Silicon Valley siphons our data like oil. But the deepest drilling has just begun

Personal data is to the tech world what oil is to the fossil fuel industry. That's why companies like Amazon and Facebook plan to dig deeper than we ever imagined

Ben Tarnoff | The Guardian| August 2018

What if a cold drink cost more on a hot day?

Customers in the UK will soon find out. Recent reports suggest that three of the country's largest supermarket chains are rolling out surge pricing in select stores. This means that prices will rise and fall over the course of the day in response to demand. Buying lunch at lunchtime will be like ordering an Uber at rush hour.

This may sound pretty drastic, but far more radical changes are on the horizon. About a week before that report, Amazon announced its $13.7bn purchase of Whole Foods. A company that has spent its whole life killing physical retailers now owns more than 460 stores in three countries.

The acquisition – Amazon's largest ever – struck some observers as strange. But Amazon tends to run about a decade ahead of its rivals. It owes its success to big, counterintuitive moves. This is a company that saw the power of online retail in 1994, and of cloud computing in 2006. Its purchase of Whole Foods represents a similarly far-sighted incursion into a lucrative new frontier.

Amazon isn't abandoning online retail for brick-and-mortar. Rather, it's planning to fuse the two. It's going to digitize our daily lives in ways that make surge-pricing your groceries look primitive by comparison. It's going to expand Silicon Valley's surveillance-based business model into physical space, and make money from monitoring everything we do.

Silicon Valley is an extractive industry. Its resource isn't oil or copper, but data. Companies harvest this data by observing as much of our online activity as they can. This activity might take the form of a Facebook like, a Google search, or even how long your mouse hovers in a particular part of your screen. Alone, these

traces may not be particularly meaningful. By pairing them with those of millions of others, however, companies can discover patterns that help determine what kind of person you are – and what kind of things you might buy.

These patterns are highly profitable. Silicon Valley uses them to sell you products or to sell you to advertisers. But feeding the algorithms that produce these patterns requires a steady stream of data. And while that data is certainly abundant, it's not infinite.

A hundred years ago, you could dig a hole in Texas and strike oil. Today, fossil fuel companies have to build drilling platforms many miles offshore. The tech industry faces a similar fate. Its wildcat days are over: most of the data that lies closest to the surface is already claimed. Together, Facebook and Google receive a staggering 76% of online advertising revenue in the United States.

 To increase profits, Silicon Valley must extract more data. One method is to get people to spend more time online: build new apps, and make them as addictive as possible. Another is to get more people online. This is the motivation for Facebook's Free Basics program, which provides a limited set of internet services for free in underdeveloped regions across the globe, in the hopes of harvesting data from the world's poor.

But these approaches leave large reservoirs of data untapped. After all, we can only spend so much time online. Our laptops, tablets, smartphones, and wearables see a lot of our lives – but not quite everything. For Silicon Valley, however, anything less than total knowledge of its users represents lost revenue. Any unmonitored moment is a missed opportunity.

Amazon is going to show the industry how to monitor more moments: by making corporate surveillance as deeply embedded in our physical environment as it is in our virtual one. Silicon Valley already earns vast sums of money from watching what we do online. Soon it'll earn even more money from watching what we do *offline*.

It's easy to picture how this will work, because the technology already exists. Late last year, Amazon built a "smart" grocery store in Seattle. You don't have to wait

in a checkout line to buy something – you just grab it and walk out of the store. Sensors detect what items you pick up, and you're charged when you leave.

Imagine if your supermarket watched you as closely as Facebook or Google

Amazon is keen to emphasize the customer benefits: nobody likes waiting in line to pay for groceries, or fumbling with one's wallet at the register. But the same technology that automates away the checkout line will enable Amazon to track every move a customer makes.

Imagine if your supermarket watched you as closely as Facebook or Google does. It would know not only which items you bought, but how long you lingered in front of which products and your path through the store. This data holds valuable lessons about your personality and your preferences – lessons that Amazon will use to sell you more stuff, online and off.

Supermarkets aren't the only places these ideas will be put into practice. Surveillance can transform any physical space into a data mine. And the most data-rich environment, the one that contains the densest concentration of insights into who you are, is your home.

That's why Amazon has aggressively promoted the Echo, a small speaker that offers a Siri-like voice-activated assistant called Alexa. Alexa can tell you the weather, read you the news, make you a to-do list, and perform any number of other tasks. It is a very good listener. It faithfully records your interactions and transmits them back to Amazon for analysis. In fact, it may be listening not only your interactions, but absolutely everything.

Putting a listening device in your living room is an excellent way for Amazon to learn more about you. Another is conducting aerial surveillance of your house. In late July, Amazon obtained a patent for drones that spy on people's homes as they make deliveries. An example included in Amazon's patent filing is roof repair: the drone that drops a package on your doorstep might notice your roof is falling apart, and that observation could result in a recommendation for a repair service. Amazon is still testing its delivery drones. But if and when they start flying, it's safe to assume they'll be scraping data from the outside of our homes as diligently as the Echo does from the inside.

Amazon is likely to face some resistance as it colonizes more of our lives. People may not love the idea of their supermarkets spying on them, or every square inch of their homes being fed to an algorithm. But one should never underestimate how rapidly norms can be readjusted when capital requires it.

A couple of decades ago, letting a company read your mail and observe your social interactions and track your location would strike many, if not most, as a breach of privacy. Today, these are standard, even banal, aspects of using the internet. It's worth considering what further concessions will come to feel normal in the next 20 years, as Silicon Valley is forced to dig deeper into our lives for data.

Tech's apologists will say that consumers can always opt out: if you object to a company's practices, don't use its services. But in our new era of monopoly capitalism, consumer choice is a meaningless concept. Companies like Google and Facebook and Amazon dominate the digital sphere – you can't avoid them.

The only solution is political. As consumers we're nearly powerless, but as citizens, we can demand more democratic control of our data. Data is a common good. We make it together, and we make it *meaningful* together, since useful patterns only emerge from collecting and analyzing large quantities of it.

No reasonable person would let the mining industry unilaterally decide how to extract and refine a resource, or where to build its mines. Yet somehow we let the tech industry make all these decisions and more, with practically no public oversight. A company that yanks copper out of an earth that belongs to everyone should be governed in everyone's interest. So should a company that yanks data out of every crevice of our collective lives.