A Wilfully Optimistic Manifesto for the Things that Scare Me

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Now is the time! We live in an age when we have unprecedented opportunity to use technologies to make richer, more engaging, and more fulfilling worlds. All we need is craft, resourcefulness, courage, and a certain sense of humour.

Of course, these days it's easy to be a bit nervous. As computer systems increasingly coalesce with each other and the physical world, the advantages they offer seem to be balanced by their dystopian possibilities. But I'm not so worried about drones flying drugs to prisoners[1], robots raising children[2], driverless cars killing passengers[3], or even AI threatening mass unemployment[4] and outstripping human intelligence in a singularity[5] that could threaten humanity itself[6]. The sheer drama of these overt, headline-worthy dangers will rally the forces needed to address them[7]. No, what worries me are the more insidious threats that IoT, Big Data and the like present to our social, cultural and personal lives. Chief amongst these is the *coercion through convenience* that characterises so many current developments. This is the tendency for services and systems to seduce us into acting against our beliefs or interests by making life just a little bit easier, and, conversely, by being tiresome to avoid. For instance, who can resist Uber's convenience and low fares, despite knowing it lowers drivers' pay and conditions, undermines local businesses, and avoids paying taxes? Aren't ebooks great, once you get past the guilt of seeing bookshops close? Doesn't the seamless way your phone, tablet and laptop connect with one other and a plethora of online shops outweigh any concern for the way corporations have access to so many facets of your life?

Coercion through convenience not only leads us to give up our privacy or collude in societally harmful activities. It also leads to totalising world views as our perceptions are shaped by the tools we use. It separates us as we cluster to products, services and sites that cater to our interests and confirm our beliefs. It deskills us as we increasingly rely on our technologies to find our way, to bring us information, to suggest products and drive our cars. And it leads us to channel our money, micropayment by micropayment, to the Silicon Valley businesses who benefit from the economies of scale offered by the one-click economy.

But we're designers, and we don't despair!

We know that we fundamentally shape the world, by working between materiality and humanity – even, one is tempted to say, between the corporeal and spiritual. If we are sceptical of coercion through convenience, then we can work against it. Even better, we know some tactics to proceed:

- Design for openness. Many systems try to match people's desires closely but end up teaching them to want what they offer. Creating systems that maintain openness, or even ambiguity and ambivalence, allows people to engage with them as they want. The trick is to offer resources, not solutions. Ideally, this

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[1] bbc.co.uk/news/uk-36302136

[2] theguardian.com/technology/2016/sep/29/ipal-robot-childcare-robobusiness-san-jose

[3] newscientist.com/article/2095740-tesla-driver-dies-in-first-fatal-autonomous-car-crash-in-us/

[4] ft.com/content/063c1176-d29a-11e5-969e-9d801cf5e15b#axzz40LiuFHpZ

[5] www.singularity.com/qanda.html

[6] en.wikipedia.org/wiki/Open_Letter_on_Artificial_Intelligence

[7] And if not, at least we can hope that our robot masters will treat us like pets, not livestock: www.auger-loizeau.com/projects/robots

will offer almost as much convenience with far less coercion (e.g. Wakkary et al. 2015; Lim et al. 2013; Gaver et al., 2004).

- Design for particularity. One of the reasons systems shape us instead of fitting us is that they are designed for mass appeal. The advent of low cost batch production means products can be developed for niche markets, designed for alternative values and to capture odd perspectives. The new worlds they offer may enrich all our lives (e.g. Wallace et al., 2013; Gaver et al., 2010).

- Design to reframe data. The internet is awash with user-generated and so-called 'big' data. In many contexts, these lead to the sorts of siloed, totalising world views I decry earlier. But they also provide a rich and virtually unlimited resource for design, capable of offering surprising new perspectives and insights if they are framed in different ways than they were conceived (e.g. Gaver et al, 2016; Hansen & Rubin, 2002)

- Design for (re)making. As rapid prototyping and microprocessor platforms become widespread and affordable, opportunities grow for distributing designs rather than finished products. This is a new focus for our studio's work, as we work towards designs that suggest new perspectives through their idiosyncrasies while remaining open for adaptation and modification. In the long run, this may become the basis for new ways to distribute and acquire computational products that provide an alternative to the oddly homogenising effects of Silicon Valley's so-called disruptive technologies.

More fundamentally, we know that design, and design research, is *emergent*. Relevant questions, issues, and even areas of concern appear and change over the course of a project. As Schön [1983} and Rittel's [1974] accounts suggest, design must be situated, flexible, and a matter of designers' embodied knowledge to address the complex situations in which it operates. Scientistic approaches, involving a priori hypotheses and questions, formulaic methods, and 'generalised' theories will only recreate a mass-produced culture of coercive convenience. Instead, we need to reconceive design research to suit its emergent nature. This will require valuing particular narratives of design processes, and design outcomes that don't seek to provide the best solution but to open new encounters with the world. Most of all, it requires appreciating the kinds of inconvenience that give rise to intrigue and wonder, the inconveniences of designed worlds complex enough to be engaged with in multiple and divergent ways.

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