The European Way of Digital

How to make tech work for open societies in Europe

Counterpoint is a research and advisory group whose focus is on the social and cultural dynamics that drive politics and markets. Based in London, Counterpoint provides NGOs, businesses and governments with strategic insights on the new landscapes of risk and uncertainty.

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How to make tech work for – not against – open societies in Europe

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Europeans share the worries of people in many parts of the world about how digital technology is changing their politics, economies and societies. But as Europeans, they also have specific expectations regarding the role of the state in protecting them from the most negative effects of the digital transformation. There are variations across countries, of course. But overall, these expectations vis-à-vis the state and its role in contributing to the democratic commons and open societies are largely shared. They have no problem in seeing national or supranational institutions involved in regulating the most damaging market excesses.

Europeans have both the expectations and the means to help protect democracy, open societies and citizen wellbeing during the transformation now underway.

Furthermore, these expectations coincide with the fact that the European Union and national governments have well-developed tools that could help manage the most negative effects of digital transformation. In other words, Europeans have both the expectations and the means to help protect democracy, open societies and citizen wellbeing during the transformation now underway. And the norms set at EU level to regulate and guide digital are already starting to be adopted elsewhere in the world. In a world torn between an American model that is largely market-driven on the one hand, and a Chinese model rooted in authoritarian state practices on the other, is a European Way of Digital the way forward?

Why the European Way of Digital is different

European societies exhibit shared profiles with respect to the role of the state in regulating and protecting societies.

First, Europeans tend to trust markets less; as a result, they look more often than Americans do to state-driven solutions rather than market ones.[1] The delivery of such solutions varies across countries, but there is a shared political culture: Italians get much less from the state than Finns do, but both still have higher expectations of the state than Americans.

Second, overall, European societies are generally predicated on solidarity rather than competition. This means that Europeans tend to be less tolerant of inequality than Americans or Chinese and they expect the state, rather than private charities, to protect citizens from the vicissitudes of economic precarity. Although there are different attitudes towards the precise role of the state across Europe, on the whole Europeans see the state as having a responsibility to prevent market failures and to

provide a social safety-net in case of failure – because the state is understood to have a duty of care to protect public goods and preserve civic spaces, both of which are understood to be the conditions for solidarity.

Given these attributes of European societies, it is no surprise that the state is viewed as the natural vehicle – often in collaboration with others – to solve the problems created by the digital transformation.

For Europeans, digital access and digital services are part of this slate of public and civic spaces, and as a result they expect them to be regulated as any other public service. In practice this means that much as they expect the state to ensure universal access to education, healthcare and other public services, they expect the same to apply to digital services.[2]

These expectations play out in the face of digital transformations and in the context of societies that care deeply about values such as freedom of speech and media pluralism. Despite the rise of populist politics, European citizens are used to living in open societies with functioning democracies (by and large) and they are worried that these might be heavily affected by digital change.[3] Like Americans, they want to see problems such as hate speech and filter bubbles addressed, discrimination weeded out, and conspiracy theories exposed.

The EU has specific tools that can help govern the digital public sphere and regulate companies' behaviour online: competition policy, privacy and data regulation, setting common standards, creation of network collaboration in research and development. As for national governments, they have both taxation and spending powers that can shape how digital companies behave, through tax policy and state funding of innovation.

What do Europeans worry about?

This volume looks at some of the bigger questions about the effects of digital transformations on open societies and how the EU and European governments could respond. In effect, European citizens are particularly worried about the following key issues:

- **Privacy.**[4] One of the main concerns of Europeans has been the collection of personal data, as well as the storage and use of such data by big technology

companies without consent. Worries have always been rife, especially in Germany, but the use of personal data in various election campaigns for the purposes of micro-targeting has contributed to the spread of anxiety across the continent. Protecting this data is seen as the responsibility of the state, rather than the individual. GDPR has been one response, but what else do policy-makers and regulators need to take into account in order to assuage growing concerns?

- **Taxation and fiscal justice.** Taxation is seen as the central resource for public services, so tax avoidance by Big Tech companies provokes strong political reactions. At EU level the Competition Commissioner Margrethe Vestager has led the charge in terms of taxation of big tech. But at national level, too, the French and Spanish governments have put the issue on the public agenda – and many parties made it a key issue in the run-up to the European Parliament elections. More broadly, European citizens are concerned about equity: Some of the more aggressive social movements of the past year have been fuelled, in part, by concerns regarding the equity of the fiscal burden across society's main actors. But also by a concern that both national and international institutions are failing in their roles as protectors of the public. The European Elections held in May (2019) and the unusual turn-out suggest that there is an appetite for a growing role for the EU – a realisation that it has the legitimacy and the capacity to act and provide both protection and redress.

- **Transparency.** European citizens worry about various aspects of transparency. First, they worry about the lack of transparency regarding the actual business models of large tech and social media companies: they are not clear that Facebook, for example, is a 'tech company'. They feel that the business of Facebook might equally be data collection, or advertising. The lack of clear specification regarding the activities that make such companies profitable is a growing concern. But Europeans also worry about the concentration of power into the hands of very large tech companies in a context in which they have, so far, been left to self-regulate. European citizens are worried about what data is collected, how it is stored, and how it is used – with little if any institutional oversight. Finally, they worry about the opacity of the algorithms that determine how their information is sorted/ordered/promoted in the digital public sphere and how they are targeted or monitored as a result, by Facebook, Google (and YouTube), in particular.

- **Fragmentation and polarisation.** In light of the rise of populist forces across Europe, many Europeans worry about the creation of echo chambers and filter

bubbles[5] that encourage increasingly fragmented societies. These echo chambers occur in conjunction with algorithms that privilege the visibility and circulation of the most outrageous or extreme statements – these tend to rise to the tops of pages and attract more 'clicks'. The result is not just fragmentation but increasing polarisation as the most abrasive and extreme views come to dominate discussion and exclude the possibility of dialogue and compromise, by default. This is not only bad for democratic participation – but because it undermines trust in institutions, it also runs contrary to European traditions of solidarity and civic life that can only occur when common, shared spaces are preserved.

A European Way of Digital?

The political culture in Europe creates a particular set of requirements which are different from those in the other big markets for digital services and products. The world already has two models. The US sits at one end of the spectrum, marked by absence of state intervention, with minimal regulation seen as the condition for innovation and being competitive. Although there is growing awareness in the US of the costs of a mainly market-regulated system, many Americans think the costs are worth the benefits of being the world leader in social media and other tech sectors. At the other end lies China, with total state control. But the EU could develop an alternative, based on European conceptions of the public interest and public goods. Public institutions of various kinds are highly developed across European countries. How could they be applied in the digital sphere?

One often-formulated argument against a European middle way, in contrast to the American libertarian model, is that it is less effective in its capacity to create tech giants and so-called 'unicorns'.

Two issues are crucial here. The first is that the argument in favour of a European Way of Digital is in part about a different relationship to technology. The aim is not to create two or three Trillion-dollar giants that dominate the market (and, it should be noted, tend to snuff out the competition they claim to be so fond of), but rather to create a sustainable eco-system of small- and medium-sized firms that deliver sustainable, flourishing, long-term businesses as well as wellbeing, better commons and better policy. This is not just tech for the sake of tech, but again – in line with a different conception of the state's involvement, but also of the role of business in society – tech that can also be harnessed in pursuit of particular societal aims and results.[6]

Second, while US companies often claim that regulation snuffs out innovation, judicious regulation also contributes to innovation by creating incentives for collaboration. For example, Europe-wide networks create ecosystems of collaboration and innovation. Regulation-induced innovation can emerge because the EU allows free movement of workers, capital and companies, and protects patents, ensuring the diversity that leads to creativity and innovation. Moreover, it creates a larger set of users and a market that is more differentiated; this forces firms to be innovative and to respond to a diverse market, helping them to be more competitive globally too.[7]

Finally, the EU still has real capacity to generate trust, and European citizens are convinced that issues to do with digital technology are best addressed at EU level and support a European digital single market.[8] But perhaps most importantly for the purposes here, in the case of cutting-edge industries that are redefining a sector or even creating one (such as intelligent health systems or intelligent transport based on AI), development that is regulated and overseen by the EU is a crucial element in generating that trust: generating citizen trust in radically new technologies, or new uses of technology that impact so directly on their health and wellbeing is key for adoption and use. The fact that the EU can be seen to do that suggests that it is well placed to encourage adoption of cutting-edge products because its involvement is a guarantee of quality and trust-worthiness. In fact, manufacturers of products developed elsewhere in the world often seek an EU mark of quality even if they are destined to be sold outside European markets, because that mark is trusted globally. In a fast-changing world where trust is dropping, trust in quality and safety of products with European standards – which remains high across Europe at 78% – makes a big difference, from baby milk to driverless buses.[9]

This volume presents contributions that focus on a European Way of Digital that serves the public interest and fosters open societies. The contributions that follow illustrate specific areas in which EU institutions need to be active in order to address European citizens' worries.

Our two initial essays focus on platforms: Johannes Mikkonen and Johannes Koponen focus on platform regulation and on the kind of European-style rules-based governance that needs to underpin European aspirations of solidarity. Alastair Parvin goes further and asks why in a society of diminishing costs and rapid problem solving, the wins are not more obvious. In a radical move, he suggests that the problem lies with ownership, and more specifically, with monopolies.

To address this, the state's role needs to shift from redistributor to rule designer in order to develop a digital infrastructure based on democracy.

Our third essay, by Rachel Coldicutt, also pulls at the thread of governance: for her this needs to be rooted in a democratic process – in which more people steer the impact and direction of technology. This is essential and must bring together increased legislative and regulatory capacity with empowered publics (empowered also to seek redress) and a robust, growing evidence base. Christopher Lambin, in his essay, pushes the argument for the public's empowerment a little further: his argument is not only that tech companies cannot be allowed to claim their sorting is neutral when in fact it produces effects that are inherently harmful to democratic processes, but that they should be required to produce algorithms that work toward the common good. Steffan Heumann's focus is on disinformation: in his essay he outlines where Europe has already acted against disinformation – but his piece also stands as an encouragement to go further. Voluntary codes, he argues, will not be enough and hard rules need to be put in place.

Our last two essays stand in lieu of case studies. The piece by Steffen Krüger and Niamh Ní Bhroin addresses the relationship between wearable trackers and the emergence of a new kind of surveillance: one in which the traditional collectivisation of risk through insurance is transformed by the relentless tracking of health and performance, thereby leading to new forms of segregation and the gradual erosion of the norms of solidarity. As for Diego Piacentini, his piece focuses more specifically on the case of Italy as an illustration – and argument in favour – of digital public services as a means to a more open and fair society.

Each of these essays could stand alone as an original and thought-provoking piece; here we encourage the reader to take them together as an illustration of the potential of a European Way of Digital.

Notes

1. European Commission (21 December 2018), 'Autumn 2018 Standard Eurobarometer: Positive image of the EU prevails ahead of the European elections' (Brussels): http://europa.eu/rapid/press-release_IP-18-6896_en.htm; OECD, 'Governance at a Glance' (2017): http://www.oecd.org/gov/government-at-a-glance-22214399.htm

2. European Commission (2016), Public Consultation on the Regulatory Environment for Platforms: 'Study on Online Platforms – Contrasting perceptions of European stakeholders: A qualitative analysis of the European Commission's Public Consultation on the Regulatory Environment for Platforms': https://ec.europa.eu/digital-single-market/en/news/study-online-platforms-contrasting-perceptions-european-stakeholders-qualitative-analysis

3. Voices on Values website: http://situationroom.dpart.org/index.php

4. Jessica Davies (2 November 2017), 'European consumers' attitudes toward data privacy, in 5 charts': https://digiday.com/media/european-consumers-attitudes-toward-data-privacy-5-charts/

5. See 'Degenerate Feedback Loops Recommender Systems' (2019), by the Google Deepmind team: https://arxiv.org/pdf/1902.10730.pdf for an explanation of the consequences on people's beliefs and preferences.

6. See Margrethe Vestager on this: https://qz.com/1122482/margrethe-vestager-at-web-summit-slams-google-apple-and-woos-tech-startups/

7. European Political Strategy Centre (2016), 'Towards an Innovation Principle Endorsed by Better Regulation': https://ec.europa.eu/epsc/sites/epsc/files/strategic_note_issue_14.pdf

8. Standard Eurobarometer 90 (Autumn 2018), Wave EB90.3, 'Public Opinion in the European Union. First Results'. Survey requested and co-ordinated by the European Commission, Directorate-General

for Communication. Delivered by Kantar Public. P 29.

9. European Commission (2017), 'Consumers' attitudes towards cross-border trade and consumer related issues': https://publications.europa.eu/en/publication-detail/-/publication/af6a3712-9e77-11e7-b92d-01aa75ed71a1/language-en

All urls checked and working, 27 May 2019.

European Promise and Platforms

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Virtual reality, artificial intelligence, robotisation, nanomaterials, the platform economy: these are the buzzwords of our current technological landscape. But some of these buzzwords have potentially significant social consequences. For example, digital platforms (by this we mean platforms that facilitate exchanges, usually between users and producers – like Amazon or Uber) displace traditional companies, computers displace humans, and new devices displace traditional channels of communication.

Platforms bring immense social gain for their users due to their inherent network effects. Network effects mean that each interaction inside a platform increases the potential value of future interactions for some, or all, of the other participants in the platform. Due to this, it's alarming that Europe is far behind the US and China in creating successful platform companies.

To leverage new growth, grasp the opportunities and solve the tensions these developments bring, Europe needs new ways of treating platforms, platform work and platformised consumption. And we want to explore whether there might be a 'Europe-specific' approach towards platforms.

Three competing perspectives on platforms

The new global order has essentially three competing 'platform stories':

In the Chinese story platforms are an extension of the (authoritarian) state. The Chinese government supports their massive platforms such as Tencent and Alibaba. These very powerful companies then compete in an increasing number of business sectors. For example, in Wuxi, the brutal competition in the food delivery sector between Meituan (owned by Tencent), Ele.me (owned by Alibaba) and Didi (owned by both Alibaba and Tencent) has led to virtually free meals and near-instant delivery.

In the American story platforms are a continuation of the cultural colonialism that has shaped the world for at least the last 70 years. When Mark Zuckerberg admitted in a Congress inquiry that Facebook is a media company, he connected Facebook to a line of corporations from Disney to Coca Cola. These companies have had a key role in pushing the planet towards American values of individualism, entrepreneurship and consumerism.

Europe, on the other hand, lacks a dominant story. European values are often seen as more social than in other regions. While Americans are widely considered to suspect the motives of the state, the purpose of taxation and the value of equality – Europe is built around a sense of solidarity. This means that the European story is likely to revolve around rule-based governance and strong institutions.[1]

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But two possible competing stories of Europe can emerge based on these common European characteristics. The first one of these is a traditionalist story of **'Fortress Europe'**, which is based on an imagined religious and cultural uniformity and aims to maintain national homogeneity.

The other competing story is more convincing and forward-looking: **the story of a history of divisions.** This story is born precisely of the divisions that Europe has been able to overcome in the recent past, and in particular since 1945 and 1989. This overcoming happened bottom up, with the help of the rule of law, and via a culture of mutual trust and respect.

As a group of European historians write in *The Guardian*,[2] this Europe of differences, symbolised by the EU, is a European project in direct opposition to past imperial ambitions. Instead, this European story is 'an unprecedented project of solidarity backed by the will of peoples who have abolished war between themselves and who share a desire for freedom'.

But is this new story of Europe being told too late?

The rise of new social tensions

The risks and opportunities related to advances in technology are so extensive that technological development can't be left solely to companies and engineers. Technology should be considered as a social issue as well: it is changing both the way societies **are** organised and how they **should** be organised.

Big technological advances, while they have beneficial consequences, can impact on and increase social tensions. There are historic examples of this. The advent of the steam engine during the Industrial Revolution brought with it more efficient travelling and factories, but also pollution and environmental challenges.

Rapid urbanisation led to the appearance of both slums and creative cities, and while new jobs were created for millions of people, we were also left with new social problems such as unemployment and urban poverty.

Those problems were not solved until new social institutions were created. And the full potential of new technologies couldn't be utilised until these tensions were, if not resolved, then at least addressed and managed.

The same applies to today's technological developments. **As we are in the midst of a transition to a post-industrial society, we need to shape current social institutions and create new ones that address current and future societal tensions.**

New tensions arise and need to be negotiated, but few of them are as important as the tension between trust and platforms. **Indeed, Facebook's Cambridge Analytica scandal brought the tensions between trust and the platform business models to light. Trust is a commodity for these companies. But trust is also one of the cornerstones of the European states.**

End of trust

Platform companies do not operate like traditional companies that sell products. Instead, platforms bring together users and resources and create business not just for themselves, but for a broader class of actors. In brief, platforms have three important characteristics.

Platforms are a way to save costs, increase efficiency and maintain competitive advantage. Platforms remove friction between people and create more efficient markets first and foremost by lowering transaction costs. For example, Uber has lowered the transaction costs of finding someone willing to offer a low-cost ride.

Thus, **platforms are sets of rules.** Platforms dictate the interaction of their user. Uber, for example, claims to be an empty vessel for market forces, but among other things it (a) predicts where the demand for drivers will be and raises surge prices in advance of actual demand; (b) creates phantom cabs to give an illusion of greater supply; and (c) shapes the interaction between driver and passenger with reputation systems and highly structured apps.

Platforms are where life happens. They program the behaviour of us all and will dictate how we behave in the future. They reduce our cognitive burden by minimising friction in face-to-face contact with new people. They build trust between people (and companies) who have no other reason to trust each other but the interactions and services they obtain.

We have now lived through the phase during which the economic impacts of platforms were their most important feature. The economic impact will continue to play out in various ways, but to make future life on platforms possible, we must turn our attention to broader questions of how platforms regulate the life that is built 'on top' of them and how the platforms themselves should be regulated.

Towards platform regulation

The claim that governing platforms is difficult is false. Platform companies are fully dependent on public and private investments and this provides clear leverage points for regulation.

The claim that governing platforms is difficult is false. Platform companies are fully dependent on public and private investments and this provides clear leverage points for regulation.

In this respect, platform companies are not special: they are just like all the other companies. Uber needs drivers and their cars, and also roads, traffic lights, police officers to monitor the traffic and maintenance of streets.

Furthermore, education platforms typically need teachers, universities, books and articles; health platforms need physicians, health devices, health data and knowledge for diagnoses. And almost every platform needs products and services that are provided by traditional companies. Unlike some platforms, these traditional companies are not able to get monopoly profits from their offerings.

In the end, platform regulation is based on different identified and unidentified social deals around these and other resources that are used by platforms.

Four ways to govern platforms

When different institutions regulate platforms, it is about something more than just regulating businesses. Currently, there are four successful actions for governance:

Control platforms through data: Airbnb has a rough history with the regulators of New York City. In 2015, however, the company shared their data with the city.[3] The action is part of the company's broad effort to convince local and national regulators that Airbnb is not a platform for so-called illegal hotel operators, who use it to skirt local housing laws and hotel restrictions to regularly rent properties to travellers.

Co-develop regulatory features of platforms: Estonia is the first country in Europe to fully legalise Uber.[4] But before legalising it, the state negotiated an additional feature to the platform that links Uber drivers digitally to the tax office. This enables Estonia to collect taxes from Uber rides.

Create new legal entities: As platforms have become influential actors that set rules on how we interact, read news, shop and work, does it make sense to treat them in the same way we treat mom-and-pop hardware stores? Or should they be regulated as though they were essential utilities like electricity or water? New kinds of ownership models can be effective ways to create fairer structures to the platform companies.

Ban platforms: While this is a sure-fire way of limiting the negative impacts of various platforms, it also prohibits positive impacts. Many cities have opted to ban various platform companies for now to see how the market shapes up (Uber is banned in some cities for example).

The European digital promise

It's easy to govern platforms but it's not easy to govern platforms in a way that supports European values.

At the same time, there is a serious need for a new narrative that ensures the continuation of the successful European story that was created after the Second World War and further strengthened after the fall of the Berlin wall.

But perhaps the answer to these two questions is the same: creating the narrative of digital Europe that is based on trust and solidarity from diversity in order to support the competitiveness of the European digital economy.

The American and Chinese paradigms emphasise different kinds of uniformity: The Chinese platforms emphasise uniformity through the value of harmony, similarity in tastes and in consumption; and the American platforms emphasise uniformity of product. In other words, Chinese platforms enhance consumer uniformity and American platforms enhance production-side uniformity.

	Diversity in production	Uniformity in production
Diversity in consumption	Opportunity for Europe?	American platform narrative
Uniformity in consumption	Chinese platform narrative	

Nevertheless, as the two dominant paradigms demonstrate together, digital platforms can offer opportunities for diversity of consumption and production.

What is needed is a roadmap for a better life in a platform society – one in which various technologies fulfil their promise of a better life for human beings. This could be called the European Digital Promise.

As James Bridle writes in his book *New Dark Age*,[5] there's no need for new technologies. Instead, there's a need for a new literature, or new metaphors. For example, issues such as privacy, taxation, transparency and polarisation all lack more detailed vocabulary and tools to understand what they *mean* in the platform society.

New metaphors of privacy: Privacy, more than ever, is considered a binary. Either you have it or you don't, as 'leaked' digital data can be endlessly copied and shared. But in fact there are different levels of private. There are things we share as secrets, insights that have a requirement for privacy only for a certain period of time, and ideas that we share with our loved ones. A better vocabulary for privacy would be a good starting point for European Digital Promise.

New deal of taxation: Taxation is done in essence to redistribute resources. There are many resources other than money that are unevenly distributed. Data, use of various services and even time could be considered as taxable resources. The discussion on a new deal of taxation has become more urgent now, when there are more and more discussions on basic income and negative income tax.

Transparency and new rights: Transparency is a right. In Nordic countries it's taken as a given that there is always some level of transparency towards the governing institutions. Similarly, companies need to have some level of transparency when their stocks are traded in the stock exchange. But there's no transparency of algorithmic behaviour or non-personal data, even though these data could have much more positive impact than government documents.

Togetherness amid polarisation and fragmentation: The multiplicity of values and positive history of divisions in Europe require common platforms that allow people to feel solidarity not despite but because of their diverse backgrounds. Trust is essential. Platforms create trust. This is the resource they can bring to the table to create a new social deal for Europe.

For example, a restaurant delivery platform is a very good way for an uneducated young person to find work. These platforms are, however, often times not profitable if sustainable salaries and benefits are paid. It's possible to imagine that it would make sense, contrary to all expectations, to provide wage subsidies for these platforms in exchange for two promises:

1. A promise that the platforms treat these workers as employees.
2. A promise that the platforms try to help these workers to find work that is not supported by wage subsidies.

Keeping the latter promise could yield platforms extra benefits from the government. This promise is important because currently there is very limited social mobility from these jobs to more permanent jobs.

Notes

1. Charles Grant (25 March 2007), 'What are European values?', *The Guardian*: https://www.theguardian.com/commentisfree/2007/mar/25/whyvaluesmatterinawidere (accessed 16 May 2019).

2. Thomas Serrier, Stéphane Michonneau et al. (17 April 2019), 'One heritage, one story: that's not the Europe we know', *The Guardian*: https://www.theguardian.com/commentisfree/2019/apr/17/unite-europe-divides-future (accessed 16 May 2019).

3. Mike Isaac (1 December 2015), 'Airbnb releases trove of New York City home-sharing data', *The New York Time*s: https://www.nytimes.com/2015/12/02/technology/airbnb-releases-trove-of-new-york-city-home-sharing-data.html (accessed 16 May 2019).

4. David Mardiste (9 June 2016), 'Embracing Uber, Estonia shows tax needn't be an issue', *Reuters*: https://www.reuters.com/article/us-estonia-uber/embracing-uber-estonia-shows-tax-neednt-be-an-issue-idUSKCN0YV1PS (accessed 16 May 2019).

5. James Bridle (2019), *New Dark Age: Technology and the End of the Future* (London and Brooklyn: Verso Books): https://www.versobooks.com/books/3002-new-dark-age (accessed 16 May 2019).

All urls checked and working, 27 May 2019.

Democracy as a Platform

Europe and the Fourth Industrial Revolution

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At any given moment in history, the leading edge of technology is surrounded by a noisy crowd of startups, specialists and salespeople whose salary relies on giving you the impression that they know something you don't. Like a flock of seagulls in the wake of a fishing trawler, they circle and spin, producing a cloud of vague buzzwords: *'the sharing economy', 'smart cities', 'big data', 'urban data', 'block-chains', 'artificial intelligence', 'Industry 4.0'*. Of course, no one wants to look stupid, so the temptation is simply to adopt these framings, or to back away and leave it to others.

This makes it almost impossible to develop a clear-headed public debate about what the political implications of digital technology actually are.

When we do respond, we tend to frame our responses *reactively*, around issues such as privacy, social media echo-chambers, the psychological effects of information overload, fake news and the regulation of the big 'tech companies'.

This is not to say those responses are wrong – they're not – they're hugely important. But they are only one part of a bigger picture.

The problem with these reactive framings of the issue is that they can fool us into accepting false premises, such as the assumption that digital technology is a uniquely private sector phenomenon (it's not), that so-called 'tech companies' are a distinct new species of business (they're not, Facebook is an advertising company), or that 'digital' is somehow a separate area of policy and regulation from everything else (it's not).

It is too easy to tell ourselves that the crises we are experiencing are an inherent function of the technology itself – as opposed to the business model behind it. Or the opposite; that it is just a result of 'unethical' conduct in a few particular companies.

Most importantly of all, what these reactive conversations *don't* do is give us a mental model that allows citizens and democratic institutions to get ahead of digital transformation and shape it, rather than being shaped by it.

So what is going on?

What is happening is that we – as a society – are making a huge, uneven transition, from a world that runs on paper and mechanical technology, to a world that runs on computing technology and the internet.

As Arvind Narayanan of Princeton University wittily points out,[1] if you strip away all the noise, there are basically only two things that computers and the internet are really, really good at.

The first is collecting and storing data. Lots of it. This is exciting because it exponentially increases our ability to understand ourselves, each other and the world around us. It is also dangerous, because that data has incredible power, and if that power is centralised into the hands of only a few unaccountable corporations and/or parts of government, it can be used to exert a level of control over individuals, society and the economy that is historically unprecedented.

The second thing computers are good at is following rules (or 'algorithms'). If *this* then *that*. This allows us to take human knowledge and skill and encode it into machines, so they can perform laborious, repetitive and skill-intensive tasks for us in a continuously faster, cheaper, and more consistent way than we could before. Economists refer to this as lowering the 'marginal cost' of production. The designer Buckminster Fuller simply called it mankind's progressive ability to 'do more with less, until eventually you can do everything with almost nothing'.[2]

Automation is not new. Our ability to create tools and knowledge, and to pass them on for the next generation to build upon is the essential mechanism behind all industrial progress. Digital technology is new only in that it represents an exponential leap in the pace and complexity of what can be automated. Not just manual work, but administrative and knowledge work too.

This in turn creates a third key driver: globalisation. Put simply, it is becoming ever cheaper and easier to move information, money, goods and people around the world. Where once it would have cost days and several Euros to post a letter, today we can send messages in seconds for fractions of a cent; orders of magnitude less. In fact, almost zero.

The zero marginal cost economy

This should be cause for huge optimism, because it means that a functioning, democratic market economy is, in effect, a progress machine. Given reasonable levels of competition, collaboration, education and investment, the cost of living should steadily fall, and quality of life should steadily rise, for everyone. It means huge challenges like climate breakdown and population growth are far from insurmountable. Ours is the first generation in history that finds itself within realistic reach of what the economist Jeremy Rifkin calls a 'zero marginal cost society':[3] where the cost of producing and distributing *almost everything* falls so low that it becomes cheap and abundant, be it information, green energy, food, construction, medicine, mobility and so on; a world of rapid innovation, where no problem needs to be solved twice, where natural resources can be stewarded rather than depleted, and where our labour is focused on leadership, innovation, care and human connection. A positive-sum society, where no one needs to be left behind.

Except, this is not where we seem to be heading.

The explanation lies in a crucial – but often poorly understood – difference between markets and capitalism.

Rifkin is right. The natural endgame of free, fair, competitive markets *is* a world where almost everything can be produced for almost nothing. But the natural goal of capital is the opposite. For an investor, the ultimate prize is to own a monopoly: a position of power, protected from competition, from which it is possible to drive the production cost down to zero, but keep prices the same, extracting the difference as profit, instead of passing it on (what's referred to as economic rent[4] – money for nothing).

In the 20th century, capital could achieve something close to this simply by owning the direct means of production. But as digital automation wipes out the cost of production, these become ever less secure investment positions. Algorithms written by teenagers can replace whole industries within years.

Who owns the future?

So where does capital go next? Or to put it another way, in a digitised, globalised economy, *what is left to own*?

1. **Land.** Described by Winston Churchill as the 'mother of all monopolies', real estate is still the single largest repository of wealth ($280tn globally) and by far the largest mechanism by which those with capital can extract economic rent from those without it. In recent decades we have seen investment diverted away from productive enterprise and into global real estate speculation, fuelling a housing crisis in most major cities.

2. **Infrastructure.** Whether it is hard infrastructure (such as railways or water) or digital infrastructure (such as communications platforms or the world wide web), infrastructure tends to have a natural monopoly, either because it has no like-for-like competition, or because it has critical mass (you have to use it because everyone else is using it). In the digital era, a new investor playbook has emerged – arguably exemplified by companies such as Uber, Amazon and Softbank – whereby investors use the 'disruptive' low costs made possible by digitisation to capture whole industries; raising prices only once all competition has been eliminated or acquired. The same infrastructure acquisition playbook can also be used by foreign governments for purposes of political leverage.

3. **Intellectual property.** Though originally invented to encourage openness and competition, over time IP has been weaponised by wealthy interests to capture monopolies that allow the owner to extort prices wildly beyond the cost of production, notably within domains such as pharmaceuticals and agriculture, where that monopoly gives them power over peoples' very lives and livelihoods.

4. **Data.** The power of digital devices and the web to harvest citizens' personal data is now well understood. The primary use of this data has been for the purpose of targeting advertising. However, increasingly it also has another purpose:

5. **Behaviour.** That is, the ability to manipulate people's behaviour (for example making them happier, more 'loyal' or more inclined to vote one way or another). This can then be sold to any powerful actor, for example governments or insurance companies.

6. **Money supply.** We often forget that currency is a technology. In principle, central banks own the monopoly to create money, but in practice that right is licenced to private banks to create money in the form of loans, and then collect interest on those loans. Today, 97% of new money is created by private banks.[5]

7. **Public services**, by definition, usually have a monopoly. If governments can be persuaded or forced to privatise or outsource these services, shareholders can digitise and extract rent from them instead of making them better or cheaper. Outdated government procurement models make this disturbingly easy.

8. **Government.** All of these monopolies are ultimately either created or permitted by governments. So perhaps not surprisingly there has also been a significant increase in the amount of money large companies are spending on the intellectual capture of government, through lobbying, revolving door arrangements and political donations. Alongside conditions of austerity and growing economic inequality, this has the effect of dramatically eroding trust in institutions.

Governments … can innovate, inventing new forms of ownership, new charters, new social contracts, new rights and new forms of regulation around them, and so ensure that markets are functional, free and fair.

Understanding the future of ownership in this way gives us a map of power in a digital world. Governments that can innovate, inventing new forms of ownership, new charters, new social contracts, new rights and new forms of regulation around them, and so ensure that markets are functional, free and fair – will find themselves able to unlock exponential levels of prosperity, wellbeing and innovation, and to restore public trust. Those that can't will find themselves trapped into a zero-sum game; a downward spiral of deflation and decline, flatlining productivity, retreating public services, geopolitical weakness, corruption and rising public anger.

In this environment, the traditional policy tools of 'Left' and 'Right' no longer make much sense. Even significant changes to tax rates or public spending will have a relatively marginal impact on people's lives in comparison to the potentially huge impact of even small changes to the rules: changes that cost government nothing to implement – they just require political self-confidence and a clear head.

In the 21st century, the state's most important role will be not as a *redistributor* but as a *rule-designer*. A maker and shaper of markets – setting the terms for participation and keeping power in balance. These markets do not always need to be exclusive. In many cases they can exist alongside one another, and in parallel with existing markets.

Democracy as a platform

But democracy also faces another challenge: its institutions have a scale problem. Globalisation cannot be put back into its box. Whether you like it or not, citizens and companies will increasingly treat nations like city-states, choosing and moving between them. In other words, we do not have a 'migrant crisis', rather we live in a world where migration will be the norm now. Similarly, we should not be 'going after Google', rather we must recognise that *any company* could make millions of workers redundant tomorrow, and would be considered incompetent if it *didn't* move its profits offshore[6] to avoid paying tax on them; leaving the state to pick up the bill.

Two possible versions of this future lie ahead of us:

One could be described as the *The Market as a Platform for Democracy*. A global wild west, where the strongest wins, and the winner takes all. A world dominated by a handful of rentiers, playing national and city governments off against each other in a race to the bottom.

The second is *Democracy as a Platform for the Market*, where it is democratic governments that set and enforce the rules of the market, and it is companies that compete with each other. The rules include the conditions for access to its citizens, to its domain, to its economy; what can and cannot be owned. Whether global companies want to play on a given platform or not is up to them. If they do, they have to play by the rules. If they don't, the field is left open to others that will.

Building the platform

But a Platform comprises two things: *rules* and *infrastructure*.

A state's infrastructure includes its physical territory and its hard infrastructure, but also its digital and institutional infrastructure. It is in this area that many of Europe's governments, distracted by the narrative of 'tech startups', have been painfully slow to invest.

We now need to move fast, to build fully digital public services, data registers and machine-readable legislation. Beyond government, we also urgently need targeted strategic investment into open systems innovation: new kinds of open, neutral

digital infrastructures and institutions to accelerate progress, restore trust, transform industries and support citizens through the transition.

The combined impact of this, alongside moves to phase out economic rent, could be seismic.

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It shifts the conversation from one that is only about 'tech ethics' – to one that is also about the things that are holding our economy and our society back. It allows us to see how, even in the digital age – in fact, *especially* in the digital age – truly open, free, fair, democratic societies will ultimately *outperform* authoritarian or feudal ones.

As a family of nations – a platform of platforms – Europe must now decide for itself which of those it wants to be.

Notes

1. Aravind Narayanan (2018): https://twitter.com/random_walker/status/1035515004139831296

2. R. Buckminster Fuller (1938), *Nine Chains to the Moon*, pp. 252–59.

3. Jeremy Rifkin (2014), *The Zero Marginal Cost Society: The Internet of Things, the Collaborative Commons, and the Eclipse of Capitalism*, New York: St Martin's Press.

4. Wikipedia contributors (2019), 'Economic rent': https://en.wikipedia.org/w/index.php?title=Economic_rent&oldid=885447238

5. PositiveMoney (2013). 'How banks create money': https://positivemoney.org/how-money-%20works/how-banks-%20create-money/

6. Independent Commission for the Reform of International Corporate Taxation (2019), 'How big tech companies avoid taxes and what can be done about it': https://www.icrict.com/icrict-in-the-news/2019/1/23/how-big-tech-companies-avoid-taxes-and-what-can-be-done-about-it

All urls checked and working, 27 May 2019.

Capacity, Evidence and Redress

A regulatory system for data and technologies

Rachel Coldicutt
Doteveryone

As the data revolution ripples through the 21st century, there is an opportunity for Europe and the UK to become global leaders in good governance. The benefits of the networked age can and should be felt more widely and equitably, while the costs must be understood, mitigated against and provided for. Democratic process – in which more people steer the impact and direction of technology – is essential for creating this balance and must bring together increased legislative and regulatory capacity with empowered publics and a robust, growing evidence base.

For many, the consequences of technologies can still be judged as public goods: economic opportunity, convenience and connection have created new kinds of ease, opportunities and social norms. But these benefits are not universal. Existing gender, racial and economic inequalities have been deepened by the ubiquity of partial data sets; the social privilege and perspective of those who make software has changed how information travels and work gets done; and everyone who owns a smartphone or walks down an urban street is a part of the surveillance economy, a surveillance state, or a mixture of both. Meanwhile, competing global and political forces are jostling for technological dominance, the uncertainty of pervasive automation is within sight, and the opportunity vested in data belongs to governments and businesses, rather than citizens or civil society.

For the last two decades, most familiar digital technologies for Europeans have come from Silicon Valley. Free-market libertarianism – a tangle of growth, disruption and fantastic wealth, prioritising a small state and viewed in aggregate as a certain sort of freedom – has been the dominant theme. But the next wave of dominant technologies will almost certainly reach Europe from China and be rooted in entirely different social norms and assumptions.

The transformative potential of connecting everything and everyone cannot be dominated by a single ideology or a single market. A flourishing society depends on diversity – of experience, thought, choice and opinion – and on the ability of diverse voices to contribute and create change. Technology is made by people. It is not neutral, but a product of the political, economic and social context it was created in. And the response to the technology cannot be neutral either: to be effective in Europe, it must be democratic and culturally representative.

To date, European technology sensibility has perhaps been defined by an enthusiasm for legislation and regulation, cemented by the General Data Protection Regulation and Margrethe Vestager's reputation as 'the nemesis of big tech'. A future, more comprehensive vision must build on that courage to act and respect

for the law, but not every intervention needs to be as substantial as the GDPR. Our work at Doteveryone has shown three clear areas for development in the UK, and in Europe too: there is currently a need for increased capability and resource within existing regulators; a shortage of robust evidence on which to base policy; and a lack of public agency for seeking redress. The report *Regulating for Responsible Technology*[1] sets out the need for a coordinating body for this system: an Office for Responsible Technology, acting as a front door for a developing and complex system of regulation that sits across existing structures and siloes.

Effective regulation of data and digital technologies must not simply police how products and services are created, but direct the ways they are applied, and look to mitigate or remedy their affect. It should also allow single issues – for instance, the use of facial recognition in justice – to cut across multiple sectors, and combine issues of monopoly and competition, safety, justice, equality, privacy and security. Doteveryone's research has shown that the complexity of many technology issues, such as targeted political advertising and the status of social-media content, means they are prone to falling through the gaps of traditional regulatory structures, leading to them being revisited time and again without satisfactory resolution. As machine learning becomes more widespread, the number of complex, multivalent issues will rise sharply and topics such as working with robots will require new kinds of regulatory structures and organisations that cannot, as yet, be fully anticipated.

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An effective regulatory system also needs the resources and capabilities to be reactive, and occasionally pre-emptive. In 2018, the UK Information Commissioner's Office issued a fine to Facebook for serious breaches of data protection law that took place between 2007 and 2014 – an 11-year timescale from start to finish.[2] While the action was welcomed, it was unequivocally too late. Christopher Wylie, the Cambridge Analytica whistleblower, said of the preceding investigation, 'One of the weak points of the ICO is the lack of technical people. The fact is that they've had to ask me a lot of questions that a database engineer would not ask.'[3]

These resources also need to be flexible and able to be deployed in areas of unmet need, as new issues and evidence arise, rather than accreting around specific topics and specialisms. Skilled technology workers are already in short supply; in 2019, the recruiter Hays reported that 93% of UK employers have struggled to recruit tech roles in the past year,[4] and it seems unlikely that many people accustomed to the

salaries and the culture of technology businesses will have an easy time crossing over to government or regulatory roles. As such, those who do will need to be employed wisely and flexibly – perhaps learning from the discipline of technology product teams rather than from traditional civil service or governance structures.

As technologies are changing societies in real time, the lack of robust evidence about their effects has hamstrung many attempts to act decisively. Notably, the issue of children and screen time has been particularly confusing. Research by Przybylski and Orben at the Oxford Internet Institute debunks the concept and says that potatoes are more harmful to children than screens;[5] addiction expert Mandy Saligari compares screentime to giving children 'a gram of cocaine';[6] while a study by the UK Royal College of Paediatrics and Child Health linked higher screen time (more than two hours a day) to depression and poor diet, concluding that management of children and screens was ultimately a parenting issue.[7] Energetic media coverage of these, and many other studies, appears to have left UK politicians and their advisors none-the-wiser, leading to haphazard policy-making-by-anecdote. While the lived experience of legislators' children may be valuable in certain settings, it cannot become the barometer against which national policies are set. As such, the cultivation of a robust evidence base, perhaps sitting under the remit of an authoritative Commissioner or Chief Digital Officer, would be a critical tool for any effective regulatory system.

Finally, the public must be able to seek redress. Much of the social impact of data and technologies is dispersed and incremental, and the individualised, arm's length nature of data-driven services can be disempowering for those who might feel they have something to complain about. Doteveryone's *People, Power, Technology* research shows that 43% of people say there's no point in reading terms and conditions because 'companies will do what they want anyway',[8] while Edelman's *Trust Barometer 2018* finds only 36% of the UK public trusts search engines and platforms.[9] James Plunkett of the charity Citizens Advice has described the 'frustration and regret' consumers have come to feel about the data-driven, differentiated pricing, and this low-level discomfort is mostly unreported.[10] Algorithmic biases like this one are hard to spot as an individual, but – as with disinformation – can have a profound impact on society as a whole.

European Commission research from 2016 shows that 87% of UK consumers would be more willing to defend their rights if collective redress was available to them,[11] and it is vital that evidence about harms is aggregated, so that it is possible to spot and anticipate trends. This would also allow a feedback loop, in which data

and case studies could be shared with technology companies to highlight potential problems and encourage best practice, as is already common in the energy and finance sectors.

The possibility of redress, via backstop mediation and alternative dispute resolution, is a vital component of a democratic regulatory system. The views and experience of the public must have *at least* parity with the policy teams and lobbyists from technology companies. Regulation will be successful only if it is addressing and improving the technology harms that are changing society and affecting people's lives; it cannot play simply to headlines and political intent.

Bringing together capacity, evidence and redress under the aegis of an Office for Responsible Technology makes it possible to institute useful technology regulation, which moves in close step with the harms experienced and reflects the values and experience of the people it is representing. Ensuring regulation for data and digital technologies is agile, resilient and intelligent will allow it to mature over time – developing new capabilities as their experience grows and new regulatory issues emerge.

Data and digital technologies may have defined the first two decades of this century, but they have not – as yet – defined what it means to be human. Good governance is essential to ensure that people have as much chance to shape technology as it has to shape them. And in different ways across the globe, love and friendship, healthcare, education, transport, education, politics and government have all changed utterly – we should all have a say in how that unfolds.

Notes

1. C. Miller, J. Ohrvik-Stott, R. Coldicutt (2018), *Regulating for Responsible Technology: Capacity, Evidence and Redress: a new system for a fairer future*, London: Doteveryone: https://doteveryone.org.uk/project/regulating-for-responsible-technology/

2. Information Commissioner's Office (25 October 2018), 'ICO issues maximum £500,000 fine to Facebook for failing to protect users' personal information': https://ico.org.uk/facebook-fine-20181025

3. Evidence from Christopher Wylie to MPs, Commons Select Committee (27 March 2018): https://parliamentlive.tv/Event/Index/28e9cccd-face-47c4-92b3-7f2626cd818e.

4. Hays, 'The top tech skills you need for a salary boost': https://www.hays.co.uk/blog/top-tech-skills-salary-boost/index.htm

5. Andrew Przybylski and Amy Orben, quoted in 'Technology use explains at most 0.4% of adolescent wellbeing' (22 January 2019), Oxford Internet Institute: https://www.oii.ox.ac.uk/news/releases/technology-use-explains-at-most-0-4-of-adolescent-wellbeing/

6. Rachael Pells (7 June 2017), 'Giving your child a smartphone is like giving them a gram of cocaine, says top addiction expert', *Independent:* https://www.independent.co.uk/news/education/education-news/child-smart-phones-cocaine-addiction-expert-mandy-saligari-harley-street-charter-clinic-technology-a7777941.html

7. Health Policy Team, Royal College of Paediatrics and Child Health (2019), 'The health impacts of screentime-aguideforcliniciansandparents':https://www.rcpch.ac.uk/resources/health-impacts-screen-time-guide-clinicians-parents

8. C. Miller, R. Coldicutt, H. Kitcher. (2018) *People, Power and Technology: The 2018 Digital Understanding Report*. London: Doteveryone: http://understanding.doteveryone.org.uk/

9. *Edelman Trust Barometer 2018: Global Report* (2018): https://www.edelman.com/sites/g/files/aatuss191/files/2018-10/2018_Edelman_Trust_Barometer_Global_Report_FEB.pdf

10. James Plunkett (31 January 2018), 'Markets don't work like they used to—and people are starting to notice', Citizens Advice: https://wearecitizensadvice.org.uk/markets-dont-work-like-they-used-to-and-people-are-starting-to-notice-af00ed38014d

11. Consumers, Health, Agriculture and Food Executive Agency (European Commission) (20 September 2017), 'Consumers' attitudes towards cross-border trade and consumer related issues 2016, Final report – Study', Publications Office of the European Union: https://publications.europa.eu/en/publication-detail/-/publication/af6a3712-9e77-11e7-b92d-01aa75ed71a1/language-en

All urls checked and working, 28–30 May 2019.

Algorithms for Good

Realigning algorithmic power with open society values

Christopher Lambin
Counterpoint

The internet and social networking sites have become the background for all modern life. Of the global population that has internet access, around 3.2 billion use social media. Each day, 3.5 billion Google search queries are made, 5 billion YouTube videos are watched, 250 million Tweets are sent, and 800 million Facebook posts are updated.[1]

These platforms are major sources of news: 44% of Facebook users report using the platform as a source for news, 19% use YouTube and 10% use Twitter for this purpose.[2] According to a study across 26 countries, more than half of internet users now report using social media as a primary source of news, and more than one quarter call it their 'main news source'.[3]

The one function that all social media platforms share is *sorting*: search results, news feeds, recommended videos, suggested friends, trending topics – all these are the result of transforming a pool of data into an ordered list; the order is defined by each entry's correspondence with some set of criteria.

The power to determine these criteria is the power to shape the landscape of information in the digital public sphere, and as a result, to have a major influence on users' perception of the world. A 2015 study found that voting preferences of undecided voters can be shifted by 20% or more by manipulating search rankings of politically weighted content.[4] This is the power to set agendas and to frame narratives in far greater ways than any newspaper editor, simply through the sheer number of users.

New checks and balances on this power are desperately needed. The EU is uniquely placed to construct the legal frameworks that limit this power and direct it towards preserving the values of European society.

Ambivalence in the attention economy

A fundamental principle of the web is total neutrality as to the *content* of information travelling through it – this principle is hardcoded into the fundamental protocols of information transmission. The social media platforms of Silicon Valley have tried their best to carry on this tradition of 'ambivalence to content'. While terms of service define what content is acceptable and moderators work (tirelessly[5]) to

remove the worst offending content, how information is *sorted* relies not on content but on a whole suite of engagement metrics – view time, click rates, likes, shares, content style, etc. – all completely tangential to the content itself.

But even without directly controlling content, there is still a major incentive to influence what users see. With an abundance of information, users' attention becomes the scarce resource over which online platforms compete. The current business model of 'free' social media and online platforms is fundamentally based on advertising revenue, earned through renting out users' attention to advertisers. So then, what is 'good' content in the attention economy is defined very simply by whatever users spend their time consuming – for a moment consider the 'food pyramid' and imagine if what was healthy was considered determined by a population's eating habits.

The fact that algorithms which sort information purely on engagement would, nonetheless, end up consistently promoting particular forms of content was largely foreseeable: the human psychological appetite for novelty and surprise, the need for high emotionality and for confirmation of 'prior' beliefs,[6] all of these drive these sorting algorithms to privilege content that is conspiratorial, outrageous or provocative, hyper-partisan, deceptively oversimplified and captioned with clickbait headlines. In other words, junk – consider again the parallels with food diets.

Take YouTube for example. It has been accused of being a 'radicalising machine'.[7] In fairness, in early 2019 the platform began taking steps to demote explicitly conspiratorial and misleading content.[8] However, it has been pivotal in amplifying conspiracy theories and hyper-partisan content for years now. Videos claiming that vaccinations were harmful and unnecessary were autoplayed alongside a video explaining the value of vaccinations. The recommendation algorithm for kid-friendly content was exploited through the use of popular keywords to promote highly disturbing videos.[9] And the conspiracy theorist Alex Jones's videos have been recommended 15 billion times on the platform.[10]

It is becoming increasingly untenable to claim neutrality towards content when, as a perpetual consequence of business models and algorithm design, uniquely harmful, misleading, and conspiratorial content get top place on the sorting pile.

Junk information diets, junk democracy

A growing number of voices in the technology industry – many, former employees of the biggest platforms companies – have tried to highlight the unseen costs of systems designed on the principles of the extractive attention economy. The Centre for Humane Technology, founded by the former Google design ethicist Tristan Harris, has collected a 'Ledger of Harms' that lists costs that *do not show up on the balance sheets of companies, but on the balance sheet of society*.[11] Of particular relevance is the harm to democracy, where propaganda, lies and unreliable information dominate the digital public sphere and make citizens more divided, less informed and more vulnerable to manipulation.

These effects on individual browsing habits compound into societal effects; certain messages and political styles become privileged in national discourse; personalised news feeds and search results fragment the shared epistemic reality; shortened attention spans and a general appetite for easily consumable content preclude productive debate on complex and nuanced topics. When the digital public sphere is flooded with 'junk news', conspiracy theories and clickbait, then hyper-partisanship rules and a once-shared reality becomes fractured and the possibility for democratic consensus is diminished.

It is time for Europe to set a course that realigns the function of sorting algorithms in online spaces with an updated understanding of human needs and the values of an open digital society.

It is time for Europe to set a course that realigns the function of sorting algorithms in online spaces with an updated understanding of human needs and the values of an open digital society. It is possible to design and operate the algorithms and software that constitute the digital public sphere as if they were social utilities – with the goals of the service provider aligned with the goals of the user and with societal values, and therefore promoting some of the information based on its relationship to reality, or its ability to inform and build consensus. This model is far from what exists today, and it is fraught with value judgements and subjectivity. Even so, inherent subjectivity is not reason enough to abandon the ideal of creating social media algorithms that work for 'good'.

'Wanting what we want to want'

It can be argued that any information that is selected by free-thinking, responsible citizens is, by virtue of having been selected by such citizens, good. But there are several ways that free choice can be subverted. It is possible for social media platforms to lean on the scales of personal choice when equipped with masses of behavioural data, personal data, sophisticated algorithms and an understanding of the vulnerabilities in human psychology.

First, the order of choices presented matters: for example, 70% of videos watched on YouTube were reached through recommended videos,[12] and the first page of a Google search captures between 70% and 90% of clicks.[13] It should be clear that users place a great deal of trust in platforms to be giving them *what they want* – that there is a necessary belief that what is provided by search results or promoted to the top of recommendations is the *correct* result. The user is free to choose whether or not to select these results, but the choice has already been shaped by criteria that privilege some information.

Second, the endless competition for attention has driven the platforms to refine their ability to combine behavioural data and sophisticated analytics in ways that are *more* attention grabbing than anywhere else online. This arms race for attention leads to exploiting the raft of biases and frailties in human psychology in ways that begin to seem exploitative. An open letter signed by 50 psychologists was sent to the American Psychological Association, calling to attention the *'unethical practice of psychologists using hidden manipulation techniques to hook children on social media and video games'*,[14] but vulnerability does not end after childhood. Children are certainly vulnerable when navigating the digital public sphere, but so too are fully developed adults. Our ability to focus, our attention spans, our mental fortitude to resist distraction and 'junk news' are all limited by our biology. This biology is sorely out-classed by an entire industry of data scientists, behavioural psychologists and UX (user experience) designers who are seeking to extract away attention.

As practices to extract attention improve and more time is taken away from fulfilling meaningful individual goals – e.g. spending time with family, reading books, engaging with local communities, a balanced sleep schedule – is it still fair to say that the algorithms are giving people *what they want*? In sorting information based

on its ability to distract, can we say that these sorting algorithms are *good*? When these individual effects combine to undermine the capacity for democracy in nations, is it not the place for government to intervene?

Teleology of algorithms for good

Now return to the notion of the digital public sphere controlled as a social utility – providing a service to citizens, not packaging attention for advertisers. What would the *purpose* of a social media platform be? How would this be decided? How would the power to sort information and hence direct attention be held to account? And crucially, how could this be done given the market incentives of the attention economy?

Many believe that at the core of this issue is the business model of the attention economy and until that changes fundamentally manipulation and attention extraction will persist.[15] While this may be true, there are certainly steps that can be taken to shift towards aligning algorithms of the digital public sphere with individual and open society values.

First, we need to fully understand and quantify the power of influence that resides in these algorithms: social media platforms ought to be required to allow audits and impact assessments from independent research bodies to evaluate and assess the downstream effects on individual wellbeing and public discourse.

Second, the implementation of a new framework defining the responsibility for care – and perhaps fiduciary duty[16] – of those who control the sorting of information. While extremely difficult to quantify and directly attribute cause and effect, the power to shape perceptions must be coupled with the responsibility to use this power with care and in line with the values of the society it operates within.

Third, for the individual, there must be much greater awareness, greater freedom and greater opportunity to shape the criteria for what constitutes 'good' information to them. Since the purpose of these platforms varies for individuals, each person should be free to reflect on, and choose how information is sorted, not just to have to choose from an already sorted list. Forcing platforms to allow individuals to produce their own sorting algorithms would open a new field of creativity and innovation in discovering and defining new criteria that are better aligned with individual and shared values.

Ultimately a wider debate must be held to clarify what purpose these social media platforms fulfil, and what purpose they ought to fulfil. Neutrality is impossible. Ambivalence to content is not an option. Accepting this means creating the possibility of reigning in the power of social media platforms to shape the digital public sphere and to reassert values which uphold not undermine open societies.

Reasserting values into cyberspace

In an article published on 1 January of the new millennium, Lawrence Lessig of Harvard Law School makes the most compelling case for allowing governments to intervene to uphold values in 'cyberspace'. This argument is more crucial now than 20 years ago as the boundaries between cyberspace and all other spheres of public life have been effectively erased.

> For here's the obvious point: when government steps aside, it's not as if nothing takes its place. It's not as if private interests have no interests; as if private interests don't have ends that they will then pursue. To push the anti-government button is not to teleport us to Eden. When the interests of government are gone, other interests take their place. Do we know what those interests are? And are we so certain they are anything better?
> …
> We should interrogate the architecture of cyberspace as we interrogate the code of Congress.
> …
> Unless we do, or unless we learn how, the relevance of our constitutional tradition will fade. The importance of our commitment to fundamental values, through a self-consciously enacted constitution, will fade. We will miss the threat that this age presents to the liberties and values that we have inherited. The law of cyberspace will be how cyberspace codes it, but we will have lost our role in setting that law.[17]

We, as European societies, must recognise that a particular set of values have been baked-in to the design of underlying technologies of online spaces. We should not have to settle for technology that is adversarial to these values. Instead, the values of an open society – pluralism and diversity of opinion, transparency and accountability, freedom of expression and information, as well as rational and civil consensus-oriented deliberation – can and should be embodied in the technology that shapes our view of the world.

Notes

1. Web Traffic That Works (2018), 'How do consumers spend their time online?', retrieved from: https://www.webtrafficthatworks.com/how-consumers-spend-time-online/

2. Magdalena Mis (2016), 'More than half online users get news from Facebook, YouTube and Twitter: study', *Reuters*, retrieved from: https://www.reuters.com/article/us-media-socialmedia-news-idUSKCN0Z02UB

3. Nic Newman (2018), 'Digital News Report: Overview and key findings of the 2018 report', *Reuters Institute*, retrieved from: http://www.digitalnewsreport.org/survey/2018/overview-key-findings-2018/

4. Robert Epstein and Ronald E. Robertson (2015), 'The search engine manipulation effect (SEME) and its possible impact on the outcomes of elections', *Proceedings of the National Academy of Sciences*, retrieved from: https://www.pnas.org/content/112/33/E4512

5. Casey Newton (2019), 'The Trauma floor', *The Verge*, retrieved from: https://www.theverge.com/2019/2/25/18229714/cognizant-facebook-content-moderator-interviews-trauma-working-conditions-arizona

6. Tali Sharot (2011), 'The Optimism Bias by Tali Sharot: extract', *The Guardian*, retrieved from: https://www.theguardian.com/science/2012/jan/01/tali-sharot-the-optimism-bias-extract

7. Zeynep Tufekci (2018), 'YouTube, the great radicaliser', *The New York Times*, retrieved from: https://www.nytimes.com/2018/03/10/opinion/sunday/youtube-politics-radical.html

8. Issie Lapowsky (2019), 'YouTube will crackdown on toxic videos, but it won't be easy', *Wired*, retrieved from: https://www.wired.com/story/youtube-recommendations-crackdown-borderline-content/

9. James Bridle (2017), 'Something is wrong on the internet', *Medium*, retrieved from: https://medium.com/@jamesbridle/something-is-wrong-on-the-internet-c39c471271d2

10. Nicholas Thompson (2018), 'When tech knows you better than you know yourself', *Wired*, retrieved from: https://www.wired.com/story/artificial-intelligence-yuval-noah-harari-tristan-harris/

11. Centre for Humane Technology (2018), 'Ledger of Harms', *Centre for Humane Technology*, retrieved from: https://ledger.humanetech.com/

12. Ashley Rodriguez (2018), 'YouTube's recommendations drive 70% of what we watch', *Quartz*, retrieved from: https://qz.com/1178125/youtubes-recommendations-drive-70-of-what-we-watch/

13. Kelly Shelton (2017), 'The value of search results rankings', *Forbes*, retrieved from: https://www.forbes.com/sites/forbesagencycouncil/2017/10/30/the-value-of-search-results-rankings/#9b5ca7444d3a

14. Children's Screen Time Action Network (2018), 'Our letter to the APA', retrieved from: https://screen-timenetwork.org/apa?eType=EmailBlastContent&eId=5026ccf8-74e2-4f10-bc0e-d83dc030c894

15. Anne Quito (2018), 'The case for paying for Google and Facebook', *Quartz,* retrieved from: https://qz.com/1249955/jaron-lanier-at-ted-2018-to-fix-the-internet-we-have-to-start-paying-for-google-and-facebook/

16. Thompson (2018), 'When tech knows you better than you know yourself', see note 10.

17. Lawrence Lessig (2000), 'Code is law: on liberty in cyberspace', *Harvard Magazine*, retrieved from: https://harvardmagazine.com/2000/01/code-is-law-html

All urls checked and working, 27 May 2019.

Protecting Democracy in the EU

Tackling the Disinformation Problems

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Disinformation threatens the core of our democracy

Disinformation undermines the foundations of our democracy – public discourse, fair electoral competition, and, on a more basic level, citizens' trust in our democratic institutions.

Democracy is based on public deliberation. Public discourse enables us to find the best solutions for important social and economic problems, and it is essential to build popular support for policy proposals. This is particularly important during election campaigns, when political candidates seek to make their case directly to the citizens and compete for their vote.

Democracy is all about competition for the best ideas and for voters' political support. But, like any competition, this can only work if some important norms are observed, the most important being that public debate must be rooted in facts. A shared set of facts is particularly important when we confront highly controversial and polarising issues such as the Euro or refugee crises. If we do not get the facts straight, there is no chance that we can constructively debate these issues and argue over the best solutions and approach.

Even more, the core of our liberal democracy – the competition for political power through elections – can only work if facts about the candidates and their political programmes are not distorted or misrepresented. This is why disinformation campaigns – the dissemination of false information with the intention to mislead – are such a critical threat to our democracy.

Disinformation in the context of new digital communication technologies

Disinformation has always been a challenge for democracies. But thanks to technology, we are now confronting the problem on a new scale. In recent decades, traditional media's gatekeeping function regarding the publication and dissemination of news and information has been dramatically eroded. Through social media, alternative channels for the distribution of news and information on a massive scale have emerged, bypassing traditional media organisations.

At the same time, many news organisations have struggled to transition to digital media. Newspapers and media organisations have been downsized, and many have

gone out of business altogether. Thus, while quality journalism with its emphasis on thorough and independent fact-checking is in decline, opponents of fact-based democratic discourses, whether domestic or foreign, have seized the opportunities of this new media environment. Digital and social media provide them with cheap and widely accessible tools to develop and launch disinformation campaigns with unprecedented scale and reach.

Disinformation is a global problem but Europe has a unique role to play in addressing it

From the election of Donald Trump to political campaigns in India, online platforms have come under growing scrutiny across the globe regarding their role in dissemination and amplification of disinformation. While the problem is global, all eyes are on Europe for those who think that this problem requires a regulatory response. The US government has adopted a laissez-faire attitude towards its home-grown technology sector and in the field of privacy left a regulatory void that Europe has successfully filled with the General Data Protection Regulation. And while Washington's attitude towards Silicon Valley has become much more critical, the large lobbying power of the big tech companies in combination with the deep political divisions between Democrats and Republicans make it very unlikely that we will see the US government take a lead in addressing this issue.

But apart from the US it is really only the EU that has the combination of international weight with a lucrative market of more than 500 million people and regulatory fire power to effectively take on the disinformation problem. Europeans also have a different attitude about regulating speech. Americans tend to see freedom of speech as an absolute right that should not be undermined in any way. A history of violent nationalisms has made Europeans much more sensitive to how speech can be abused. Many Europeans see the need to strike a balance between freedom of speech and other important rights such as the protection of ethnic minorities or the value of informed public discourse. That is why – even in the US – many who are concerned about the spread of disinformation in digital media look to Europe to take the lead.

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Important first steps, but much more needs to be done

Since the broader public became aware of the problem during the 2016 presidential election in the US, disinformation has become a problem in every subsequent election and political crisis in Europe. Given that the problem affects all member states, we need an EU-wide response. This is especially the case for the regulatory elements affecting the large online platforms discussed further below. Otherwise, we risk further regulatory fragmentation undermining the concept of the European digital single market or – even worse – lack the political muscle to enact effective rules at all.

European institutions have realised the gravity of the threat. The European External Action Service has set up a strategic communications unit to detect, analyse and expose Russian disinformation campaigns targeting the EU and particularly its Eastern member states. The European Parliament has conducted hearings and commissioned expert reports. In December 2018 the EU Commission took on a leadership role with the publication of the comprehensive action plan against disinformation,[1] which is supposed to guard the integrity of the European Parliamentary elections in May 2019. While the plan contains some important first steps – more resources for detection and analysis, a code of practice on disinformation for major internet platforms, and the setup of a Rapid Alert System to improve information sharing and coordination between the EU and its member states – the next Commission needs to step up its work on the problem. These are the top priorities that the new Commission together with the European Council and the new EU leadership in general need to address in the next institutional cycle (2019–2024).

Broadening the scope of the action plan

The production and distribution mechanisms of disinformation are highly complex. Some disinformation is pushed by foreign actors. But as we (at Stiftung Neue Verantwortung) have shown in our own analysis of the spread of disinformation in the context of the German national elections in 2017, amplification by domestic actors is what makes disinformation campaigns really effective and impactful.[2] Much fake news also originates within member states. Our research on Germany shows how the spread of disinformation is a central component of a deliberate strategy by right-wing populists such as the Alternative for Germany (AfD) to mobilise support and push their political agenda.[3] Effective disinformation campaigns

are also crafted to appeal to local contexts. They take advantage of social and cultural divisions within society and generally seek to polarise society even further. Disinformation campaigns are most effective where trust in established quality media has been eroding, and they particularly appeal to those parts of the population who have turned to social media as their main source of political information. Thus, in order to craft effective policy responses, we need a much more comprehensive approach at the EU level. It must look beyond the current focus on identifying and countering foreign, and particularly Russian, disinformation within the context of the European External Action Service (EEAS). EU institutions should also look at how they can promote media literacy and quality journalism as well as the points discussed below such as the development of new analytical tools, the development of a deeper understanding of what makes societies resilient against disinformation and clearer rules for social media companies as well as political campaigns.

An EU Disinformation Index

A more comprehensive EU-wide approach needs to be based on a deep understanding of the causes and mechanisms that drive disinformation campaigns. The Action Plan already emphasises research and the development of tools for the detection, analysis and subsequent exposure of disinformation. But as described above, broader social, economic and political factors determine how vulnerable EU member states are to disinformation.

In order to better understand the threat landscape and vulnerabilities across its member states, the EU should develop and implement a Disinformation Index. The Index would be based on indicators that seek to measure member states' resilience against disinformation. Factors and conditions mapped by the Index across the EU should include:

In order to better understand the threat landscape and vulnerabilities across its member states, the EU should develop and implement a Disinformation Index.

Media markets: media consumption patterns, particularly the role of online and social media; audience size of different media channels; public trust in different media channels;

Political system: number of political parties, stability/volatility of recent governments, measures of inter-party cooperation/polarisation, public trust in government institutions;

Socio-economic conditions: economic inequality levels and trends, social mobility, cultural diversity/polarisation, migration patterns;

Geo-strategic context: foreign[4] ownership of media outlets, reach of foreign media channels, past exposure to foreign influence campaigns.

The Disinformation Index would provide an overview of vulnerabilities and the resilience of EU member states regarding disinformation campaigns. This Index could serve many purposes, including *inter alia* the following more specific tasks and objectives:

• Based on findings from the Index, the Commission could propose a research programme that looks at these factors in more depth and investigates their potential for strengthening the resilience of democratic societies and institutions against disinformation;

• The Index will further help to increase awareness in government and the broader public about the disinformation problem and what factors are linked to it;

• The Index could also inform member state policy-making with respect to risk assessment, vulnerability management, and ultimately market regulations on the EU level that seek to steer the power of technology back towards democratic outcomes;

• The current debate is too narrowly focused on foreign influence campaigns and technological aspects such as the role of bots. The index would spur a much-needed broader debate about social, economic and political criteria and factors that are important for making member states and the EU as a whole more resilient against disinformation campaigns.

From voluntary code to hard rules

The European Commission has recognised the importance that large internet platforms play as an infrastructure for the distribution of disinformation. In order to push the private sector to step up its efforts, a Code of Practice on Disinformation was developed and published in September 2018.[5] The Code is an important first step, the implementation of which must be closely monitored. But it cannot

substitute for the need of the EU member states to develop definitive rules and update their legal frameworks accordingly.

Across the EU, member states have failed to update their legal frameworks for regulating political campaigns to account for online campaigns and social media. It is not only social media companies that need to be held accountable, but also political parties and campaigns. Political parties and political campaigns should not only publish how much money they spend on social media campaigns, but also disclose their messages and targeting parameters. In general, member states need to review their campaign regulations, identify gaps, given the rapid technological changes and new practices, and adjust their legal frameworks accordingly. The EU should help member states to meet this challenge through dialogues on sharing best practices and developing basic standards for how such regulation can to be integrated into its rule of law frameworks.

At the same time, we need clear rules for the internet platforms. A voluntary code will not be sufficient. We are already confronted with the problem that different companies are taking very different measures to address the problem.[6] Rather than having member states take the initiative, leading to further fragmentation of rules and requirements, the Commission should foster the development of EU-wide rules for internet platforms to counter disinformation. The Code of Practice and the evaluation of its implementation will serve as a strong foundation for these efforts. The following issues should receive particular attention:

At the same time, we need clear rules for the internet platforms. A voluntary code will not be sufficient.

- Rather than leaving it to the companies to determine, the EU should develop a framework for access to data for research. The framework should spell out what kind of data must be made available and under what kind of circumstances and use restrictions it can be used. This framework needs to balance the public's interest in more transparency with data protection regulation and the legitimate business interests of the platforms. Rather than closing access altogether, the framework should clearly spell out use restrictions – for example, restricting the use of the data to publicly funded research on disinformation and other issues affecting fundamental rights – and their enforcement;

- Besides rules for parties and political campaigns as mentioned above, the EU should also set firm requirements for transparency regarding political advertisements and their targeting parameters on internet platforms;

- Companies should also be required to disclose how they adjust their algorithms to prioritise quality information and journalism over unverified information and disinformation. This includes disclosures on how companies determine reputation and trustworthiness of news sources;

- New mechanisms for more information-sharing between the platforms and public authorities also need to be explored. For example, the EU should study how regulatory frameworks from cyber-security could be applied to the disinformation problem.[7]

Conclusion: development of a comprehensive programme to strengthen the EU against disinformation

There are no silver bullets or quick fixes to solve the disinformation problem. Instead, a holistic approach with a comprehensive strategy and a wide range of measures is needed.

Important first steps have been taken with the Action Plan. But its scope needs to be broadened. As part of the EU Disinformation Index, we need to integrate domestic forces behind the production and spread of disinformation as well as institutions that counter the effectiveness of disinformation into our research and analysis. This will put EU institutions in a position to further develop its understanding of what makes democracies resilient against disinformation and develop policies accordingly.

The new Commission also needs to move from voluntary codes to real accountability. Instead of leaving it to social media companies or political parties to decide what is acceptable democratic practice and what is not, we need a strong legal framework for the protection of the integrity of our elections.

This legal framework must address two dimensions. First, what are the rules for online campaigning in politics? Second, what are the obligations of internet platforms regarding transparency of political advertisements, exposure of disinformation, and the protection of free speech, as well as the health of our democratic debates? This is no easy task. But given what is at stake for democracy in the EU and worldwide, the EU will have little choice but to take this challenge on and provide global leadership in protecting public interests through the regulation of digital markets.

Notes

1. European Union External Action Service (December 2018), *Action Plan Against Disinformation*, https://eeas.europa.eu/headquarters/headquarters-homepage/54866/action-plan-against-disinformation_en

2. Alexander Sängerlaub, Miriam Meier and Wolf-Dieter Rühl (2018), 'Fakten statt Fakes. Verursacher, Verbreitungswege und Wirkungen von Fake News im Bundestagswahlkampf 2017', *Stiftung Neue Verantwortung*, available at: https://www.stiftung-nv.de/de/publikation/fakten-statt-fakes-verursacher-verbreitungswege-und-wirkungen-von-fake-news-im

3. Mark Scott (2017), 'Far-right German voters more likely to believe fake news, study says', *Politico*, available at: https://www.politico.eu/article/far-right-german-voters-more-likely-to-believe-fake-news-study-says/

4. Defined here as non-EU.

5. The European Commission (26 September 2018), *Code of Practice on Disinformation*: https://ec.europa.eu/digital-single-market/en/news/code-practice-disinformation

6. Mozilla has publicly criticized Facebook for not living up to the spirit of the Code of Practice. The Mozilla Blog (31 January 2019), 'Mozilla raises concerns over Facebook's lack of transparency': https://blog.mozilla.org/blog/2019/01/31/mozilla-raises-concerns-over-facebooks-lack-of-transparency/

7. Stefan Heumann (12 October 2018), 'Why social media platforms should be treated as critical infrastructures': https://medium.com/election-interference-in-the-digital-age/why-social-media-platforms-should-be-treated-as-critical-infrastructures-6a437a127ff7

All urls checked and working, 27–29 May 2019.

Your Health is our Wealth

Self-tracking health insurance deals, data privacy and the erosion of solidarity

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Private health insurers are collaborating with the producers of digital wearables (i.e. fitness trackers and smart watches) and introducing new developments in the commercialisation of self-tracking data. These developments are not devoid of cultural and social implications – especially in a European context; and power relations between individuals and corporations operating in the 'Insurtech' sector are changing as a consequence. The consequences on the potential for individuals to manage and negotiate data privacy are particularly interesting.

One point is that the use of self-tracking data in commercial health insurance significantly erodes the notions of community and solidarity, which, as Fieschi and Grabbe rightly claim in the introduction to this volume, have been pillars of post-Second World War European societies. With regard to data protection and privacy, we also argue that the concept of 'informed consent', upon which data privacy is predicated, and according to which it is apparently to be managed, fails to sufficiently protect European citizens from the interests of corporations operating in the evolving Insurtech sector.

What are self-tracking insurance deals?

Self-tracking insurance deals are a significant development in the use of individual data for commercial purposes. Insurtech corporations offer their customers a wearable device, either for 'free', or at a discounted price (i.e. John Hancock's offer of '*An Apple Watch for only 25$*'). Customers are then invited to track their fitness and health-related activities (i.e. steps taken, hours slept, visits to the gym etc.).

This individually generated data is then submitted directly to the insurance corporation for assessment and evaluation, and in particular for the calculation and establishment of individual risk (or 'health status'). Clients whose data indicates relatively low risk (i.e. who record healthy behaviour and overall fitness) are rewarded with vouchers for products or services from the corporation or their commercial partners, and/or with discounts on their insurance fees.

From ubiquitous surveillance to incentivised behavioural change

Self-tracking insurance deals complicate our established notions of data management, protection and privacy. These notions are grounded in an understanding that big tech

firms in the social networking and online-search business (i.e. Google/Alphabet, Facebook or Amazon) aim to attract and retain users on their platforms in order to mine the data and metadata of their interactions. This data is then traded for advertising purposes, i.e. to try to influence customers to consume particular products and services.

However, as more mundane everyday objects (such as watches or clothes) are becoming equipped with sensors, an internet connection and an IP address, a new kind of digital surveillance becomes possible. Andrejevic and Burdon have pointed out that the continuous, automatic and discreet production of data in the background suggests monitoring practices that are no longer specific, aim-directed and intentional, but ubiquitous, general and opportunistic.[1]

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Sensor data, once generated and stored, begs to be used and thus creates a strong disposition for its interpretation in novel and unforeseen contexts. In other words, data from IoT (Internet of Things) devices are raw material waiting to be refined and turned into meaningful information and the development of self-tracking insurance deals represents one scenario in which this happens.

Wearables – a solution in search of a problem

As late as 2017, the International Data Corporation (IDC), a market intelligence agency, conceded that the 'utility and necessity' of wearable devices 'has been questionable at best'.[2]

Eventually, the problem that wearables could be considered to solve was found: self-tracking devices were framed as a meaningful addition to sports activities, thus enhancing a particular perception of fitness. Soon, however, it became clear that the trackers could not only enhance traditional fitness activities, i.e. jogging, cycling or swimming, but could also, by virtue of the data-tracking potential of their sensors include other activities, not previously associated with fitness, such as sleeping, walking or breathing, in the realm of physical performance. 'Find fitness everywhere' was an early slogan from Fitbit, one of the major producers of tracking wristbands.

And while for end-users this first and foremost meant approaching daily life from a fitness-conscious perspective, e.g. taking the stairs instead of the elevator, or

Now, sleeping, breathing, body temperature, perspiration and heartrate are among the physical functions that are being turned into fitness performances and framed as physical challenges.

walking home instead of taking the bus, the extended potential for the generation of data has come to suggest that fitness can be found in increasingly obscure activities and bodily functions. Now, sleeping, breathing, body temperature, perspiration and heartrate are among the physical functions that are being turned into fitness performances and framed as physical challenges. This is first and foremost because they can be measured and optimised, and thus turned into potential concerns and worries that can be exploited for commercial gain.

In fitness, in sickness and in health

Once the definition of fitness is accepted as applying to ever-expanding spheres of digitally traceable life, our attention necessarily turns towards its lack – i.e. 'unfitness' – and thus to sickness. The question arises as to what level of fitness an individual should maintain in order to be considered healthy? It is therefore unsurprising to see health and life insurers entering this field.

Vitality, an incentive-based insurer, owned by South African Discovery, is at the forefront of the development in self-tracking health insurance that we are concerned with. Discovery also describes itself as 'the world's largest platform for behavioural change'.[3] Vitality has been operating in the UK since 2014, and subsequently initiating collaborations in various other countries, for example in France and Germany with Generali.

The results of these collaborations are advertised as a 'win–win–win situation'. Clients secure wearable gadgets, improve their health, and save money on their health insurance and/or the products of their insurers' commercial partners. The insurer obtains healthier clients, reduces coverage (and administration) costs, and they, and their commercial partners, profit financially. Finally, society gains a healthier population.

But, dig just below the surface of these advertisements (in particular in the publications of business consultancies and insurance corporations) and some more worrisome issues appear. Chief among them the potential erosion of European notions of solidarity, the incentivisation of behaviour change, the management of data privacy, and the illusion of choice.

The decline of the common good as a growth opportunity

In publications from these fields we can see how the decline of public, state-funded health insurance is framed as a 'growth opportunity for private health-insurance companies'.[4] Due to 'pressure on public finances', and helped by the 'disruption' of the insurance market by wearable technologies, companies willing to invest in 'Insurtech' are promised to be able to expand their business, customer base and revenue, while 'keeping staff and costs to a minimum'.[5]

What characterised public, state-funded health insurance schemes was the notion of 'collective insurance', i.e. the provision of health insurance and calculation of risk on a collective rather than an individual basis. Under collective schemes, members would ideally receive cover according to their health needs.

By contrast, the developments we are concerned with reflect a move to personalised insurance. These schemes are based on self-tracking data and incentivise particular kinds of behaviour on a competitive, and commercial, basis. Sensor data from wearables are presented as key to profit maximisation and cost minimisation. They make it possible to continuously assess each client and evaluate their health efforts, the insurance risks they pose and the costs these risks will most likely result in.

Under the cover of holistically sounding words, such as the 'personalisation' and 'democratisation' of health, and 'customer-centred', or 'value-based' care, the long-term vision driving this innovation is to arrive at the possibility of dynamically determining and adjusting the price of each individual's insurance fee. In the circulating business lingo, the goal is to develop 'dynamic', 'real-time' and 'individualised' 'risk-based pricing'.[6] '[H]ow does it make any sense to set a rate at a certain point in time, when a change in your behaviour could shift the underlying risk throughout your life?', asks Adrian Gore, Discovery CEO, rhetorically in an interview with *McKinsey Quarterly*.[7] Gore implies that this doesn't make *any* sense, particularly now that Discovery has access to continuous data streams from people who subscribe to their policies

Big Brother insurance?

The notions of surveillance and control that are implicit in Gore's rhetoric lead us to the second idea, which we see as driving self-tracking insurance deals.[8] This idea is

for insurers to become ever more present in their customers' lives and in this way become their personalised health authorities. As Chad Hersh, vice president of Capgemini, bemoans with respect to life insurance: 'The industry has been at a disadvantage compared with other financial services firms such as banks because to date life insurers' presence in customers' lives had been confined to infrequent transactions such as policy renewals or policy changes.'[9]

With the help of the self-tracking data and the game-like tasks, nudges and challenges that can now be meted out to clients in personalised form, the insurer seeks to become a 'player' instead of merely a 'payer' – it wants to become a 'leader' who guides their clients 'towards risk free behaviour', all the while proposing to them 'ancillary services […] in order to exploit relevant data detected'.[10]

Self-tracking data streams thus make it possible for insurance corporations such as Discovery to incentivise customer behaviour. They argue that this maximises 'shared value', i.e. that it enhances customer health and minimises risk of payout. However, it also ushers customers through carefully planned commercial ecosystems that facilitate the generation of profit for Discovery and their collaborating partners. Customer 'health journeys' include training at gyms owned by Discovery or their partners, or buying food marked as 'healthy' at affiliated stores.

Together, the double vision for insurers to *continuously monitor* clients and to *continuously task*, preoccupy and, in this way, *lead* their customers through their 'health journey' puts the insurer in an extremely close and, in this way, extremely powerful position in relation to their clients. In our view, this position displays clear authoritarian tendencies in that the insurer obtains the power to decisively *shape the behaviour* of its clients and *evaluate their worth* along the lines of private profit interests.

'Always on a treadmill' – eroding solidarity through competition

Admittedly, it is still a *soft* power that insurers wield: suggesting certain behaviours, warning of others, rewarding some life-style choices rather than others, framing some activities as more welcome – and beneficial for the client – than others. Yet, it is exactly this normalising power that worries us because of the long-term effects that it could have on people's attitudes towards themselves and others. Living with

the knowledge that all our activities are monitored and that each of these activities comes at a cost that impacts our individual worth, could lead to a consideration that certain people are worth more than others because of their health status and the effort that their data proves they have made.

Once notions of worth and merit have permeated people's ideas of health care, the foundations of public health insurance as a common good in Europe and their predication on the notion of solidarity are in serious danger of eroding and becoming replaced by ideas of competition.

Once notions of worth and merit have permeated people's ideas of health care, the foundations of public health insurance as a common good in Europe and their predication on the notion of solidarity are in serious danger of eroding and becoming replaced by ideas of competition.

When Discovery CEO Adrian Gore brags that Discovery makes 'an innovation score part of each manager's performance evaluation', adding that 'our leaders are always on a treadmill', this relentlessly competitive stance is also what the insurer seeks to cultivate as the new behavioral norm for its policy holders.[11] Beneath the language of care, the playful tasks and the tempting rewards, this norm oozes of egotism, individualisation, and material as well as mental poverty.

Ways to counter the trend: decoupling health and commercial wealth

But what can we do to resist the authoritarian tendencies inherent in these insurance deals? First of all, it is important that we – academics, journalists, politicians, lawmakers – stop using the language coined by the business. Particularly in journalistic, but also in academic publications on the subject, there is excessive and uncritical use of the business's buzz-words, such as 'reward-based', 'customer-centric', 'shared value care'. This reproduces the insurers' ideological framework and forecloses on the possibility of imagining alternatives.

Closely related to the above point, developments in self-tracking insurance reinforce the need to reconsider our understanding of data privacy and current approaches to managing and regulating this. Even though European GDPR regulations have been hailed as an important step in the direction of better privacy protection,[12] the compromise that GDPR seeks to strike between customer protection and business friendliness plays largely into the hands of corporations.

GDPR relies heavily on the notion of 'informed consent'. In theory, 'informed consent' means that every individual assesses each of the many trade-offs between the data they give to corporations and the services they obtain. The individual is then charged with the responsibility of making a weighted decision about whether or not they consent to the corporation's potential use of their data. In practice, however, it frequently means that individuals simply tick the 'I agree' box in order to get access to the services/content they want to use. A recently conducted online survey found that people did not even relate 'informed consent' to data privacy issues – apparently unable to perceive any serious consequences for their lives when agreeing to data sharing.[13]

The GDPR approach to making individuals responsible for their data privacy not only fails to protect people in radically unequal power relations, but also reproduces the common sense promoted by big-data corporations. When Brooks Tingle, CEO of the US insurer John Hancock, claims that 'the customer has total choice about whether to participate',[14] this is not true, either for the self-tracking insurance deals, or for the broader commercial ecosystems through which customers are led. This illusion of choice masks the power these corporations wield in relation to their users. While this power might be soft, it is nonetheless coercive. The illusory choices that people are invited to make have already been determined.

Conclusion –
a plea for the freedom to choose 'unwisely'

It is against the increasingly invasive and coercive data exploitation of commercial entities described above that we wish for another overhaul of European data privacy regulations. Whereas it seems impossible to stop the *generation and circulation* of our data, regulators on national and supranational levels in Europe should at least bar the *application* of these data by commercial entities in certain fields. Health is one field that should remain protected.

Therefore, when it comes to the use of self-tracking data for commercial health insurance purposes, we strongly argue for a European policy that takes the stance that Lena Rudkowski, professor of law at Freie University Berlin, advocates:

> In view of the existential importance that health insurance has for the insured, particularly in situations of personal crisis, the insurance policy, with its initially defined conditions, is not to be called into question either due to the

decline of the insured's health status, or due to their personal – and, from a medical viewpoint, potentially risky – lifestyle. The insurer's interest in an equivalent relation between risk and premium must take second place behind the insured's interest in their free, and *possibly risky and unreasonable* way of life (our translation, emphasis added).[15]

Notes

1. M. Andrejevic and M. Burdon (2015), 'Defining the sensor society', *Television & New Media*, 16(1):19–36. https://doi.org/10.1177/1527476414541552.

2. 'Wearables aren't dead, they're just shifting focus as the market grows 16.9% in the fourth quarter, according to IDC' (2 March 2017), *Business Wire*: https://www.businesswire.com/news/home/20170302005298/en/Wearables-Arent-Dead-Theyre-Shifting-Focus-Market

3. Discovery (2018), *Discovery: Integrated Annual Report*, South Africa: Discover Limited.

4. S. Singhal, P. Finn, T. Schneider, F. Schaudel, D. Bruce, P. Dash (2016), 'Global private payors: a trillion-euro growth industry. Healthcare Systems and Services Practice', McKinsey and Company.

5. T. Catlin, J.T. Lorenz, B. Münstermann, B. Olesen, V. Ricciardi (2017), 'Insurtech: the threat that inspires', McKinsey and Company; available at: https://www.mckinsey.com/industries/financial-services/our-insights/insurtech-the-threat-that-inspires

6. A. Silvello (2017), 'IoT and connected insurance reshaping the health insurance industry. A customer-centric "From Cure to Care" approach', *EAI Endorsed Transactions on Ambient Systems*, 17(15):e5. doi: 10.4108/eai.8-12-2017.153462.

7. Jill Hellman and Adrian Gore (2015), 'Commentary: How Discovery keeps innovating', *McKinsey Quarterly*: https://www.mckinsey.com/industries/healthcare-systems-and-services/our-insights/how-discovery-keeps-innovating.

8. Hellman and Gore (2015), 'How Discovery keeps innovating', see note 7.

9. C. Hersh (2018), 'Wearables: a game changer for the life insurance customer engagement metrics', Capgemini, available at: https://www.capgemini.com/2018/05/wearables-a-game-changer-for-life-insurance-customer-engagement/

10. Silvello (2017), 'IoT and connected insurance...' (see note 6).

11. Hellman and Gore (2015), 'How Discovery keeps innovating', see note 7.

12. A. Troiano (2017), 'Wearables and personal health data: putting a premium on your privacy', *Brooklyn Law Review*, 82:1715–53.

13. L.H.S. Anaya, A. Alsadoon, N. Costadopoulos, P.W.C. Prasad (2017), 'Ethical implications of user perceptions of wearable devices', *Sci Eng Ethics*, 24:1–28.

14. Quoted in A. Chen (2018), 'What happens when life insurance companies track fitness data?', *The Verge*, accessed from: https://www.theverge.com/2018/9/26/17905390/john-hancock-life-insurance-fitness-tracker-wearables-science-health

15. L. Rudkowski (2017), 'Vertragsrechtliche Anforderungen an die Gestaltung von "Self-Tracking"–Tarifen in der Privatversicherung', *Zeitschrift für die gesamte Versicherungswissenschaft*, 106(5):453–502.

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'iO' or the Road to the Future of Government Services

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The EU *eGovernment Action Plan 2016–2020*[1] sets the very ambitious goals for member states of modernising public administration with digital technologies and facilitating digital interaction between administrations and citizens and businesses, through high-quality public services. It indicates multiple principles and goals related to the modernisation of public administration. In particular, the *Plan* lists seven guiding technological principles for the digitisation of the public sector. The 2017 *Tallinn Ministerial Declaration*[2] indicates five specific objective areas, to be implemented in the period 2018–2022, built around the *Plan*'s principles:

1. Digital-by-default, inclusiveness and accessibility;
2. Once only;
3. Trustworthiness and security;
4. Openness and transparency;
5. Interoperability by default.

From the start, the Digital Transformation Team has worked around these principles and made them an integral part of its vision. To achieve this, it mapped and integrated EU principles in the design and delivery of its public service strategy, and in 2017 it published the *Three-Year Digital Transformation Plan*,[3] a strategic and technical document that guides the digital transformation of the Italian Public Sector.

The Team has tried to translate what looks like mere technological principles into real digital public services that meet the changing expectations of citizens and companies. It is committed to building and relaunching the building blocks upon which a solid digital transformation strategy is based: national registry, digital identity and digital payment system, as well as new tools and working methods for a modern system for managing public data and software, technological development and service design.

The digital transformation process … a way to strengthen and nurture digital interaction.

These projects were conceived as essential components of the whole strategy; indeed, they were the puzzle pieces and at the same time were consistent with the EU strategy. Yet, the effort was not limited to digitisation: the Team also wanted to foster citizens' progressive adoption of digital service delivery channels; as technology is just the means and not the goal, we used the digital transformation process as a way to strengthen and nurture digital interaction.

Among the actions mentioned in the *Tallin Declaration* is Action 1: Provide citizens and businesses with the option to interact digitally with public administrations, if they choose to, while following the 'User-centric principles for design and delivery of digital public services'. This action corresponds to the principle of 'digital by default'.

And here it comes: the story of Anna – the principles/actions become a service.

Summer 2022. Anna is on the subway, returning home after a day at work. She has seven stops still to go, and still time to play with 'iO' on her smartphone. No, 'iO' is not a game.

She signs in with her SPID digital identity to check for official notifications. Some are not so pleasant: outstanding fee payments and speeding tickets; but one is good: her little boy has been accepted to nursery school. Two stops left, she proceeds with her payments through pagoPA, the public digital payment platform integrated in the app.

At home, at last! She is tired but, at least, she has more time for herself and her family.

Is Anna's story really possible?

'iO' is an innovative application allowing citizens to receive messages, documents and notifications, request information and certificates, set their preferences and pay for public administration services in a simple and intuitive way. Thanks to 'iO', every citizen would be able to request and keep documents and certificates, receive money, pay fees and taxes, receive communications and messages.[4]

The app encompasses many principles/actions of the *eGovernment Action Plan* and the *Tallin Declaration* as it is based on the integration of other enabling systems being implemented, such as digital payments (pagoPA),[5] a unique national register (ANPR)[6] and a digital identity service (SPID)[7] that guarantees access to all public administration services with a single identification system.

Each one of these systems corresponds to the implementation of one or more principles of the *eGovernment Action Plan*.

Let's consider SPID.[8] This is the public system for the creation of a unique digital identity to access public and private services in Italy. It represents a unique access point (by authentication) for users to national services. As SPID is a unique authentication access for users it is an important preliminary step to achieve the so-called Once-Only-Principle (OOP) – not just at a national but also at European level, as SPID has been notified and recognised at the European level. The principle prescribes that public administrations should ensure that citizens and businesses supply the same information only once to a public administration. Without SPID, Anna could not identify herself once and interact with all the different administrations she may need to contact.

pagoPA, the engine of the 'iO' digital wallet, is another application of the above-mentioned digital-by-default principle as it is the centralised node for payments towards public administration services, both central and local. Citizens are able to pay taxes, university fees and school meals, fines and TARI (the municipal waste tax), plus many other services provided by the public administration, with a credit or debit card – just like on any e-commerce site – and to be able to save one's payment preferences so that payments can be made quickly, with a single click. pagoPA allows all digital payment providers – including the most innovative fin-tech companies – to offer their services.

pagoPA is the answer to the demands of citizens who are more and more accustomed to obtaining sophisticated, personalised, on-demand services that are easy to use and often free.

ANPR (Unified National Registry)[9] allows the synchronisation of Italian population data, currently scattered across 8,000 different registers. It is an authentic source and a key enabler: the technical preconditions for the provision of digital services. It also responds to what is outlined in Action 7 of the *Tallin Declaration* on the need to increase the findability, quality and technical accessibility of data in key database registers to apply the once-only-principle for national or cross-border digital public services. With ANPR each municipality knows exactly that Anna is an actual resident and is entitled to all those services that the municipality offers.

'iO' is currently in a 'closed beta phase' which started in Spring 2019, and it is ongoing with a few administrations. From metropolitan areas like Milan and Turin to medium-sized cities such as Cagliari, Palermo, Cesena and Padova or smaller towns such as Valsamoggia, many municipalities are testing the delivery of digital services on 'iO', including paying local taxes and fees, registering for schools, notifications for

payments due, and many others. Public agencies such as the Italian Revenue Agency or the ACI, Automobile Club of Italy (in charge of the registration of motor vehicles) are testing notification of fees and payments due dates; through 'iO', ACI allows citizens to acquire or verify the certificate of title for a vehicle.

It's a start: the time horizon for the full implementation of 'iO' is 2022.

Thus, 'iO' is not a stand-alone project. Rather, it is the outcome of a journey; the application is part of the larger strategy of *the country's operating system* and the result of the cooperative work of many experienced individuals, public agencies and administrations.

We have worked and still keep working with the 'club of virtuous Public Administrations'; there are many: ministries, local administrations, agencies, state-owned technology companies. For example, the *Plan*[10] itself would have remained totally ineffective, had we not worked with the Department of Public Administration to update the Digital Administration Code (CAD) in December of 2017.

The CAD lays down the legal foundation for many of the services established in the *Three-Year Digital Transformation Plan*; in particular, there are a few changes that could help with the creation of services that 'iO' will provide. The CAD states the neutrality of the law with respect to technology. All too often, the technology architectures necessary for the creation of a service are described in a law and therefore remain mandatory even when they are incorrect or obsolete. To fix this problem, we introduced guidelines, designed for the flexible adoption open to online public consultation and to be updated as necessary. The second change is the addition of a register of citizens' digital domiciles, with all the addresses to be used by administrations for official communications.

To accelerate the changes, we also created other tools for collaborating with the technological world and involving public officials: the Forum, a modern tool for managing documents; Developers Italia, the first community of developers of digital public services; Designers Italia, the community of designers that will help to overturn the paradigm of 'citizens must adapt to the public administration', and represent an aggregation point – so to speak – between people and technology; Forum Italia, where developers and designers of digital public services can meet for discussion; Docs Italia, a modern tool for managing documents. The road towards the full functioning of 'iO' and a fully digitised public sector is still long. Much remains to be done.

These are among the most outstanding issues:

The Digital Transformation Team is still working on the publication of an API (Application Programming Interface) catalogue, even though in the meantime it has already collected the first few positive examples to populate it with. Applications must display interfaces that can be read by machines and must be able to work together in an integrated and secure way in order to build new, more powerful and innovative solutions.

In the Italian public administration, there are thousands of 'data centres', which are, in most cases, expensive, inefficient and poorly secured. The majority of advanced countries have already started the migration of data to the cloud and/or a small number of strategic national data centres, ongoing for several years now. The process has just begun. Even with strong central leadership and clear, agile processes in place, catching up will take years of work.

Equally challenging is changing the ways in which digital services and technology are procured. Countries far ahead of us in terms of digitisation have already done so. The Digital Transformation Team is working with Consip[11] to create a digital marketplace that encourages and facilitates startups and innovative SMEs to work with the public administration. The goal is to gradually eliminate single-supplier agreements and drastically shorten tender-processing times to ensure enough flexibility for making many small purchases.

To innovate we need continuity, determination and technological skills. The Digital Transformation is a journey based not only on continuous improvement but also on 'disruption', moments of significant top-down change. Also, we need competent leadership, not just officials who 'comply'. Luckily enough, we are seeing some positive signs of progress but more needs to be done. Analog is inefficient and expensive, while a well-managed digital transformation brings benefits from which all citizens can profit, saving time and money while enjoying better services.

'iO' is coming and nothing will stop it.

Notes

1. 'European eGovernment Action Plan 2016–2020': https://ec.europa.eu/digital-single-market/en/european-egovernment-action-plan-2016-2020

2. 'Ministerial Declaration on eGovernment – the Tallinn Declaration' (6 October 2017): https://ec.europa.eu/digital-single-market/en/news/ministerial-declaration-egovernment-tallinn-declaration

3. Digital Transformation, 'The Three-Year Plan for ICT in the Public Administration, 2019–2023': https://pianotriennale-ict.italia.it/en/

4. Digital Transformation Team, 'iO: the project to develop the public services app': io.italia.it

5. Digital Transformation Team, 'pagoPA digital payments': https://teamdigitale.governo.it/en/projects/digital-payments.htm

6. Digital Transformation Team, 'National Resident Population Register (ANPR)': https://teamdigitale.governo.it/en/projects/anpr.htm

7. Digital Transformation Team, 'Public Digital Identity System (SPID)': https://teamdigitale.governo.it/en/projects/digital-identity.htm

8. Digital Transformation Team, 'SPID': https://www.spid.gov.it/

9. See note 6.

10. See note 3.

11. CONSIP is the National Public Procurement Agency: http://www.consip.it/

All urls checked and working, 29–30 May 2019.

Europeans worry about how digital technology is changing their politics, economies and societies. They have specific expectations regarding the role of the state in protecting them from the most negative effects of the digital transformation; and the European Union and national governments have well developed tools that could help manage the effects of digital. This collection explores how, in a world torn between an American model that is largely market-driven on the one hand, and a Chinese model rooted in authoritarian state practices on the other, a European Way of Digital might be the way forward.