

How a data deluge leaves us struggling to make up our minds

July 15 2015, by Rikke Duus And Mike Cooray



Credit: AI-generated image ([disclaimer](#))

We make a huge number of decisions every day. When it comes to eating, for example, we make [200 more decisions than we're consciously aware of](#) every day. How is this possible? Because, as [Daniel Kahneman](#) has explained, while we'd like to think our decisions are rational, in fact many are driven by [gut feel and intuition](#). The ability to reach a decision

based on what we know and what we expect is an inherently human characteristic.

The problem we face now is that we have too many decisions to make every day, leading to [decision fatigue](#) – we find the act of making our own decisions exhausting. Even more so than simply deliberate different options or being told by others what to do.

Why not allow [technology](#) to ease the burden of decision making? The latest smart technologies are designed to monitor and learn from our behaviour, physical performance, [work productivity levels](#) and [energy use](#). This is what has been called [Era Three of Automation](#) – when machine intelligence becomes faster and more reliable than humans at making decisions.

You, me and my algorithm

Intelligent systems use algorithms (formulas for taking in data and outputting other data) to learn patterns and behaviours from how we use them. One industry that has grown rapidly is [online dating](#) – in the UK alone, the market is expected to grow from [£165m to £225m by 2019](#). This enormous growth stems from the perception that finding love is hard, so any technology that can help will be popular.

Online dating sites' matching algorithms create a reliance upon, if not a belief in, a scientific approach to finding love. But instant satisfaction sites such as Tinder also encourage developing many [weak ties](#) between partners that often lack commitment, emotional intensity and intimacy.

Should we want to relegate our most important human adventure to an algorithm? Might we find ourselves with a generation of people who are willing to trade the current partner for a better model, or who trust big data-generated matches more than their own instincts?

Making decisions visual

The ability to visualise data has accelerated the move of knowledge from our minds and onto the screen. This, tied with our [fear of being wrong](#), presents new opportunities for business.

[Sproutling](#) is one of many companies that have tapped into our need for quantification and [visualisation](#). Their product is a wearable baby monitor that records a baby's heart rate, skin temperature, motion and position, data it uses to predict about the baby's mood, comfort, sleep pattern and even when the baby is due to wake up.

Sproutling prides itself on eliminating guesswork, but in fact it feeds a new breed of parents-cum-data-scientists who watch over their children constantly, but once-removed behind the screen. A recent [study](#) has shown that technology that conveys or displays emotions makes people uncomfortable. Nevertheless, the Sproutling has already sold out.

Data-driven decision making is becoming the dominant logic, in our private lives and at work. A [global study from PwC](#) found executives are comfortable making decisions based on their [gut instinct](#). However, a majority expect the use of data to affect how the company makes decisions in the future.

Data can help an organisation to see the big picture and identify trends and patterns. However there's a danger that we [over-rely on data](#) and so lose sight of the context, more often than not acquired through instinctive understanding and the value of conversations.

Subtle manipulation

Many companies such as Netflix, Amazon, iTunes and Tesco use data on

our web habits to make recommendations to us. These are small acts where systems' decisions narrow the opportunities we have for natural, organic exploration. The old way of stumbling upon a new artist, film or author is replaced by loops of similarity.

Arizona State University academics [Braden R Allenby and Daniel Sarewitz](#) explain how these, and other technologies such like fitness trackers and GPS, create techno-social systems that "impose certain orders of behaviour on our lives about which we have little choice." When our ability to make independent decisions is taken away, we become easier to manipulate and influence. We will become accustomed to not making our own decisions and simply follow the cues in front of us, whether that's directions from our GPS or meal suggestions from our fridge.

Accept the world is uncertain

By outsourcing our decisions to [intelligent systems](#) and seeking certainty through data, we objectify ourselves. We are left responding to the computer rather than thinking creatively and autonomously. We are in danger of undermining our human instinct, and have already started the process of de-learning [decision making](#) by putting our trust in machines. Director of the Max Planck Institute for Human Development, [Gerd Gigerenzer](#), suggests gut feelings are the tools for an uncertain world – data creates only an illusion of certainty.

In a complex world with abundant choice, we need good intuitions and smart shortcuts to make decisions. Even so, ultimately we must accept that uncertainty will always be part of what it is to be human. When we deny ourselves the challenge of thinking critically, evaluating situations and making our own decisions, we are heading towards a future where *Homo sapiens* will lack the cognitive ability to think for itself, and we will have surrendered to the machines we once built.

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