic-style interview for a project, I try to do my own transcriptions—I often hear things when transcribing that I didn't notice live. Sometimes these things involve power differences between me and the person I'm interviewing.

There is an ACRL publication that I really like called Decision Making in the Absence of Certainty[18]. It talks about the way that an event or project can spark activity in organizations like libraries. I think that the MacGuffin definitely applies—it can be a thing that initially sparks activity and gets people to organize their effort towards some goal. Here speculative design is a MacGuffin that has given me the chance to explore other things, like different projects about inclusivity.

Dark Matter

A case study[19] talked about the Low2No project and issues of culture change in more detail. It talked about how Finland was "a country with a long history of using consensus as a cornerstone for change. Inviting international experts to propose deep changes" in this kind of culture meant that Sitra (the organization leading the project) had to proceed very carefully.

An example of that coming up in the project involved fire codes in Helsinki, which hadn't been updated since the 19th century when timber buildings burned more regularly. Low2No provided the momentum to actually build the consensus to update these codes, and along the way the project teams experienced some of the negative aspects of such a consensus-based culture.

Dan called this the "dark matter" around the problem: cultural elements that were absolutely real, but that people were so used to that they were no longer consciously aware of them.

Using speculative and critical design to think through issues of inclusivity absolutely raises these types of issues. I for one feel that there a focus on inclusivity starts to reveal a whole host of wicked problems, and that design appraches like this may be a good opportunity to confront them.

18 David Mash, *Decision-Making in the Absence of Certainty.* (Chicago: Association of College and Research Libraries, 2010)

19 Martin Bechthold and Anthony Kane. "Low2No: Strategies for Carbon Neutrality. Case Study on the Low2No Competition, Helsinki, Finland." Retrieved February 16, 2019, http://helsinkidesignlab.org/peoplepods/themes/hdl/downloads/Low2No_Case.pdf.

**Speculative and Critical Design as a Continuation of Design Thinking**

Although this may seem like a strange or even radical way for designers to work, I think that it is a continuation of work that is already happening. For people that do design thinking or human-centered design, ethnographic techniques are really central. Most models of the design process, like the ones we built our brainstorming workshop from, begin with something like observations or interviews, and then they proceed through idea generation and prototype building.[20]

From my perspective, speculative and critical design is an excuse to do more in-depth research and strategy in the beginning of a project, to set the stage for a good conversation with the people who will be affected by whatever it is you are going to be designing. For future-thinking projects this helps make the topic real. As an example, most people have not had interactions with self-driving cars—but videos, diagrams, and games can help participants develop a fuller picture of this technology.

But the critical aspects of the approach are also an opportunity to "debrief" and to make sense of research sessions by drawing on different, critical perspectives.

**Speculative and Critical Design as Something New**

At the same time I think that speculative and critical design is doing something new. This is Stewart Brand's pace layering model, from his book "the clock of the long now."[21]

I think that one of the things that might make speculative design seem strange is the look of it—its aesthetic approach. Trends come and go, and I think that designers are probably more prone to chasing the latest trend than the average person. So maybe it makes sense to think of the look of speculative design in Brand's fashion layer—something that is mercurial and quick to change.

But underneath those experiments with what design should look like, I think that there are things that designers have been doing for a while now: still incorporating research, ethnographic methods and strategy, here they're just packaging it in a new way. I think of these slower changes as something taking place in the layer of commerce, the product a designer is actually selling to his client.

But to me where speculative design is genuinely more radical is below the level of commerce—if it really does start to think about problems from an ethical perspective it's quite a big change. The artist Hito Steyerl wrote a short essay about artists and freelance work.[22] She talked about the history of the term freelance—she described a freelance is a mercenary

20 Joanne Mendel. "A taxonomy of models used in the design process." Retrieved February 16, 2019, http://www.dubberly.com/articles/taxonomy-of-models.html.

21 Stewart Brand. *The Clock of the Long Now: Time and Responsibility.* (New York: Basic Books, 2008)

22 Hito Steyerl. "Freedom From Everything: Freelancers and Mercenaries." From *The Wretched of the Screen.* (Berlin: Sternberg Press. 2012)

soldier, someone who will go and fight for whoever pays the best. Dunne and Raby might say that a designer who does that is working in that way is doing "affirmative", not "critical" design. I think the social and ethical aspects of speculative design are an attempt for design to get past that. If they can, I think that will be a very good thing.

I mentioned a new project at the beginning of this presentation. A fellow designer and I are developing the curriculum for a reading group on speculative design and climate change with a local arts organization. It is turning out to be a good way to stress-test design approaches that aspire to be able to tackle massive problems. I know I am already learning a lot.

Please keep in touch, if you'd like to keep up with this project and to borow or build upon the materials we produce. You can reach me at john@johnjung.us. Thank you very much.