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Big Data: A Revolution That Will Transform How We Live, Work, and Think

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Big Data: A Revolution That Will Transform How We Live, Work, and Think

Viktor Mayer-Schönberger and Kenneth Cukier (2013)
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It's usual at the beginning of a year to proclaim and predict trends for the 12 months ahead. Although heralded by a slew of online and offline publications in the second half of 2013, it's probably still too early to know if big data has reached the peak of inflated expectations on the Gartner Hype Cycle graph,[1] or whether, thanks to the disclosures of Edward Snowden, it's now mired in Gartner's trough of disillusionment.

There were dozens of big data books published in 2013, some no doubt brought to market under time constraints to catch the public appetite, and some featuring existing research repackaged for a big data-hungry audience, like Aiden and Michel's *Uncharted: Big Data as a Lens on Human Culture* (2013). There's also a *Big Data for Dummies* publication out already (always a barometer of popularity), and McKinsey, O'Reilly and even the *FT* have proffered their new tomes, too. Mayer-Schönberger and Cukier's book has the benefit of being one of the most accessible and proves to be a useful navigation tool on that hype slope, wherever we might be hurtling to right now.

We're in an age where numbers no longer incite awe, since they've become loosened from the moorings of human scale and cognition. What does it mean when we are informed that Google processes more than 24 petabytes of data per day, or that the world sends 400 million tweets a day? Such numbers neither impress nor disappoint any more; we're perpetually numb. 'To measure is to know,' proclaimed Lord Kelvin, but he never lived in an era where a single jet engine creates one terabyte of data on a single transatlantic flight. Each one of us is like one of those engines, giving off 'data exhaust' as we operate in our daily lives, and someone somewhere wants to monetise it (maybe you, dear reader?) or utilise it to change our behaviour (remember Cameron's Nudge Unit?).

In actuality it's the acceleration that is more dramatic. In *Big Data*: *A Revolution That Will Transform How We Live, Work, and Think*, by Viktor Mayer-Schönberger and Kenneth Cukier, we are told that Visa recently used Hadoop software[2] to reduce

[1] http://www.gartner.com/technology/research/methodologies/hype-cycle.jsp

[2] http://hadoop.apache.org/

the time to interrogate 73 billion transactions from a month to 13 minutes. Unlike some other authors, Mayer-Schönberger and Cukier aren't out to impress you with stats, though; neither will they prognosticate on how you can exploit or leverage big data yourself. They studiously avoid any of the breezy techno-solutionism of so many pundits, who seem to breathlessly describe a benevolent panopticon that will lead the knowledge economy onwards into some kind of Silicon Valley singularity (as savagely critiqued by the irascible Evgeny Morozov in *To Save Everything Click Here* (2013)). Certainly, the authors do share the notion with some of those writers that there is a revolution going on, but they have been careful to let you know in the subtitle that it's about a revolution 'that will transform how we live, work, and think'. Mayer-Schönberger and Cukier want us to think before we number-crunch: 'Just as the printing press led to changes in the way society governs itself, so too does big data,' they warn (p. 184).

It's not the big numbers in big data that stick out for once. It's the big culture changes that it suggests will be needed in its wake. Mayer-Schönberger's last book, *Delete: The Virtue of Forgetting in the Digital Age* (2011), is a clue that this current book isn't a business manual or an MIT-style future gaze. As the authors point out, 'The IT revolution is evident all around us, but the emphasis has mostly been on the *T*, the technology. It is time to recast our gaze to focus on the *I*, the information.'

The authors posit that digitisation is giving way to what they call 'datafication' and 'the next frontiers of datafication are more personal: our relationships, experiences and moods' (p. 91). Facebook datafied our relationships, Twitter datafied sentiment, and LinkedIn datafied our careers, they say.

Seemingly written pre-Snowden, there are no references to the NSA or GCHQ, but the authors are phlegmatic in arguing that 'the biggest impact of big data will be that data-driven decisions are poised to augment or overrule human judgement' (p. 141) and 'our perceptions and institutions were constructed for a world of information scarcity, not surfeit' (p. 149).

For all this virulent datafication – a kind of digital Taylorism – businesses need to understand that, rather than getting data certainties in their business, they need to be prepared for Messy. As Pat Helland, one of the foremost database designers, says, with big data 'we can no longer pretend to live in a clean world' (Helland 2011). The authors devote a whole chapter to the idea of Messy data (the more data you have, the more noise) and don't mind playing Cassandra around the impact of rushing to datafy without thinking: paralysing privacy, predictive policing and profiling, the 'dictatorship of data' and the rise of the twenty-first century data-barons are all examined as possible outcomes.

It's this messy world that creativity thrives in, so at first this can seem counterintuitive.

In a world where Google tests out which shade of cornflower blue in a banner produces more hits and therefore more return, or which font brings more profit, what happens to the designer? Where does innovation fit if we slavishly follow the data towards a beige average? People always assumed that out-of-control nanotechnology might turn the

world to grey goo, but the unquestioning use of big data now seems the most likely culprit, at least conceptually.

After all, big data is about being able for the first time to collect and interrogate complete datasets rather than the traditional method of sampling and extrapolating. As such, it can give the impression that it generates a form of objective truth as opposed to the guesswork, inspiration or hunches that have been the currency of creative practitioners.

However, Mayer-Schönberger and Cukier seem to imply that, far from being obliterated, creativity is given an additional new role – as a kind of new interpreter beyond causality. 'Society will need to shed some of its obsession for causality in exchange for simple correlations: not knowing why but only what,' warn the authors (p. 7). We are hard-wired to see patterns and causality when none exists. 'Causality won't be discarded, but is being knocked off its pedestal as the primary foundation of meaning.' To the authors, no matter what the processing power, we'll be no nearer knowing the 'why' of things, only the more superficial 'what'.

We will need to discover new patterns and correlations in the sea of data to offer new insights and conclusions. Big data won't stifle creativity, inspiration, guesswork, creative hunches, but it will find new uses for them.

Just like design, big data relies on the right questions being asked, and some of those questions will need to be pretty imaginative for the challenges ahead. As has been recounted before, if Henry Ford had asked the public what they wanted, they would have just demanded faster horses.

It's probably only when we accept that information needs imagination to interpret it that we'll ascend from the bottom of Gartner's Hype Cycle, inching towards the upper slope of enlightenment and the plateau of productivity. Mayer-Schönberger and Cukier's book is a good flight manual.

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