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Cyber Sway
The New Mind Control
Robert Epstein

Google is not only collecting massive amounts of information about us, it is also in a unique position to alter our attitudes, opinions, beliefs, and behaviour without us knowing this is occurring and without leaving a paper trail. Robert Epstein, Senior Research Psychologist at the American Institute for Behavioural Research and Technology, exposes a new and unique threat to the democratic system of government – and to human freedom.

US president Dwight D. Eisenhower is often remembered for the farewell speech he gave three days before John F. Kennedy took office in January, 1961. In it he coined the phrase, 'military-industrial complex' to describe the potentially dangerous alliances he saw emerging between the new Cold War arms industries and the rapidly expanding military sector of the US economy. "Only an alert and knowledgeable citizenry," he warned, could guard us against the "unwarranted influence" that these new alliances might exert over our government. "The potential for the disastrous use of misplaced power exists and will persist". Largely forgotten was the other warning he gave moments later in this famous speech. "Akin to, and largely responsible for the sweeping changes in our industrial-military posture," said Eisenhower, "has been the technological revolution during recent decades." We must also be alert, he said, to the possibility that "public policy could… become the captive of a scientific-technological elite." This second warning is extraordinary: Eisenhower was worried about the power of a technological elite more than 50 years ago, when, by current standards, technology barely existed. The question is: *have* we been alert and *are* we knowledgeable about the forces Eisenhower described?

The research I have been conducting in recent years has convinced me that we have been far from alert and that we know almost nothing about the significant forces that are increasingly controlling our lives. I have focused my investigations primarily on one relatively new source of influence – the internet – and particularly on what is by far the largest source of influence on the internet – Google, Inc. What I have learned has both humbled and scared me. Google is not only collecting massive amounts of information about us, my research suggests that it is also in a unique position to alter our attitudes, opinions, beliefs, and behaviour without us knowing this is occurring and without leaving a paper trail.

Where did such power come from, and whom does it serve? Recent reporting by former *Guardian* journalist Nafeez Ahmed has documented a relationship between the US intelligence community and Google, Inc. that predates the founding of the company in 1998 and that has grown stronger over the years. Some of the funding that supported the development of the ubiquitous Google search engine by Stanford graduate students Sergey Brin and Larry Page in the 1990s came from the CIA and the NSA. Both agencies wanted to encourage the creation of online tools that could someday be used to identify and track people who might be a threat to national security. In other words – and this came as a shock to me – the Google search engine wasn't just a search engine that much *later* was used to track people's searches; Google's search engine was in fact developed right from the outset as a tool for tracking what people were looking for on the internet (think: 'skinhead groups', 'how to build a bomb', 'Middle East news'), as well as what websites they visited.

The model from the outset was: give people a free tool they can use as a gateway to the internet and track everything they do. Google's developers figured out how to monetise this model by selling the information they collected to companies trying to reach people with targeted advertisements. This model, which I've dubbed 'Google's Dance', is fundamentally deceptive. On the surface, it presents the company as a kind and benevolent information provider, akin to the public library. Beneath the surface, it turns us all into products, with Google obtaining nearly 100 per cent of its income by collecting and then selling information about us. From a revenue perspective, Google is really just an advertising agency that has a unique way of surveying potential customers. Ironically, if you use the Google search engine to locate the 'largest advertising agencies' in the world, you might mistakenly conclude that the WPP group, based in London, is the largest, with revenues of $19bn. Google's revenue is now closer to *$75bn*, almost all of which is from advertising.

Unfortunately, because this business model has proved to be so lucrative, Google's appetite for acquiring more information about us has, over time, become almost obscene. Since 2000, Google has developed or purchased well over 60 different platforms for monitoring what we do: Google Play, Chrome, Android, YouTube, Google Wallet, Google Voice, Google Calendar,

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Google Earth, Street View, AdWords, AdSense, Google Docs, Waze, and so on – platforms that between them track virtually all of our internet activity, purchases, communications, medical problems, sexual preferences, location, even our fears. Gmail was introduced in 2004 as a way of capturing our emails, and Google not only stores and analyses every email Gmail users send, it also captures all of the *incoming* email from other email services like Yahoo and Hotmail. It even captures those email drafts you decided *not* to send. Google also tracks us when we don't know we're using Google products – for example, when we are visiting web pages that simply incorporate Google products into them, such as Google Analytics and Google Maps – which amounts to about 70 per cent of the top web pages in the world. Early in 2012, Google announced that it was consolidating all of its data platforms into one,meaning that all of the information it collected about us would be stored in a single, comprehensive profile.

And yes, in case you were wondering, Google and other American high-tech companies routinely share the private information they have about us with government agencies – and not just with US agencies, but with intelligence agencies around the world.

What happens in societies in which companies or government agencies are able to collect vast amounts of information about people to monitor people 24 hours a day? Whether we look at fictional depictions of such societies (think: Orwell's *1984* (1949) or Zamyatin's *We* (1924)) or real-world examples (think: the Stasi, the KGB, or China's new Social Credit System), one word immediately comes to mind: *control*.

Am I suggesting that Google, Inc. is a potential tool for totalitarian despots? Not at all. Unfortunately, the real threat Google poses to humanity is much more ominous. Machiavelli's iconic book, *The Prince*, published in Italy in 1532, proposed an ideal model for Leadership that looks a bit like Google's business model. The public face of a good leader, said Machiavelli, is always kind and benevolent. Behind that public face, though, the effective leader is always ruthless. Ideally, this method of leadership makes people submit to control voluntarily. In a sense, it is an invisible form of control.

Centuries later, in the 1950s, concerned about the new alliances being formed between corporations, politicians, and social scientists, British economist Kenneth Boulding envisioned the possible rise of an "unseen dictatorship" – one that is "still using the forms of democratic government." In 1957, American journalist Vance Packard wrote a best-selling book called *The Hidden Persuaders* that warned about this new form of control – one that is invisible to the people being controlled.

Unfortunately, the internet has now made possible invisible new forms of control that make Packard's concerns look trivial. For example, writing in the *New Republic* in 2014, Harvard law Professor Jonathan Zittrain pointed out that Facebook could easily flip an election with no one knowing it had done so. He made this claim based on a study Facebook staff had published with faculty members from the University of California, showing that Facebook caused 340,000 people to vote in an election by sending them 'go out and vote' reminders on voting day. What if, said Zittrain, Facebook chose to send out such reminders only to people who favoured one particular party or candidate? Facebook ads are, by nature, ephemeral. If Facebook sent out 'go out and vote' reminders to one group only, no one would ever know this was occurring, and the manipulation would also leave no paper trail.

In 2013, Ronald E. Robertson, my associate at the American Institute for Behavioural Research and Technology, and I discovered another kind of online manipulation that we called the Search Engine Manipulation Effect, or SEME (pronounced 'seem'). I had conjectured that when higher-ranked search results made one candidate look better than another, the preferences of undecided voters would shift in the direction of the preferred candidate by 2 or 3 per cent. People trust search results, after all, and they think higher-ranked results are better than lower-ranked results, which is why 50 per cent of all of our clicks go to the top two items. People also think that unlike other sources of information that bombard us every day – newspapers, magazines, radio shows, television programmes – search results are objective and impartial. Bear in mind that in most countries (including most countries in Europe), Google controls 90 per cent of online searches, so for all intents and purposes, Google has no competitors. This, too, makes Google's search rankings especially credible to people.

To my astonishment, in a controlled experiment we conducted in which a diverse group of people were randomly assigned to groups in which search results favoured one candidate or another, voting preferences shifted toward the favoured candidate by an extraordinary *48.4 per cent* after just one search. We have conducted more than a dozen experiments since, including national studies in the US and India, and multinational studies with people from 39 countries across the world. In the process, we have come to believe that SEME is one of the most powerful sources of influence ever discovered in the behavioural sciences. Four findings are clear at this point:

First, SEME can easily be used in real elections to shift undecided voters by 20 per cent or more – up to 80 per cent in some demographic groups. As many elections are very close, this is enough to determine the outcomes of upwards of 25 per cent of the national elections in the world. Because we know fairly precisely how many people SEME can shift, by knowing the projected win margin in an upcoming election and the proportion of voters who get some of their information about candidates through search engines (now more than 80 per cent of voters in some countries), we can predict which elections can likely be flipped by SEME.

Second, very few people are able to recognise biased search rankings when they see them – in other words, they are oblivious to the fact that they are being manipulated – and the few people who *do* see the bias generally shift even *farther* in the direction of the bias. It is as if the bias is serving as 'social proof' that one candidate is better than the other. This is troubling, because it means that simply being aware of biased rankings doesn't necessarily protect you from them.

Third, biased search rankings impact far more than voting preferences; they appear to be influencing a wide range of decisions people are making every day – everything from small decisions like where to go on holiday, to weighty decisions about which side to take in national debates about important social issues. In experiments we completed recently, we were able to shift attitudes people have about artificial intelligence ('dangerous or helpful?'), homosexuality ('in our genes or a matter of choice?'), and hydraulic fracking ('beneficial or a danger to the environment?') by between 25 and 39 per cent after a single online search. (That's right. We have shown that AI can change our views on AI).

Finally, because search results, like advertisements, are ephemeral, manipulating people using biased search rankings leaves no paper trail. Search results take us to web pages that influence our thinking, and then they are gone. For all intents and purposes, SEME is a completely invisible form of manipulation that is almost certainly impacting a wide variety of decisions people make every day.

Are real search rankings actually biased toward one candidate or another, or toward one product or another, or toward one perspective or another? An anti-trust action initiated by the European Union against Google, Inc. in 2015 is based on findings that Google's search results are indeed often biased in ways that favour the company; at the time of writing, a similar anti-trust action is in progress against Google in India based on similar findings. An internal investigation by the US Federal Communications Commission has drawn similar conclusions, and so has a study published by Slate.com in December, 2015. This should hardly surprise anyone; Google is a for-profit business, accountable only to its shareholders, not to the general public. It should programme its search algorithm in a way that orders search results to its advantage. Court decisions in the US have even encouraged this practice, ruling that when a search engine company chooses an ordering for its search results, it is exercising its right to free speech.

Like many large corporations, Google also often favours one candidate over another in elections. In the 2016 presidential race, there are multiple indications that Google is strongly favouring Hillary Clinton. In 2015, Clinton hired a Google executive, Stephanie Hannon, to be her chief technology officer. Shortly after, Eric Schmidt, head of Alphabet, the holding company that now owns Google, bankrolled a semi-secret high-tech company called The Groundwork for the sole purpose of putting Clinton in office. WikiLeaks founder Julian Assange called Google Mrs. Clinton's "secret weapon" for securing the US presidency. My colleagues and I now estimate that SEME can be used to shift between 2.6 and 10.4 million votes to Clinton in the November election with no one knowing this is occurring and, again, without leaving a paper trail.

Our research has also revealed that some demographic groups are far more vulnerable to SEME than others – in other words, far more trusting of search rankings. For example, in a national study we conducted in the US, SEME shifted the voting preferences of 54.7 per cent of female conservatives but only 22.0 per cent of female independents. If you were running a company like Google and you wanted to impact an election, both to hide what you are doing and to maximise your impact, you would send out biased search rankings only to highly vulnerable, undecided voters. Fortunately, you would also have access to a vast amount of highly detailed personal profiles that would make it easy for you to identify such people.

MIT's Noam Chomsky warned, in 1993: "The general population doesn't know what's happening, and it doesn't even know that it doesn't know." SEME and other means of mind control that are now becoming widespread on the internet exemplify this idea to a frightening degree. People have no idea that biased search rankings impact virtually everything they do, think, and say – they have no idea they are even viewing biased search rankings. Worse still, moment to moment in time, when people are using Google's search engine or dozens of other free services the company provides (all of which are collecting information about them), they also feel trusting and grateful – trusting of the objectivity of the service they are using and grateful that it is being provided free of charge. The services might be free, but can the same be said of the people using them? Are we the "alert and knowledgeable citizenry" Eisenhower urged us to be, or are we mindlessly handing over our freedoms to the technological elite about which he warned? So far, I think the answer is all too clear.

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