**Book now** – Get to grips with consciousness at our next Instant Expert event in London

PROFILE 7 March 2018

# I exposed how online profiling leaves us open to mass persuasion

David Stillwell revealed how social media lets companies nail your personality as well as a spouse could, leaving you ripe for exploitation – but he sees the upside



Daniel Stier

By **Douglas Heaven**

DAVID STILLWELL fidgets with his empty takeaway cup as we talk. Sitting in this quiet cafeteria at the University of Cambridge, the ongoing firestorm of US politics feels a million miles away. But with Donald Trump's surprise victory in the 2016 US presidential election, the fire found its way to him, thrusting the young researcher into the spotlight.

"It's uncomfortable," he says, uncomfortably. "Plenty of investigative journalists have wanted to have off-the-record conversations about what companies are doing and whether we've helped them."

The conversations he is referring to concern what some consider a form of pervasive mind control. Stillwell played a key role in exposing ways that firms and governments can exploit our online data, mining it to create individual psychological profiles they can use to fine-tune

adverts and political messages for maximum impact, ushering in an era of unprecedented digital persuasion of the masses.

It started in summer 2007. On a whim – having just finished a psychology degree at the University of Nottingham, UK – Stillwell made a Facebook app called myPersonality. It let people take a test that describes personality types according to the "Big Five" traits, which include degrees of agreeableness, conscientiousness and extroversion.

Months later, some researchers asked Stillwell if they could use his data. But he hadn't collected any. He had only set it up because "I thought it would be cool," he says. Then he wised up and started gathering data. It would prove a career-making move. When Michal Kosinski, then at the University of Cambridge, approached him a year later, Stillwell had a data gold mine of more than a million Facebook profiles paired to personality types (that number now tops 6 million).

In 2013, Stillwell, Kosinski and colleague Thore Graepel dropped the bombshell that machine-learning techniques made it possible to predict someone's personality type simply from their Facebook likes. And accurately too. Just nine likes is enough to predict your personality traits as well as a colleague could. With 65 likes, as well as a friend; with 125 likes, a family member. Most people have around 225 likes, so organisations that possess this sort of data can predict your personality just as well as a spouse could. Not only that, it only takes a few Facebook likes to predict your age, gender, intelligence, sexuality, political and religious views, relationship status and a host of other things. In short, the internet knows just what pushes your buttons.

## Laid bare

Why was that a big deal? For marketers, discovering someone's characteristics to any great degree typically involved asking them to fill out a questionnaire, making it impractical. But if it could be done automatically, our psychologies are laid bare. Nowadays, even your Twitter account can be analysed, your personality predicted from your tweets.

What does it mean to have such knowledge in corporate hands? "We can be hacked," says Stillwell. "Manipulated, persuaded or encouraged." He gives the example of a smooth-talking car seller. "The guy sizes you up and starts giving you the spiel he thinks will perfectly match you. As he's talking, you are either smiling or looking disinterested and he's using that to adjust his pitch as he goes along." That's the level of targeting we are talking about, says Stillwell. And it can be done online, by an algorithm, when you don't have your psychological guard up.

Stillwell is now deputy director of The Psychometrics Centre at the University of Cambridge. His latest experiment with Kosinski and colleagues involved 3.5 million people. They found that those targeted with online advertising based solely on a single Facebook like were 40 per cent more likely to click on an online advert and 50 per cent more likely to follow through with a purchase than those seeing untailored advertising. When such messaging can be scaled to target many millions of people at the press of a button, and with no regulatory oversight, that for some is an alarming degree of influence.

Nudges at vast scales might sway democracies. Cambridge Analytica, a firm that taps into big data, approached Stillwell's team in 2013. It had been spending big buying personal data from various sources and wanted help using it to influence US politics. The chance to work with this trove of data was tempting – "we discussed possibilities for months" – but ultimately Stillwell couldn't reconcile himself with Cambridge Analytica's political ambitions.

# "If we think we have it bad today, mass pursuasion could make it a lot worse"

And that was that – until Trump's win shocked the world. Cambridge Analytica wasted no time in announcing that its social media ads tailored to individual voters' personality types were key. Many were scandalised: targeted campaign ads are legit, but automated personality profiling had the whiff of foul play.

When I ask Stillwell about the election result, he shrugs. "Given the timescales involved, I didn't think it likely that Cambridge Analytica would have been able to come up with something so genius it would have swung an entire election," he says. "We spent four years on it and didn't come up with anything that incredible."

Think of Trump as a dry run, however. With the amount of money and personal data that companies like Cambridge Analytica are feeding into the hopper, there is no doubt that personality-based profiling will be perfected. "Just because it didn't matter in 2016 doesn't mean it won't matter next time," says Stillwell.

So having lifted the lid of Pandora's box, I want to know what worries Stillwell the most. Being drip-fed personalised messages without being aware that someone is trying to change how we think is insidious, he says. "The power balance right now is weighted towards those who hold the data, and we really don't know how it's being used," he says.

Later, Brett Frischmann, a law professor at Villanova University in Pennsylvania, goes further, telling me over the phone that we are on a slippery slope. "If we think we have it bad with filter bubbles today – with people being fed radically different takes on world events finding it harder and harder to find political common ground – then [mass] persuasion could make it a lot worse. These tools could be used for a form of brainwashing."

Considering how much Stillwell knows about all this, I'm curious to what extent he moderates his own online habits. "There is some horrific stuff I'm interested in that I still Google now and again," he deadpans. I laugh. He laughs. Awkward silence. "I don't think my data is being used in a way that makes me feel uncomfortable," he adds. In a world of hand-wringing over big-data exploitation, Stillwell manages to find a silver lining. "In the 1950s, shopkeepers knew you and sold stuff in a way that made it relevant to you – it was a personalised, one-to-one relationship. Then we moved to a world of internet stores where, in the name of efficiency, we give everyone the same experience."

Stillwell believes that automated psychological profiling is helping to bring back that personal touch. "It's not necessarily all about people taking advantage of us. We can also be treated like individuals again."

## Profile

David Stillwell is deputy director of The Psychometrics Centre at the University of Cambridge, and lecturer in big data analytics and quantitative social science

*This article appeared in print under the headline "The internet knows you all too well"*

**Douglas Heaven** is a consultant for *New Scientist*

Magazine issue 3168, published 10 March 2018

---

# NewScientist | Jobs

**Biomedical Scientist - Biochemistry**

**Senior Scientist - Discovery Biology**

**Python Developer**

**UX & UI Developer - Cambridge**

**More jobs ▶**