

The Public Option

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Abstract

People value highly the digital technologies that are so pervasive in everyday life and work, certainly as measured by economists. Yet there are also evident harms associated with them, including the likelihood that they are affecting political discourse and choices. The features of digital markets mean they tend toward monopoly, so great economic and political power lies in the hands of a small number of giant companies. While tougher regulation may be one way to tackle the harms they create, it does not get at the structural problem, which is their advertising-driven business model. The hunt for people's attention drives algorithmic promotion of viral content to get ever-more clicks. An alternative policy intervention to reclaim public space would be to create a public service competitor that could drive competition along other dimensions. Online space must be reclaimed as a public space from the privately-owned US and Chinese digital giants.

1. Weighing up the digital age

Digital technology has become pervasive. It is reshaping the way we lead our lives. The average adult in Britain spent 28 hours a week online in 2020 (Ofcom, 2021), more than a whole day a week, sleep included. This was less than the average German or American; in one survey nearly one in three American respondents said they were online 'almost constantly' (Perrin and Kumar, 2021). This digital dependence has been cemented by the pandemic lockdowns; entertainment, studying, shopping and social life could only happen online, as could work for many people. People in lower income countries are still less tethered than this to the Internet and World Wide Web but catching up rapidly. Less visible in everyday experience, but just as pervasive, is the way much business activity happens digitally, from control systems in factories to logistics chains to urban sensors, and much government activity too. This is without doubt the digital age.

This has happened within just two or three decades. Digital technologies have been the most rapidly adopted in history. It took a century after the introduction of the flush toilet in the 1850s for nine in ten US households to get one, but less than 20 years for

Internet access to reach the same milestone (Comin & Hobeijn, 2010, data appendix). As well as spreading very rapidly, digital has had far-reaching effects. Economists describe this cluster of related information and communications innovations as a ‘general purpose technology’: they have a wide range of uses across different areas, and profoundly change the way people, and businesses, carry out their activities. Yet despite the presence and profound impact of these technologies on our lives, neither formal regulation nor informal social norms of behaviour have adjusted to them. The costs as well as the benefits have become all too clear, from disinformation and conspiracy theories online to security breaches and loss of privacy.

Even so, many people derive great value from digital services, especially as the most familiar ones – such as online search, social media, travel planners or email – do not need to be paid for directly. High usage rates speak for themselves (for instance two thirds of UK adults use social media, four in five use online search); and when people are asked what they would need to be paid to go without Google or Facebook for a year, the typical (median) figures are high: £1,500 for online search, or £150 for Facebook (compared with £750 for access to a public park and £3,500 for a TV set) according to one study (Coyle & Nguyen, 2020). Some respondents state much higher figures than these, but in any case all are above the zero price they need to pay.

For economists, estimates like these are a measure of the utility people derive from digital services, providing a metric of value. For economics remains fundamentally utilitarian in its view of the good life – or social welfare, to use the term of art. The benefits gained from the consumption and use of different economic goods depend on the extent to which they satisfy their users’ preferences (subject to the constraint of having enough money to buy them). Economic analysis assesses policies or business practices in terms of whether or not they increase social welfare in this specific sense. What’s more, despite the evident ethical framework embedded in this approach, economists also generally insist (in the jargon) that their task is ‘positive’ and not ‘normative’. In other words, they are concerned with what is, not what ought to be, with value judgments to be made by politicians or others once they are in possession of the objective economic evidence (Friedman 1953, Duflo 2017).¹ The behavioural economics revolution has introduced human psychology,

¹ This separation of normative from positive is discussed in Coyle (2019), and the welfare framework for economic analysis in for example Coyle (2020) and Hausman et al. (2016).

but this is generally taken to mean that individuals' preferences are 'biased': the economic analyst (or social planner) still then has the task of maximising aggregate utility by incentivising people to behave according to their 'true' preferences. In short, the high stated monetary values for digital services, and the 'revealed preference' of their widespread use, are taken as a valid measure of society's economic gain.

Economic analysis is certainly not blind to concerns such as loss of privacy, misinformation, bias, or manipulation of voting. These dis-benefits of the digital world are clearly relevant to any evaluation of the impact of the technologies on social welfare. But they are harder to accommodate within the standard framework of value in terms of the metric of money. There have been numerous critiques of the one-dimensionality of the utilitarian calculus, such as Elizabeth Anderson's (1995) argument for an irreducibly multi-dimensional ethical framework, Michael Sandel's (2012) emphasis on 'republican virtues' or Amartya Sen's (1993) capabilities approach. In the end, though, when it comes to making policy decisions concerning the role of digital technologies and companies in our lives, these incommensurable outcomes need to be weighed in the same scale: how should Facebook and Google be regulated? It depends on how we think the value of their services compares to the cost of their adverse effects. Evaluation of the social impact of the digital revolution involves their many different consequences. We all love being able to plan journeys, do our banking online to avoid queues in the branch, or shop conveniently. Against this we might want to consider the explosion of child pornography, or the role of social media in inciting violence or vaccine conspiracy theories, or the scope for algorithms to shift voting behaviour by altering search results and timelines.

2. The winner-takes-all phenomenon

The evaluation needs to be informed by the fact that digital service use is concentrated among a very few giant companies, almost all based in the US or China. Most people choose the services provided by a handful of companies (Alphabet/Google, Amazon, Apple, Facebook, Microsoft, or Alibaba, Baidu, ByteDance and Tencent) and this is itself an aspect of the economic calculus. Might the negative consequences of digital be mitigated if so much power were not held by a small number of companies and their immensely rich executives?

This tendency toward monopoly, known as a ‘winner takes all’ market, is related to the essence of digital as a suite of information and communications technologies. Many industries from aircraft manufacture to banking now have a few large, dominant firms because there are large economies of scale: it is costly to get into activities such as manufacturing vaccines or creating sophisticated software. Once in, the average costs per user decline faster the larger the business, so big firms can generally supply the market at better prices and often also better quality (thanks to accumulated experience) than their smaller or newer competitors. But in the case of the digital sector, this normal scale phenomenon is reinforced by other distinctive characteristics.

One is what are known as network effects. This refers to the benefits users of a communications network gain from their being other users. A telephone call with nobody at the other end is of no value. The more people you can call the better. In the case of digital platforms including social media, these network effects can also be ‘indirect’ as the platform will be mediating between users and suppliers of a service: think of diners and restaurants, or advertisers and consumers. More diners makes it worthwhile for restaurants, while more restaurants mean more choice for diners. Any business facing such network effects will have a tricky task, when it is new, to keep both ‘sides’ in appropriate balance. This is known in the literature as the chicken-and-egg problem for obvious reasons (Evans, 2002). When they reach a critical mass of users on each side, though, digital platforms grow extremely quickly and one generally dominates the market.

A second digital characteristic is the importance of data for delivering services to users. Every key stroke or tap on our devices provides data to the big companies. This helps them improve their services over time, the more they know about what we want. It also enables their business model. Platforms will generally charge different prices to each ‘side’, often zero on the consumer side with all the commission charged to suppliers (Rochet & Tirole, 2006). This reflects the usually greater sensitivity of consumers to pricing; we do not have to go out to dine but restaurants need customers to survive. When the consumer price is zero, all the revenues need to come from suppliers. For many of the heavily-used digital service, the second ‘side’ consists of advertisers. The more the platform can tell advertisers about their potential customers, the more they can charge them. Data drives advertising revenues and further growth in user numbers, as the companies know so much about us as to be able to provide a compelling service. The data feedback loop

reinforces market dominance and creates another barrier to potentially competing services.

For these reasons, the most successful digital companies have become astonishingly large and powerful. Google took over from Yahoo as market leader by having a better search algorithm, and Facebook from MySpace thanks to its improved features. But it is hard to see how the next generation of innovators could replace them now. The winner-takes-all dynamics have produced the winners. To underline their scale, the five most valuable (according to the stockmarket) American companies are the digital big five. Their combined valuation of \$10 trillion is about one fifth of the total for the entire US stockmarket. Apple is worth about \$2.4 trillion compared to, say, Exxon Mobil's \$2.4 billion: it is an order of magnitude bigger than the giants of old.

With such economic power comes political power. Overt lobbying is a crude measure of political influence, but US advocacy group Public Citizen reports that Amazon and Facebook are the two biggest lobbyists in the US (Chung, 2021), and they and other tech firms are also among the biggest spenders on lobbying in the EU as well.² More influential although harder by far to measure will be the political and social consequences of the way they run their businesses. These might include the influence of search results or viral social media memes on people's beliefs and behaviours, the spread of material inciting terrorism or of child pornography, or any of the other online harms poisoning society.

Digital concentration has also hollowed out traditional news media in many countries, undermining both subscription and advertising revenues. Newspapers and broadcasters feel compelled to make content available for free via the digital platforms, as it is increasingly the only way to reach audiences. Relatively few can sustain paywalls. As for advertising, Google and Facebook between them earn the lion's share of online advertising revenues. Many newspapers have closed, particularly local ones, diminishing the scrutiny by the media so essential to the healthy functioning of a democracy. The amounts available to support investigative reporting have shrunk steadily. A few countries, such as Australia and France, have forced the digital giants to make payments to other news organisations. Information markets are not like markets for apples; when there are just a few dominant providers the consequences will be far reaching.

The conditions of everyday life in ways both trivial and profound are therefore to a startling degree shaped by a handful of large

² <https://lobbyfacts.eu/reports/lobby-costs/companies>

corporations. If governments and citizens want to tackle the negative consequences of the digital age, they can do so only by getting companies like Google and Facebook to change their practices.

3. Tackling digital power

The public intervention intended to ensure the market economy continues to deliver for society is competition policy, intended to promote energetic rivalry between firms for customers ensuring positive rather than negative outcomes. Yet it has been hard to get a grip on how competition policy should tackle digital markets. After all, if the giants deliver services people love, for free, and with continuing innovation, what is there to complain about? Competition authorities have traditionally not been concerned about corporate growth when consumers are evidently so satisfied. Eventually, though, the wider societal concerns led to a number of high profile reports in recent years (e.g. Cremer et al., 2019; Furman et al., 2019) recommending a change in policy, a tougher approach to policing digital markets. Joseph Schumpeter (1942) saw markets as a field of creative destruction with a succession of winners putting weaker competitors out of business over time. The market might be concentrated at a moment in time but a serious threat of new entry can perhaps discipline the behaviour of the incumbents. The problem with digital dominance is that it has become impossible for new entrants to break in as the winner-take-all features make the threat of new entry rather weak. So many jurisdictions are updating their competition policy frameworks now with new powers intended to enable the digital incumbents to be challenged.

Some of the new proposals concern questions such as the prominence the big platforms give to services provided by rivals, or the commission fees they charge. The intention is to regulate to make competition more effective. A particular focus, though, is the data loop, as this gives the tech giants a self-reinforcing and almost-insurmountable defence against new competition. Privacy campaigners object to the data harvesting on intrinsic grounds, quite correctly arguing that there is no meaningful consent given to handing over personal data when people click 'accept' on long and impenetrable terms and conditions notices.

Others have objected to the unfair division of the gains from the data transaction. Although users get the service for free, the companies make large profits from us. One line of argument therefore advocates for considering 'data as labour', and the payment of small sums

of money to users for their attention and data (Arrieta-Ibarra et al., 2018). However, this notion of an individual transaction does not capture the fact that the valuable information content – what advertisers pay for – comes from the combination of individuals' data. An advertiser does not want to know only my tastes but those of all people like me in relevant ways. The legalistic framing of data as property to be owned (the default is that the digital companies that collect it have economic ownership of it, having won our consent by a click) is based on a misconception (Coyle et al., 2019; Viljoen, *forthcoming*). Data is more like air than a normal economic good; it should not be considered as something over which property rights can be held.³

Data can furthermore be combined with other data to be turned into useful information that can help people more effectively do what they want – save time, invent new things, make their business more profitable. It is potentially a rich social resource, but one locked in the data centres of a small number of big corporations. The concern for privacy, understandable as it is, has strengthened the grip of the digital giants over the data hoards. So an alternative approach to lowering the data barrier to entry is to consider ways to make it interoperable and transferable – not simple, given the need to protect privacy and ensure security and data quality, but technically possible.

While making data more accessible to others, and breaking into the data loop, might help strengthen potential competitors to the digital giants, it will not avert all the digital harm that concern us. To see why, consider that Google and Facebook are not the pioneers in the use of personal data for corporate profit. Other kinds of company such as credit rating agencies and marketing companies have collected and sold data and the market analytics based on it. Yet they have not generated the same kind of troubling societal harms.

The feature that makes the role of some of the big tech companies today problematic is their business model: the collection of data to sell advertising space on digital real estate. In order to make money this way, they have to be able to demonstrate that they have users' attention through clicks. They need to corral more and more of our time, more minutes in every day and more of those minutes on their platform rather than others. Given that leisure time is limited by the need to earn money through work and to sleep and eat, the battle

³ In technical terms, it is non-rival: it can be used simultaneously by many people. If access is restricted by technical or legal means it would be designated a club good; otherwise a public good.

for clicks is an arms race. This race is being conducted between a few advertising-funded companies: Google including You Tube, Facebook including Instagram, TikTok, Twitter. The Alphabet and Facebook families account for more than two thirds of online advertising revenue in the UK. The fundamental need to get people clicking, to earn advertising revenues, is at the heart of the societal costs imposed on us by big tech. Conspiracy theories, misinformation, hatred of minorities (such as the Rohingya in Myanmar) – along with celebrity news, sourdough recipes and cute pet videos – are among the viral memes that get people clicking.

Advertising is to some degree a means of providing useful information to consumers. For example, nobody would buy innovative products if they had not been brought to their attention by advertising; think of the iconic Apple '1984' advert. Advertising is also, though, a form of rivalry between companies in markets where there are similar but differentiated products, such as different varieties of toothpaste or home printers. Nicholas Kaldor (1950) pointed out this had adverse effects: 'Advertising is mainly a device for strengthening monopoly power and weakening competition, and is, therefore, anti-social in its effects'. Even this understates the anti-social element. From quack remedies advertised in 19th century newspapers onwards, it has always conveyed pure misinformation to consumers, which regulators struggle to control. This context might make us wary of advertising-funded businesses to start with. Layered on top of this in today's (mis)information environment is the character of the content driving clicks and advertising. Neither the digital platforms nor their advertisers create this content; but they need it. Without viral, click-worthy content, they would have no profits because they give away their services for free.

The scale of their operations, the sheer number of their users, makes it challenging for the tech giants to monitor and police the content on their own platforms. Many governments are beginning to demand that the platforms tackle harmful online information, which has prompted them to introduce enhanced monitoring, or deploy AI algorithms to take down some kinds of content automatically (with some odd results given the gap between artificial and human judgement). When there are specific outrages or crises, obnoxious material (such as terrorist videos) is now removed relatively quickly. Yet it is only minimally rhetorical to say the drive for clicks causes much harm, including many deaths, whether from the incitement of hatred or the spread of anti-vax beliefs.

4. The public option

This reactive approach is inadequate; the quantity of hate or misinformation will always be unmanageable, and anyway it needs to be prevented in the first place. A much bolder intervention is needed to tackle the pernicious effects of the click-bait and advertising based economic model. It needs to be an intervention that does not depend on unwinding the digital age. We will continue to spend many hours each day online. Specifically, an intervention is needed to ensure that competition for people's attention does not require maximising the number of clicks. The only way to achieve this will be to introduce into the market for attention an alternative business model, one not driven by profit maximisation: a public option whose platform is shaped not by whatever will generate most clicks but by public service aims.

In case this sounds like wishful thinking, there is already a highly successful example of content markets delivering public service aims through competitors with a mixture of advertising, subscription and tax-based revenues: broadcasting. The example I have in mind is of course the BBC. It was established in 1922 as an offshoot of the Post Office with explicitly economic aims, an industrial policy intended to make sure the UK had a foothold in the exciting new tech frontier of radio (Coyle, 2015). Originally the only broadcaster, in due course commercial rivals came along, supported by advertising and regulated with public service requirements. This competition explicitly further encouraged by Mrs Thatcher's Government by establishing Channel 4 as an advertising funded, publicly-owned broadcaster with a public service remit. Even more recently, subscription-based and profit-motivated services entered the market too, delivered by cable and satellite as well as broadcast platforms. Thus, by happenstance, Britain has had a broadcast market supported by a diversity of business models, ownership structures, and corporate purposes.

The BBC has been under sustained political attack from successive Conservative governments, and its finances seriously squeezed. The current Conservative Government intends to privatise Channel 4, albeit promising it will be sold with public service purposes intact. The ideological lenses through which Conservatives have seen the market have blinded them to the economic and social benefits of the mixed broadcasting ecology in the UK. These include the kind of benefits a successful industrial policy can deliver: training for the sector as a whole, blue skies research, derisking innovation for smaller suppliers (such as musicians or special effects studios) by

providing a large market for their wares, encouraging consumer adoption of new technologies (such as on-demand viewing through the launch of the iPlayer, in 2007). However, the key point for present purposes is that while the BBC has competed vigorously with its commercial rivals for audiences, the nature of that competition has ensured high average quality and no race to the bottom in terms of types of content. Although it is regulation that ensures all UK broadcasters have to provide reasonably impartial news bulletins, it is the varied nature of the competition among business models and governance structures that ensures none of the widely-viewed UK TV channels or radio stations only shows soap operas or American movies, by far the most popular genres. Variety and quality are dimensions of the competition for attention.

Given the toxin spreading through society because of the widespread imperative to get users clicking online, and given the unmanageable scale of the problem with the billions of users and billions of hours spent on the giant tech platforms, incremental tightening of regulations on YouTube or Facebook seem unlikely to have a big impact. And yet these platforms now entirely shape the arena for public debate in our societies. People's information and beliefs, shaping how they vote, whether they get vaccinated, where they shop, whom they hate and how they think it is acceptable to act on that – all are acquired from online spaces. This includes 'traditional' media such as newspapers and indeed broadcasters, who also now depend on the tech giants to get access to their readers and viewers.

Nothing will change unless there is a significant intervention by the state, in the face of the platforms' extraordinary private concentration of power. This is a fundamental challenge to the body politic.

Regulation could work. The Chinese solution demonstrates this. Not content with exercising tight oversight of what people see and say online, with a large digital police force, the Chinese government has recently launched an all-out political attack on the privately-owned platforms. While not nationalised, they have been effectively brought under the strict supervision of the state, with a suite of new regulations regarding their practices, closer party supervision, and a massive extension of the state's control over the data held by the tech companies. Prominent commentators have denounced 'big capitalists'.⁴ This suggests that sufficiently determined regulation and punishment could reclaim the digital arena. Unfortunately only the US (if it wanted to) and China have the ability to take this

⁴ Financial Times, 6 & 7 September 2021 <https://www.ft.com/content/bacf9b6a-326b-4aa9-a8f6-2456921e61ec>

route. Other countries' governments can demand compliance with rules about moderating access to certain kinds of content, or enforcing age limits, or could even try to insist on data sharing, but their enforcement powers are weak. If it came to a game of chicken, which government would risk Facebook shutting up shop inside their borders?

So establishing a public service social media platform, at sufficient scale to attract users, perhaps through easy linkage with other online public services, or indeed by brilliant viral content that does not rely on misinformation or hatred, seems an attractive alternative. It would need to be paid for, and there is plenty of alternative need for public spending now, so perhaps this seems an unrealistic proposal. Yet we have such a degraded information environment and poisoned public debate that, when everything people believe and do is shaped by the information they acquire, it might be worth it. We could consider it a National Health Service for the body politic.

5. Claiming public space

Ideas build societies. Ideas triggered the Enlightenment and Industrial Revolution, shaping the modern world (Mokyr, 2002). Economic growth is a matter of new ideas about how to produce things or about new services and products. Ideas and beliefs cause political debate or compromise – or conflict. People die – or kill – for them. As both authoritarians and democrats have long realised (Ben-Ghiat, 2020), nothing is more important than the information and beliefs people acquire in determining the kind of society we have.

The ascendancy of a small number of digital companies in the online world where most of now spend a growing amount of our time means that their platforms can no longer be considered a private domain. Just as the presumption that they hold private ownership rights over data must be challenged, so must the presumption that the world online is a private economic space, a market. Introducing information into the picture immediately implies that market solutions are not the best ones for society (Stiglitz and Greenwald, 2014).

States have always played a strongly interventionist role in the means of communication, from post to telegraph to phone networks to broadcasting (with the US something of an anomaly, albeit regulating these markets). Communications companies have often been publicly-owned. They have also often been publicly financed. The American state through its funding and Cold War requirements

laid the foundations for the Internet, and European governments did the same for the World Wide Web, developed by Tim Berners-Lee at the CERN research facility and made freely available. Initially the Web was considered public space. The rise of the private platforms has occurred mainly in the past 15 years (Wu, 2016) because the growth of most of these services we all use has occurred in the United States, with its distinctive economic, pro-market and anti-government instincts.

The instinct to let the market decide unconstrained by government limits, the utilitarian calculus making it easier to count economic gain than social or political loss, and the nature of digital technologies themselves have brought us to the point where it is widely accepted that something must be done. We have become reliant on huge and powerful privately-owned companies based in the US or China. They decisively shape our information environment. Online space must be reclaimed as public space, and one way to do so will be to build public spaces online. Digital platforms do not all need to be publicly-owned but they do need to serve the public good.

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