

2016 Conference Transcription

Date	Thursday 31 March, 2016
Session Title	Intelligence
Session Time	10:30-12:45
Moderator	Vikas Shah
Speakers	Lydia Nicholas
Notes	n/a

Intro	<p>Hello and welcome to FutureEverything's 2016 festival podcast series. Over two days, in Manchester's iconic Town Hall, we tasked designers, artists, scientists, and many more, to rethink our resources. From life, earth, and intelligence, to community and uncertainty, our speakers ask what we might need less, and more of, in our near future.</p> <p>How does data make it into the public? And with so much information at our fingertips, how do we make sense of it? In the intelligence session we heard from Lydia Nicholas, an anthropologist and senior researcher in collective intelligence at Nesta, she uses speculative design and science fiction to make sense of health and medical futures. In 2015, Lydia curated and contributed towards 'Infectious Futures', a publication which tasks science and speculative fiction writers to imagine a world without antibiotics.</p>
Lydia Nicholas	<p>I'm an anthropologist and I work as a senior researcher in collective intelligence at an organisation called Nesta. Today I want to talk about our intelligence, and about particularly, how interacting with tools, and tools that are intelligent themselves, can bring about shifts in our processes of thinking, of how we decide and how we discover and debate the ways that we value and understand different kinds of information.</p> <p>My work tends to involve looking at how people interact with smart tools a lot. It could be how people with chronic illnesses share information about how to be a better patient, how to understand their medication, or how people in mapping projects share their ideas and manage their technology. And a lot of the time it feels like an urgent point to make and to reiterate that a lot of these changes that are brought about by our interaction with these technologies are deliberately designed, and they can disempower and silence the vulnerable. And we need to go forward with these, conscious of the way that humans' extraordinary capacity to adapt does make us vulnerable to change, and consider how we might start to push back against those that are being encouraged, and by those that design our tools, to think boldly and broadly and more consciously about how we can</p>

work towards a more ethical and positive future. It's a big aim for twenty minutes, but it might be just enough time to frame the question. So like a lot of people here, I'm interested not just in how technology will develop, but how we will. How our values and our interests will shift. Basically, when I get my jet pack, what will it mean to me? Will it be a symbol of independence? Of waste? Will it be gendered? A marker of status? Because future Lydia might want very different things. She may have very different priorities, different habits, different assumptions about the way the world works. All I've been able to tell from this artificially aged one is that she definitely isn't very happy. It's a bit of a truism that we overestimate the short-term impact of new technologies, but underestimate long-term change. And I think that's because we often forget that when people create tools those tools in turn recreate us as people. Will artificial intelligence take over the world? No. At least not in any way that we currently understand.

It's spectacularly unimaginative to assume that this new, other intelligence will wake up one day and decide that it wants a land war. But it is already autocompleting our questions and our movements, it's choosing which parts of the lives of which people we see, what we're sold, what opportunities are advertised. I had to get up early to blur these photos, because I realise the probability of one of my top matches being in the room was way too high. And when technologies take over critical thinking functions, the changes are real and physical. Our brains are superb delegators. As soon as we learn to write, we stop storing sagas in our heads. We were able to develop longer and more complex, and subtle stories to extend the reach of artistic and intellectual discourse across time and space. We don't just extend, we make trade-offs; so we'll know that when taxi drivers spend their two years learning London's streets, the back of the hippocampi, which are dedicated to special memory, swells. But at the end of those two years we also know that they perform worse on visual memory tasks managed by the front of the hippocampi. So their brains have decided to make that trade-off in resources.

This is a picture of a brain from the taxi driver study, but it doesn't matter, because I know that statistically you are likely to rate this talk more highly just because it includes an image of a brain. I don't know what it means, it's just that's the right brain. Uber drivers, of course, make a different trade-off. They don't need to know London's streets by heart, but they do need to manage the constantly evolving visual puzzle of managing that updating map of working out where is the best place to position themselves to take advantage of fluctuating fares. And when we have access to online storage of information, we stop remembering the specifics of that information. Instead, we remember how to access it.

As search technologies develop, we've learned how very little we can get away with. That's literally all I remembered to remind myself as I wrote the talk. For instance, we're here to talk about the future, assuming that it's this unknowable thing, but that's not the only way the future has ever been understood. For much of human history, people thought that they lived, not at the end of time, but securely in the middle. Medieval Christians knew that the future involved the return of their god, judgement and the harrowing of hell. History had been

thoroughly spoiled for them. The idea of the shape of time was interwoven with the technology and the social systems that they knew. They could assume that over the next century, the technology of a cart would not specifically change, and neither would the social order or the ranking of their family. So for a wheelwright to lay down wood to cure in time for his unborn grandson to cut to make his own wheels, well that made sense, nothing would change. And they'd formed this understanding of time and these cyclical identities to themselves every year in the mystery plays. Every year the guilds put on the same plays of Bible studies from war in heaven through Jesus, through the present, to doomsday. And the same roles were played by the same families over and over again. The culture and the technology and governance all interwove with this, very alien to us, way of thinking about time.

Our current view of the future has us dangling over the cutting edge of time, gazing wildly out into the dark, and it's a model that inspires fear and urgency that's very useful to advertisers who can promise that their touchscreen toenail clippers, or their Bluetooth pillow, can provide a handhold, can help us survive out there in the unknowable dark. But it's a terrible model for encouraging us to invest. The Romans built for millennia, the Victorians for centuries. Dubai's towers have a life expectancy of a couple of decades. And it's really terrible for motivation to fix anything, like climate change, or to do much that isn't writing [collapse porn? 07:31].

These shifts in perception, from tech and systemic change, change not only these abstract concepts, but reach deep inside us to visceral ways of understanding ourselves, sliding between feeling and understanding. A lot of my work has been around health, so that's where I'll pull the examples from.

At the turn of the twentieth century, the UK government was worried that the poor health of children would leave them short of recruits for wards. The 1907 Education Act included periodic medical inspections to schools, screening for disease, but current and potential, and tracking growth and mental development against the populations curve. A child's health from then on no longer consisted of her feeling sick or of her being incapable of participating in education, but of risk factors, of her failure to conform to the correct curve. In risk society, you are never well, you must always actively be scrabbling to stay at the right end of the risk curve, and the footing is unstable. Behaviours considered healthy one week may not be the next, the average. The expectation of health will also change. A failure to manage these risks easily slides into being perceived as a moral failing, even though so many of those risk factors are things like taking birth control, or being male, or being over fifty, or stress and poor diet, or simply and directly being poor.

And so over the century, health moves from the opposite of illness for statistical function to something that you can't see or feel, but only know through ever-shifting patterns which are increasingly complex and invisible without the lens of expensive big data analysis, or through the lens of your expensive fitbit. So we learn not to trust ourselves or our intuition. These quotes are from interviews and workshops that I ran about a project about quantified self. Here they're quite explicit about the pool towards a reliance on numbers, and

negation of any kind of experience that isn't captured and processed by an external data system. Not being well is no longer something that you can know on your own. These people could all afford their own data collection systems and projects, and they could afford to push back against risk, society's tendency to obscure the individual. They could make themselves understood on their own terms, but if you don't have that education, if you don't have that time or cash, your body, or the understanding of your body, has moved outside of your own control.

Also our identities; the simple version of what does it mean to be me? There are tugs there too. In the West, building on from the enlightenment, we've tended to conceive of ourselves as individuals with individual rights, with responsibilities and choices, including the choice to fail. But in many places, identities overlap more; you might consider yourself first to be part of a family or a community. The shame or the success of one becomes that of all. If these relational identities are intertwined with a strongly patriarchal culture, then you end up sometimes with women becoming only an extension of their father or their husband. Their chastity is the exact same thing as his strength, his display of power.

This is an amazing quote from a TV show that a friend of mine wrote that [inaudible 10:51] and it is amazing and you should watch it. Stuff is on TV that's good. I know I'd forgotten. So we can think about these kind of overlapping identities as old fashioned, but in fact, there are a lot of signs that we're being pushed towards that kind of identity becoming our assumption again. My Facebook profile page is made up, in large part, by the actions of other people, by their comments, by their responses, the photos they've taken and the things they've chosen to upload and tag me in. My Twitter feed is clustered with retweets. My status there is determined by other people's decisions to follow me or to engage with my ideas. And that's how I get a lot of my work, that's how I make real relationships with real people that have an impact on my life. For me, that's a positive thing and I'm relatively privileged, but of course it matters more to someone from a conservative family when the friends that they make at a gay pride event tag them in photos.

Dan O'Boyd uses the example of young, black American men from disadvantaged backgrounds, who are plying to college. They're expected to make their Facebook profiles public so their colleges can inspect them, and to product a clean-cut, high-achieving identity. But their neighbours and their families and their schoolmates, who have their own expectations of connections, might be posting language or imagery or actions, that while not necessarily illegal, don't conform to the idea of an elite institution's idea of what a college applicant should be.

In China, this is becoming explicit in the social credits system which ranks you, not just by your financial transactions, your social media profile, your arrest records, and your career progression, but also those of your friends. Cutting off that cousin who posts to Weibo about government corruption will make it much easier to rent a car or get a visa to Singapore. Our identities are becoming more leaky. We are increasingly responsible for each others' ways of being in the

world, and it's harder to keep aspects of ourselves separate or to maintain different faces for different places.

From those who come from communities with resources that speak or which act in the same way as the establishment, they might be pulled upwards as they always have been, but for those who speak in a different way, it's harder to escape or to change, to maintain a self that thrives in separate diverse spaces.

The systems that we use to connect with one another, to manage our health data, they're all growing more complex and intelligent, and as they support us in working and connecting together in ever more sophisticated ways, we need to inspect that intelligence and the assumptions that are being built in. Facebook needs to be smart to support a billion people in meaningful interactions, but we need to investigate that smartness. In any relationship when one partner is able and willing to compromise and the other one is rigid, it's always a risk that the partner that is flexible is going to be the one that makes all the compromises. Of course, humans are more flexible than machines, but of course it's not also going to be the humans in power who make the most terrible compromises.

Those designing these systems are not shy at all about their ambitions to capitalise on that adaptability, and the shapers in the moulds that better suit their business models. I keep coming back to this section of 'The Hollow Men', which is a poem, a horror of the purgatory between thought and action, the shadow there, the shadow between the idea and the reality is a space ripe for colonisation, a space rich with unspoken desires that could be advertised to and encouraged to be made real, emotional responses that can be manipulated, unspoken assumptions that can be built in, and built in constraining our responses until we forget there was another way to be.

Antoinette Rouvroy, in her report to the Council of Europe on the impact of big data on human rights, speaks of the undermining of the concept of the individual by the prediction of our actions. Intention is not action. I may be very likely to commit a crime, but treating me as if I had done it before I did is not right. It undermines my choice, my right to act and accept those consequences.

Amazon recently patented the idea of posting goods to my area before I'd bought them, predicting my latent desires and encouraging them before I had a chance to fully articulate them. Rather by predicting and encouraging desires that suit Amazon, letting the unsuitable ones [inaudible 15:20]. People quote Mark Zuckerberg on the first bit quite a lot, but I very rarely see this second bit, which actually came about ten minutes later in the same talk. We decided that these would be the social norms and we just went for it. This new norm really suits Facebook. Facebook wants you to have one conveniently consolidated monthly identity that they can sell as a package to advertisers. Eric Schmidt similarly wants to explore and claim valuable real estate in The Shadow; a new future where you're never lost, you're never lonely, you're never bored, you're never out of ideas, and they know what ideas they want you to have.

So what can we do? We can admit our vulnerability and we can be cautious about it, we could refuse to accept these auto-completed sentences,

auto-corrected jokes, our wonderful pleural identities, consolidated and sold. Although sometimes they get it so right, so sad. But that kind of resistance is rather abstract, and many of these tools are rather useful.

At Nesta, we've been attacking the problem from a few angles. We've been doing a set of work on living well in the shadow of the smart machine, where we got to bring together legal philosophers, civil servants, computer scientists, regulators, and the people that actually build the systems, to think about how to build in ethics from the beginning. We want to develop practical guidelines that are useful to people in government, people in companies who are having to make decisions under financial pressures. How do we incentivise and enforce ethics in government and beyond? A lot of these blogs articulate the concerns that I've been skimming over in a lot more depth.

Our education system is using more algorithms, which means that we're encouraging students to answer, to think in ways that echo the machine's narrow scope of understanding. Are we risking training out irony, insight, playfulness, originality? How do we educate instead about the limits of data? Of the terrible vulnerability of them? Especially when they interact and they've got no idea of the pretty ironic context that they find time in, like this pricing bot. How do we empower the next generation? Or even this one, given the speed of change, to become more than robot animacies, people that take dictation from artificial intelligence, because no one dares risk question the machine, and the machine itself feels no weight of responsibility.

Does our model of individual responsibility even work when we're taking decisions with the support of neural nets that no human can understand? At that point, does having the fall guy at the end that's signed off make sense, or should we be thinking about ways to attribute praise and blame proportionally, or collectively?

So Ursula Le Guin called on us recently to write beyond the constraints of our current model of the world, beyond the convincing promise of objective understanding of health and bodies and identities that are liquid and datafied and can be managed as bulk resources. We live in capitalism, and its power seems inescapable, but then, so did the divine right of kings. Any human power can be resisted and changed by human beings. And resistance and change often begins in art, in our art, the art of words. She meant authors, but I think speakers, fine, we're great. And as part of that, as practical work we've commissioned some stories, collaborations between academics that work in collective intelligence, and authors, and we've just released the first one from the Long and Short Magazine. It went live about an hour ago. I'll tweet the link.

Humans will always fall prey to habits of thought. Our adaptability makes us beautifully vulnerable to habits that become ruts, that become steel rails, leading us towards a specific and seemingly inevitable stop. But we have this wonderful tool called art that can steer us off course, can remind us that there are a lot of others ways to reach other destinations where we can imagine and build wonderful things.



	Thank you.
--	------------

Outro	We hope you enjoyed Lydia's talk and thanks for listening. You can hear the rest of the talks from 2016 at futureeverything.org/2016podcasts .
-------	---

[Transcription ends]