

How to cut Big Tech down to size

Amazon, Apple, Facebook and Google are too big. But what's the right way to tame the giants?

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On each day of 2018 Apple sold almost 600,000 iPhones, Amazon made more than \$500m in sales, some 1.47bn people logged onto Facebook, while there were 3.5bn searches on Google. The oldest of these companies, Apple, was founded in 1976, and just a decade ago all four were seen as scrappy—if fast-growing—outsiders. Today, even after Apple's recent market travails, they are four of the biggest companies on the planet.

Any set of companies growing so big this rapidly would be cause for concern. But in the case of the technology giants, "concern" doesn't quite cut it. Facebook is the biggest platform on the planet, and has been implicated in efforts from Russia and others to poison the online information ecosystem. Retailers and suppliers alike fear Amazon's market power, while Google's dominance of search feels all but unassailable—and Apple has shown its ability to flex its power over app and music markets, not just the mobile phone market it most obviously plays in.

No surprise, then, that columnists, campaigners and multiple parliaments around the world have floated the idea that the tech giants need to be broken up. But what might that look like? And is it even the right answer? We might, I'd suggest, do better to focus on something even bigger than the scale of these companies themselves. Namely, the unimaginably vast scale of the data—terabytes and terabytes of it—on which the foundation of each of these empires is built. This is data about us, our lives, our interests, our locations, and our connections. And it is the single thing we need to keep in mind if we want to come up with a practical plan to keep the tech giants' power in check.

The internet poses the biggest threat of monopoly in over a century, since the height of the Gilded Age. That period, from the 1870s to the early 1900s, was born on the back of the railways, a technological innovation that was not only at risk of monopoly itself, but which also created monopolies. By speeding up, and making vastly more efficient, the transportation of materials—in much the same way that the web has facilitated the dissemination of information—the railway economy hugely increased the potential for profit. And with the ability to offer different carriage fees to different companies, rail companies could directly help to build monopolies in steel, coal and other industries.

These revolutionary changes encouraged concentration in all sorts of markets, but along with the growth of new industrial giants and riches to match came a new suspicion of big business. Congress passed the Sherman Anti-Trust Act in 1890, other legislation would follow in the early 20th century, together with President Teddy Roosevelt's pose as a trust buster—using competition laws to bring to heel, and sometimes break up, the outsized corporations.

There are indeed many parallels in relation to the problems we face with the internet: not only do we need to be worried about who controls the network itself, but how the technological changes reward scale and, increasingly, reward incumbents too.

Break them up

Given their scale and dominance, you can understand the urge to tame the giants by breaking them up. That is not impossible. At the simplest level, almost all of the biggest tech companies could be split, either by operating division, or by spinning off the various companies they have each been buying up. Part of the motivation for such purchases could be seen as anti-competitive. Today's tech giants try to avoid being toppled by the sort of smaller disruptors that they once were, not so long ago. In many ways these companies are now often structured like classic conglomerates, essentially collections of loosely connected businesses owned by the same holding company.

In 2015, Google all but made this official in its case, creating a new holding company—Alphabet—separating out its core business from its long-shot and long-term businesses. The additional interests of the parent range across the field of innovation from AI to driverless cars. Google itself still contains a search engine, an advertising network, a video network (YouTube) and more. There is no theoretical reason many of these couldn't be separated, even if it would be fiendishly complicated due to their tightly-integrated systems.

Similarly, Facebook could sell or spin-off Instagram and WhatsApp—a huge photo-led social network and messaging service, respectively—and this would, on paper at least, cause a real reduction in its market power. This would also prove fairly viable: in practice, engineers who have worked at the company have said—at least at the time—that the various systems remain quite separate, meaning it would not be impossibly complex to separate the companies.

This might restore competition to the social and messaging sectors, but breaking peripheral limbs off a giant will generally leave its core untouched. It would, for example, do nothing to address the scale of the main Facebook service itself. Going for the core with this particular giant might mean breaking Facebook into, say, four networks of 500m people instead of one network of two billion. But that's not a workable idea: if you get sent to one and your friends are scattered across the other three, you'll soon have a far less usable product—and an inevitable backlash.

There are still some roles and functions within Facebook proper that might be split off—you could, for example, separate out its event planning feature into a standalone app or company. Likewise, one could—in theory—separate, say, Google's video or new search functions from searches of other types. But even here there will be some loss of utility for the users, and other practical problems: would we really want to say that no advertising company could also operate internet video, and that no social network could help you plan events? And would we attempt to impose general rules, which presumably selectively bite on the best-designed sites and networks that attract the most users, or would we apply these rules as a one-off on today's giants? Wouldn't that be a bit arbitrary?

This fear of unintended consequences alarms Jeff Jarvis, an open internet advocate and the director of the Tow-Knight Centre for Entrepreneurial Journalism at City University, New York. Advertising is intrinsic to an internet that's open to everyone, he argues. "Separating Google's services from its advertising business makes no sense, for then there'd be no

support for all the wonderful, free services we enjoy—and there'd be less of a motive for Google to offer them, gaining targeting data in the process.

“Consumer revenue”—or, in plainer parlance charging for services—then “becomes the only option on the table and that means that the services will be redlined for the privileged. I fear building the internet for the 1 per cent.” Jarvis also opposes splitting WhatsApp or Instagram from Facebook, as neither service generates nearly enough revenue to continue operating (WhatsApp is entirely ad-free), meaning they effectively survive from Facebook's subsidy.

Whether or not you accept Jarvis's arguments, there is a significant hurdle to splitting big tech in practice: the law. The obvious available mechanism here would be competition law: if we could demonstrate that not only did the tech giants have unprecedented power and scale, but that they'd also been abusing that power, then there would be the prospect of forcing them to take action to remedy it.

In practice, there are only really two bodies strong enough to have a hope of making such a decision stick—the EU and the US, as they represent the only markets large enough that the companies couldn't simply withdraw to avoid the decision and scare off other countries from taking action.

Any hopes that the US will take tough regulatory action against big tech are slim: the companies have extensive lobbying operations, and are viewed in Washington as an extension of American power. There is another problem: US competition law has been vastly curtailed since the early days of the Sherman laws and trust-busting presidents, when excessive size was conceived as being almost inherently at odds with fair competition and the public interest. The libertarian Chicago School of Economics led a successful charge through the courts and the executive through the 1970s and 1980s, championing a much narrower definition of harm based solely on the interests of consumers, with any interests of competitors disregarded; everything turns on whether or not the company was charging customers higher prices than a competitive market would. It is a fiendishly difficult standard to prove. More pertinently, it just doesn't work for big tech. Who could argue Google is a monopoly under these terms, when it's free to email, to search, and to watch YouTube?

EU competition authorities have proven more aggressive: the EU Commission has launched several major actions against the technology companies, with attempts to impose multi-billion euro fines. In recent years, though, these have been tightly focused on specific aspects of the companies' activities. In June 2017, the Commission imposed a €2.4bn fine on Google for promoting its own shopping comparison service in search results, while in July 2018 it levied €4.3bn (against which Google is appealing) over how the company licences its Android mobile phone software. In September, it launched an inquiry into Amazon, which sells its own goods in its stores alongside third-party brands, investigating whether Amazon abuses its power to promote its own-brand goods. While the penalty numbers look large, these inquiries are limited and technocratic. For those suspicious of the giants, these limits are frustrating. But the Commission is just responding to the realities of the law.

According to Professor Ariel Ezrachi, director of the Oxford University Centre for Competition Law and Policy, competition law doesn't exist to punish companies for being big, but rather for acting improperly once they are. It's designed to force a change in their behaviour; not to make breaking big firms up an end in itself.

According to Ezrachi, competition authorities could only order a "structural" fix—such as breaking up a company—when they can absolutely prove that no other solution could work. In principle it would be possible to rewrite the law to focus more on size as a problem in itself, or to make breaking companies up a recourse of first, rather than last, resort. But companies get big for good as well as bad reasons—to run more efficiently, to innovate and develop expertise. That is true not just in tech, but across the economy as a whole. So we should be careful what we wish for. And if the law needs rewriting anyway, why use the old laws at all?

Regulate their data

If breaking up big tech is so legally fraught and risks unintended consequences—whether making some companies more profitable or making the internet worse for us to use—does that mean we have to accept its dominance?

Not necessarily, according to one expert: she says splitting up giants into more firms isn't thinking too big—it's thinking too small. "I try not to get drawn on the question of 'do we break them up?'" says Julia Powles, a research fellow at NYU's Information Law Institute. "Something much more substantial is required." Her proposal is that we learn how to think about these companies in a new way—and to tell a different story. What really makes the companies so big and so unassailable? It's the data that they hold.

Take Google. The reason it's almost impossible to compete with is not that it is big—its size alone doesn't preclude anyone else setting up a new search engine. Rather, it is that it has 20 years of data on what we search for and what we subsequently click. How could any would-be competitor acquire a trove of data so rich? In Facebook's case, the all-important asset is again the data it holds—on our social connections, messaging, and more.

Though rarely thought of this way, big data is a close analogue of intellectual property. Society has a well-established set of rules for that, and they don't involve giving unlimited power to the property owner; instead they balance a range of competing interests, ideally in the way that best serves the overall public good. Yes, there are rewards for innovation—that is needed to provide a spur. But if someone designs a new drug that could save millions of lives, the patent they get for that innovation is time limited. Copyright eventually runs out.

As with words, inventions and ideas, data is what economists call "non-rival in consumption"—a resource which, in principle, one person or company can use without there being any of it less available for anyone else. But unlike words and ideas, the companies that own data own it forever, and it is barely regulated beyond some easily-dodged rules on privacy and security.

The patents that powered the great revolutions of the industrial past are now long expired, available for the whole world to use. We already know that big data is set to reshape sectors from health, to transport to energy and yet we currently have no plan to ensure that it can ever be put to use for general good. Instead, the firms who own big data can milk it for all it's worth—and stop others from doing the same.

Perhaps it is, as Powles explains, “because we don’t know how to value data, we have allowed these data monopolies to grow and we don’t have a useful mechanism to deal with it.” We can only ever touch the edges of this problem with competition laws that focus on consumer prices.

Then there are privacy rules—which are very important—but they are all about protecting the rights of the individual, and information held specifically on them, against the company or the state. That is an entirely different problem from ensuring that all the companies and individuals have access to the potential public good represented by the data in aggregate. And yet, as Powles explains, this really matters: “The biggest asset for the world’s biggest companies is data, and it has [virtually] no liabilities, no value at origin—but huge value once it’s hoarded.”

Big data, especially when mined by AI, is now solving all manner of practical problems that in the past might have had to await the spark of some brilliant human invention—even if it is also creating some new ones. We should approach it in the same spirit that we have shown towards human genius in the past. Its value should, in a carefully calibrated way, be shared around. This could be achieved by putting rules on how it can and (importantly) can’t be passed on, likely including time limits on its exclusive use so that the first-mover in an industry need not be the only one.

There cannot be a free for all. There must be rewards for those with the ingenuity to build valuable stores of data in the first place, and—for privacy reasons—limits on access to specific information on individual people, and checks that data can’t be de-anonymised. But beyond that, data regulation could look at making algorithms public, and finding ways of forcing the sharing of truly anonymised data after a period of years. There is precedent for this. Academic researchers are often granted access to medical or official records like tax, but in formats that safeguard the anonymity of the individuals involved. There is no reason in principle why this approach cannot be extended to data that is collected by big tech as opposed to the state.

Indeed, there are already some examples in the private sector for regulated data sharing to improve competition. UK banks must share data to enable personal finance apps, and to make moving current accounts easy (without this, you’d have to transfer all direct debits manually). A first step in regulating big tech could be doing this with our social media data, and our online presence—making it transferable by law.

In banking, this is done through open standards and public specifications on how data is held and stored. For social media, at minimum, Facebook could share details on how it stores user data, thus making it possible for a user to authorise transferring that data to a

new start-up with one click. We could further require companies to share well-anonymised data after a certain period with academic and rival commercial researchers, to make it easier for new competitors to make use of it.

For any of this to work, it needs the support of the US government. Not likely, perhaps, under Donald Trump. But under a different administration, Washington might develop a more enlightened understanding of its own interests. The hegemony of the American giants won't last forever—indeed, one reason why Apple's stock nose-dived recently was concern about Chinese competition, both inside and outside the People's Republic. It is surely better for the US to set the right rules, while it is still holding the ring.

With creative and careful thinking, plus some legislative courage, many other steps could be taken. It can't come too soon. "We need some sort of response," Powles concludes. "We're in the total dark ages about data's true value and what we do about it."

First, however, we need to take a clear look at the real problem with big tech. Yes, the challenge the giants pose touches on the efficiency and fairness across our fast-changing economy—in that sense it is exactly the equivalent of the one faced by the trust busters of 100 years ago. And scale remains important. Beyond that, however, we shouldn't be bewitched by the parallels: new eras need new rules.

The thing to worry about this time around is less the scale of the companies per se, than the scale of the data they are hoarding. Regulation must find new ways to allow the wider community to tap this extraordinary asset. Changing circumstances require changing solutions—and, in our times, nothing is changing things faster than big data.