the
little
book of
Speculative
NGO Design
for
Community
Groups

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TheLittle Book of SPECULATIVE DESIGN for NGOs & Community Groups

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Contents

What this little book tells you

This Little Book presents what *Speculative Design* is, what are its benefits for NGOs and Community Groups, and how it can be used by these groups in Malaysia, as well as other countries.

Non-Government Organisations (NGOs) and Community groups across the world are seeking new ways of engaging communities and of raising public and Government awareness of the challenges they face.

Speculative design is a relatively new method used to provoke, inspire and provide a critical commentary of alternative possible futures (Dunne & Raby, 2013), which can help in addressing community challenges in creative ways.

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What is Speculative Design?

Speculative design is an approach that enables thinking about the future prospectively and critically (Sterling, 2009, Dunne & Raby, 2013).

Speculative design raises various "*what if*?" questions about the future. What if change is needed? What if things were different? What if we changed in these particular ways? Then it imagines what happens.

It creates scenarios around these "what if" questions with tangible and realistic objects, designers can fabricate an experience of that possible future. These typically take the form of short sci-fi films, interactive prototypes, user manuals of future technologies, newspaper articles, consumer product/service catalogues and many others.

Speculative design:

- does not aim to predict the future, instead it places new technological developments within imaginary but believable everyday situations that allow people to debate the implications of different technological futures before they happen (Linehan et al., 2014; Lee, 2019).

- tends to be provocative, which means it has a strong political flare and engages people in debate and raise questions about direction of society.

- can develop dystopian future scenes to shake things up; utopian (ideal) future scenes to inspire public agencies to aim bigger; and alternative future scenes to explore the futures that ordinary people would prefer.

Speculative design can be employed to explore citizens' views, focus concerns and generate public and policy debate to address and re-imagine the challenges society faces. It is becoming a new method through which community groups can to speak to power.

Why use Speculative Design for addressing community challenges?

Community groups and organisations, such as NGOs need new tools to become more future facing in their decisions to look beyond the next 10 years and address the challenges that societies are facing today.

By venturing into the future, community groups can identify key opportunities, investigate challenges and possible complications. By bringing these futures to life, through tangible future artefacts, community groups can demonstrate to government and the wider public what these futures might look like and explore their implications. Where extrapolation helps us contemplate what is likely to happen, the probable.

Speculation draws possibilities to the surface and allows us to imagine more radical changes, to prepare for what could happen, and plan for what we want to happen.

Developing future scenarios in the form of speculative designs, where community groups engage with public services and emergent technologies, is not without challenges, but it can be beneficial too. The challenge lies in understanding of current and emerging technology and engaging citizens in unfamiliar territories that are typically reserved for, and explored by, experts.

The key benefits include the development of a more enhanced understanding of complex services and using speculative design as a tool for reflection, as well as interrogation, of future possibilities within these groups (Tsekleves et al., 2017).

Furthermore, while a slide of statistics or a PowerPoint bullet point will always have their place, working with speculative designs can catalyse participants to dig deep into the meaning and consequences of issues.

Moreover, speculative design encourages and enables citizens to raise ethics-related questions that may not have been possible through a typical debate. It can also help negotiate peoples' understanding, and question entrenched positions that may lead to positional shift.

In the case studies presented below, speculative designs were seen as innovative prompts that build empathy and provoke creative thinking among citizens much more than traditional communication mediums from government such as written reports, PowerPoint slides, etc.

By breaking down the barriers between research participants, speculative design can create empathy and therefore deep insight into highly specialised data. They can create a symbiotic relationship between citizens as participants in the policy process and NGOs as researchers.

Using speculative design as a means of community and citizen engagement could change attitudes of the general public towards specific societal challenges, perceptions and policies.

Case studies in addressing community challenges using Speculative Design

Various forms of speculative design, have been explored by researchers and community groups in Canada (Case Study 1), Malaysia (Case Study 2), and the USA (Case Study 3) to assess their potential to contribute to community engagement and in addressing community challenges. These are presented in the following pages.

Case Study 1

Thinking with Chemical Stories: A Design Fiction Pilot brought together disabled artists, designers and academics to explore possible futures at the intersection of chemicals, health and disability through the co-creation of speculative designs (Darby, 2018). The project was delivered under the directorship of Dr. Esther Ignagni of Ryerson University and was funded by the Women's Xchange Challenge fund and administered through the Women's College Hospital in Toronto and by a Seed Grant from the Faculty of Community Services, Ryerson University.

The workshop, held in Toronto, Canada in 2017 was facilitated by a speculative design researcher over five-days. The group was made up of 5 participants from the arts and 4 participants from academia, Ryerson University and the University of Sheffield (UK). Participants were recruited through pre-existing relationships with partner organisation, Creative Users, and academics at Ryerson University. They were purposively sampled based on their likely interest in design fiction as an approach and their likely ability to offer insight into the topic area.

Within the speculative design workshop, participants explored 'how disability could be re-imagined and re-storied as a desirable way of living within chemical encounters' (Chandler et al., 2019). Several speculative design concepts were developed through the week. However, the primary speculative design output from the workshop was Painsonic. The speculative design was co-created in the workshop through the simple prototyping of a 3D modular arm piece using cellophane and tape and a mocked-up Facebook page that imagined the product in-use in the world. The Painsonic product system featured a networked garment managed through a phone app.

The 'painsuit' was fabricated using vibra-tactile technologies and organic fabrics and harnessed the relational quality of pain to create a collective and connective alternative to pharmaceutical pain management. After the workshop the group developed the idea independently, presenting a corporate website from 2022. The website, www.painsonic.com, featured wireframe models of the app being used, pricing structures and customer testimonials.

Figure 1. Participants prototype the modular arm of the PainSonic pain-suit from cellophane, tape and paper.

Insights were developed both from the process of creating the speculative design, from subsequent reflection and from sharing the Painsonic in academic contexts. While engaging with the issues through speculative design helped to centre marginalised perspectives. However, most notably, the development of the prototype, the networked garment, was seen by participants as an instance of proto-activism, through which the impact of techno-ableism could be considered. While this project had no intended relation to policy-making, it highlights the potential for speculative design in policy-making to reflect, embody and address activist concerns.

Case Study 2

The ImaginAging project explored how might speculative design enable citizens and governments in Malaysia engage in policy agenda setting on ageing well in an urban city environment. The ImaginAging project work has been carried forward and expanded in the ProtoPolicyAsia project.

ImaginAging followed a co-design research methodology similar to ProtoPolicy. It included workshops with senior citizens living independently in the community and a workshop with experts. Speculative designs were developed by workshop participants, which were then refined by the research team into higher quality prototypes.

Figure 2. Co-designing speculative design concepts with senior citizens in Malaysia.

During the workshops, health was highlighted as the primary area of interest/concern for senior citizens, followed by independent living. The characteristics of health was evident in a theme about food and nutrition. A group from among the workshop participants chose to focus on reducing sugar consumption in all foods.

The group developed a 'Sugar-free Malaysia 2050' speculative design concept, which comprised of two speculative design prototypes. A future newspaper with two different front headline covers set in 2050 (one presenting the benefits this policy initiative will bring to Malaysia in terms of health, economic and social development; and the other presenting what will happen if high sugar consumption continues in Malaysia). A 'sugar neutraliser' speculative design was also developed presenting a future product, and thus showing that a new market may emerge in this area, which removes any processed sugar content from drinks and food.

Figure 3. The 'Sugar-free Malaysia 2050' speculative design.

These speculative design prototypes were aimed at generating public debate about the effects of sugar in food consumption in Malaysia and ways that this can be tackled at policy level. The following workshop participant quote exemplifies that their Sugar-Free proposal includes the national and multi-generational focus:

> "So we've zeroed it down to a particular vision, that we want a sugar-free Malaysia by 2050. [general gasping] 2050 because, sugar is as- is in every part of our lives, our food and all that, and of course to get people to say, 'I don't want to use sugar' will take a long time, it involves changed management, mindset change, that would take a generation or more. So, even though it's 2050, we'll take it step by step. Maybe every five year or so, we'll have various strategies in place, action plans in place, to execute a sugar-free uh... economy, ya. The rationale being that even now, 40 percent of our school children are obese. I think their- BMI is 25 and above I'm not mistaken." [Workshop participant quote]

This project aimed to disrupt the usual top-down approach to policy-development that tends to be adopted to develop without sufficient consideration of the lived experiences of the intended beneficiaries and what they see as their priorities.

Policy-makers were able to understand that the designing of a problem out of which they could prototype long-term policy-solutions was much more complex and requires a more systemic consideration beyond the identification of a policy gap.

The ImaginAging project findings reveal that despite participants' initial reluctance they were able to use speculative design to arrive at a successful outcome, creating a future that they would want to live in themselves as well as for the next generation. The activities allowed participants to realise their wishes in a non-conventional manner and expressed their creativity within the present and the future.

Case Study 3

In this project, the Near Future Laboratory, explored a future of self-driving cars and their implications for urban policy[2]. To spark a conversation on the larger questions regarding a world of autonomous vehicles, they created a tangible artefact from the near future of the self-driving car.

They ran a workshop at Interaction Design Association Conference in 2015 in collaboration with students from the California College of the Arts and conference participants to create the interaction design for a self-driving car. They did this as a way of digging into the details, discussing the known topics and raising many more unknown ones. This led to the production of a Quick Start Guide (The 'Helios quick start guide'[3]) for a technology that could substantially change mobility in the future.

Figure 4. The Helios Quick-start guide speculative design (Source: http://nearfuturelaboratory.com/.

[2]For more information of Near Future Laboratory and the project see: http://qsg.nearfuturelaboratory.com/?mc_cid=d6c93f53ca&mc_eid=4f18920feb

[3]The quick-start guide is freely available at: https://shop.nearfuturelaboratory.com/products/helios-pilot-quick-start-guide

By creating additional points in the future where self-driving cars were the norm and combining well-known brands from today, it enabled them to explore additional services and raise questions about the future society this would create.

For instance, combining self-drive technologies and Uber led them to wonder, what if you could add your self-driving car into the modern-day taxi network? You could make money when you weren't using it. But then, what do you do if you forget a bag of groceries after sending it into Uber mode?

The questions kept multiplying. Will there be a geo-fencing mechanism to control where the car goes — and how fast it goes — when you give the "keys" to your teenage son to take to football practice. Will it be able to give you discounts when send your car to get Pizza Hut for dinner; will you have to take your car to go through the Amazon Pantry Pickup Warehouse to do your grocery shopping? Will it enable commuters to take a nap while on the way to work and hence be more productive?

In a related project[4], in order to explore the urban planning policy implications of self-driving cars, the group created a physical map for a city which can be given out to the local public, or tourists. This raised questions as what would be in the map and why? It generated debates with stakeholders about the challenges that would be faced, the failures that might occur, the brand names of services, new kinds of signage, etc.

[4]See: https://shop.nearfuturelaboratory.com/products/self-driving-geneva?mc_cid=d6c93f-53ca&mc_eid=4f18920feb
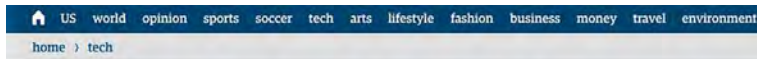
Figure 5a and 5b: Using well-known brands to place the speculative designs in a familiar future (Source: http://nearfuturelaboratory.com/).

How to use Speculative Design in addressing community challenges

To start the research design, identify the policy space and establish any key issues for consideration. Then clarify the research question(s) and determine the nature, extent and timing of any public participation and speculative designer involvement by developing a brief research design. Make sure to establish the key points for data collection and consider suitable approaches to qualitative analysis, such as thematic coding and content analysis.

There are many ways to make use of speculative design in addressing community challenges in parallel, or in series, with other methods and as a stand-alone study. Below are three project descriptions outlining some speculative design in addressing community challenges research designs:

1. NGOs or community groups commission a speculative designer to create speculative artefacts as a critical provocation for private discussion among themselves. The intention of the project is to offer NGOs difficult or unusual perspectives from which to consider familiar policy issues

2. NGOs or community groups commission a speculative designer to create speculative artefacts as a critical provocation for open discussion among key groups, and that discussion is captured. The intention of the project is to prompt debate about complex issues and gauge significant publics' reactions to a radical possibility.

3. NGOs or community groups commission a speculative design facilitator to support community groups in exploring a policy space. Together they develop ideas for speculative artefacts that embody their responses to the issues they see. Based on their work with the community, the speculative designer further develops the concepts, bringing speculative artefacts back to the group for iteration and validation. The speculative designs are shared among the wider community through a series of open public workshops. Responses are captured and used to understand the perceived benefit, need and viability of the speculative design in order to guide policy development. The intention of the project is to explore a policy space, reveal public understanding of complex issues, and to prompt ethical debate and gauge public reaction to the presented possibilities, be they solutions or critiques.

Speculative design in in addressing community challenges may be practiced by speculative designers, or by participatory groups facilitated by designers, or design researchers. It may be pursued with an anticipatory (looking towards probable futures) or exploratory mindset (considering alternatives to the probable futures), creating artefacts either affirmative of, or critical of, the status quo. Insights may be derived from the process of making the speculative design, as well as from the act of sharing, the speculative artefacts.

These artefacts may be employed within the process as inputs to further acts of speculative design or as outputs in themselves used to catalyse debate. As such, they can stimulate debate among a specific audience, or more widely among the general public, generating further insights as it does so.

Within speculative design for community related projects, project leaders should consider the research design parameters mentioned above as dualities. While some are necessarily binary, others–exploratory/anticipatory, critical/affirmative, & making/sharing–may be held in productive tension. As ever, the selection of research design parameters will emanate from the research question, or topic area, and the degree to which a participatory paradigm is adopted. There will always be a question as to exactly how participatory, co-creative or consultative the research design can be when speculative design in addressing community challenges works with necessarily small sample sizes. However, this should be recognised as a feature of a qualitative method, not a limitation of a quantitative one.

The artefacts created through speculative design in addressing community challenges projects combine a deep engagement with current issues with ethical and political concern at society's direction of travel. They are both an examination of social and technological possibility and a concrete expression of that intersection, as such they may be conceived as either exploratory or investigatory acts that speak to various degrees of likelihood or desirability.

What do I actually do to use Speculative Design with communities

Potential futures contend with each other for supremacy, they intersect and interact in many unexpected ways. And they can grow from the smallest of things, just like trends. So where do we look for the small signs, the trends, where do we find the first beginnings of change signals? How do we identify the things we need to think with?

You might use something like the trend map below with many intersecting lines of possibility. Or you might work with trends in a more everyday way, or somewhere in between.

The PESTLE framework may be familiar to some as it is commonly used in risk management where more headings are developed below each category. PESTLE is a mnemonic which in its expanded form denotes P for Political, E for Economic, S for Social, T for Technological, L for Legal and E for Environmental. It gives a bird's eye view of the whole environment from many different angles that one wants to check and keep a track of while contemplating on a certain idea/plan.
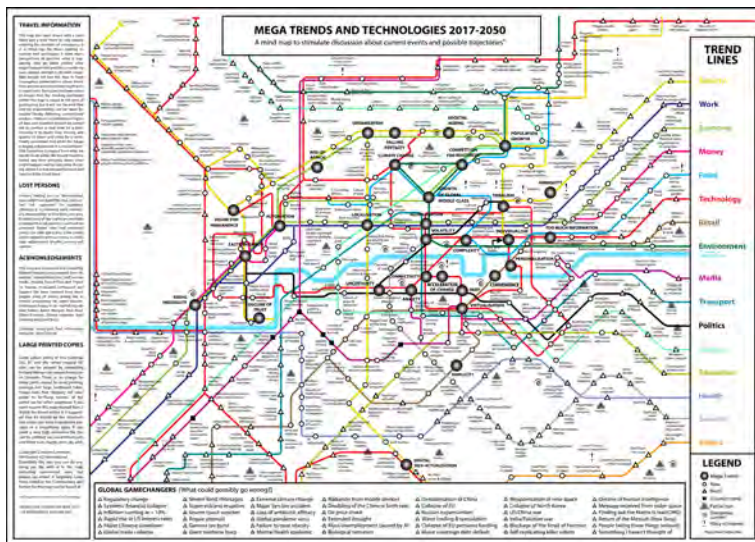

Figure 6. Trend map example (Source: Richard Watson, www.nowandnext.com, 2019).

For many of us Technology has been, and continues to be, the biggest disruptor of our age. So, there is plenty to consider from that angle, indeed that is where the roots of speculative design reach back to, but there are also shifts in Politics from left to right or right to left, in Economics there is the fast boom and bust, or the slower growth and decline. There are all kinds of Social shifts, The Legal system is always reinventing itself through case law and precedent. And there are longer term trends in the Environment that cannot be ignored.

Using the PESTLE framework is a good way of identifying different trends and insights. The questions in the table below will help you on getting a start on this.
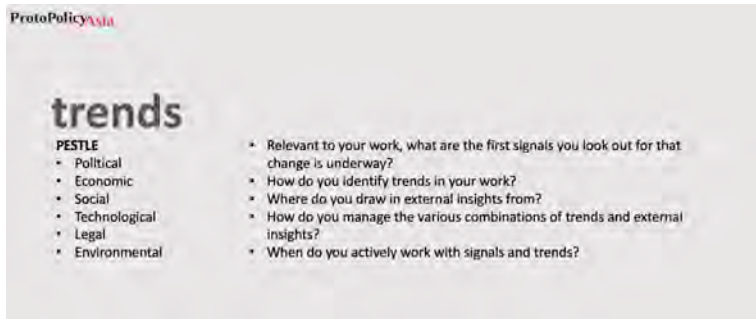

Figure 7. Using the PESTLE framework to develop speculations.

Combining and crossing trends is a great way of developing interesting speculations. Here are some steps towards speculations.

1. Identify a topic area, consider the issues and how they affect different people.

2. Identify a current trend, or trends, that help to shape our understanding of the topic area or exacerbate the issues and consider how it, or they, intersect with the topic area.

3. Specifically consider technology trends that might intersect among themselves and think how they might intersect with the topic area.

4. Create speculations at this point of intersection. Create as many What if? questions as you can. Cross your ideas! Have confidence in your questions. As examples, here are some 'What if?' questions from Dunne and Raby's 2013 book, Speculative Everything: Design, Fiction and Social Dreaming, "What if human tissue could be used to make objects? What if everyday products contained synthetically produced living components? What if we could evaluate the genetic potential of lovers? What if we could use smell to find the perfect partner? And, what if our emotions could be read by machines?".

5. Among all the speculations that are created look out for the unexpected ideas, the ones that are a little provocative. The more speculations you have the more likely it is you will get something interesting.

The speculative design, the thing, springs from the speculation. Therefore, developing the idea for a product, service, or bundled product and service helps articulate the story of a thing. Someone has a problem, a solution is presented through design, the problem is alleviated or resolved, and a life is transformed.
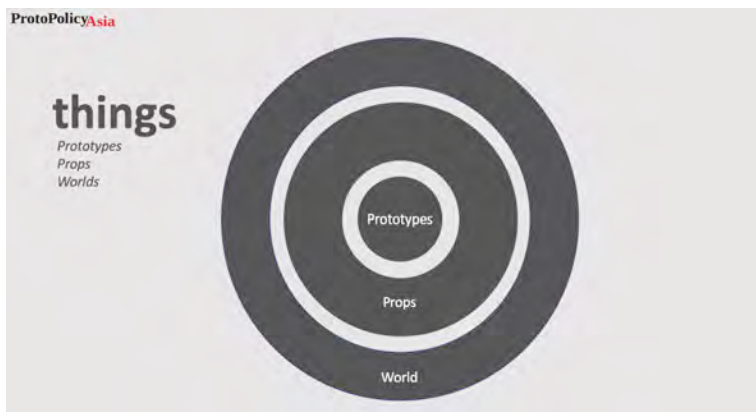

Figure 8. Developing speculative design prototypes, 'things'.

So, we need to know the story of the product? We can start by making a scenario, like the one shown that begins to point to features. And we can do that even more productively by making a version of it to really explore its features and how it might work for whoever uses it or benefits from it.

And if we can't make the thing itself then there are other things we can make that point to it. For example; paperwork, instruction manuals, flyers etc. can take sides in an argument or tell the stories surrounding the product in a more textual way.

We also need to remember that such a product could only occur in a specific context and the overall design concept indicates how the imagined world operates and how it is different to our own.

Speculative designs are thought experiments that encourage us to think differently about the world, to do so they make statements through design that provoke debate. So, when making them it is important to test the ideas to see how many of them make you think differently about things.

We can approach these methods from either a fantastic or mundane perspective. Does the idea change the more everyday it is? The more mundane it is? Or does it make more of a point if it is more fantastic? Not fantasy, but somehow less tethered to the real, to the everyday that we know. How do changing these things make the design come alive as a way to say something to its audience. How does it tell its story or make its argument?

So, to recap, at their simplest level speculative designs ask What If? questions. What if this thing existed? What if it existed at its most minimal, its most ordinary? What if it existed at its most maximal, its most extraordinary? And at such and such a time? And in this particular place? What is the nature of this thing's benevolence, how viable is it that it might come about, and what is the commercial and social need of it?

Summary

Design methods such as speculative design might create a symbiotic relationship between community groups, governance structures and the wider public. Including speculative design as a tool that pushes boundaries, can serve as an opening for community groups to engage further with the wider public and governments.

The benefits of speculative design in addressing community challenges are the added value of an enhanced interaction between NGOs and community groups in the form of physical objects rather than more traditional communication mediums. These types of interactions can contribute to more inclusive ways of addressing community challenges and identifying new policy areas that may need addressing, as lengthy government reports isolate those tranches of society that arguable might be able to contribute the most to the policy process.

Lastly, the data and insights generated by speculative design can create empathy and a deeper engagement of community groups and the wider public.

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