Decommercialising the internet

Policies to Transform the Internet from Marketplace to Public Space

The internet has become characterized by deficiencies in data protection, distributive justice and sustainability. They result from commercialization, privatization and the dominance of a few tech companies. We present policy measures to retransform the internet into a public space designed for the common good.

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The internet was initially developed as a tool primarily for the military and science to communicate and transfer information. In the early 1990s, it was opened to civil society and transformed, mainly through two user groups. First, a civic online community evolved, one in which services and information were – and still are – jointly developed and shared as free and open-source software. Software, data and algorithms are non-rival goods that, albeit with updates, can be used indefinitely without losing their value. Thus, non-commercial and commons-oriented practices, such as Mozilla Firefox or the Linux Kernel, have been able to flourish and achieve global recognition. Second, a commercial interest group quickly emerged to match, if not supersede, those civic interests. In Germany, it was especially the 1998 liberalization of the telecommunication market that led to the internet's infrastructure no longer being maintained by public actors. Also, private companies started to treat the internet as a marketplace for profit. This commercialization created the basis for numerous issues concerning social inequality, democratic principles and environmental degradation (c. f. Kingaby this issue). Dealing with these issues has become urgent as a result of the growing importance placed on technology-driven phenomena such as big data, cloud computing, artificial intelligence and the platform economy. Not just industry but also the state is heavily subsidizing these technological developments. The social and ecological issues arising with these developments, and how these issues could be politically resolved, are addressed in the following sections.

Build a sovereign digital infrastructure

The basic internet infrastructure consists – in our understanding – of data centres, mostly referred to as cloud platforms, and the connection between them via broadband networks. Both are currently run by private companies. Due to this dependency on private business, internet access is unfairly distributed as especially in rural areas, it is not profitable, and expansion is coming to a standstill. To address this particular market failure, the state is called upon to apply regulatory measures to secure a substantial expansion of fibre optic and mobile networks and to provide everyone with non-discriminatory internet access. The expansion by the state is logical since the networks are a public good that can best be operated within the framework of a non-profit, public law institutions – much like roads, water supply and energy networks. To guarantee this security of supply, all legal means must be exhausted in promoting the expansion under state supervision. In addition, government support should be available for organizations that provide free, decentralized internet access as a public good.

Further, developments in cloud computing have led to a growing dependency on cloud platforms. They provide the infrastructure to store, analyse and utilize the increasing bulk of companies' and individuals' private data (Staab/Nyckel 2019). This increasing dependency makes cloud platforms a critical infrastructure on which the data sovereignty of individuals, companies and public actors increasingly rely. In this respect, it is not only a matter of competitive concern that US and Chinese providers (e. g. Amazon, Microsoft, Google, Alibaba) are largely controlling this market. To reduce dependency on quasi-monopolistic cloud providers, German state and industry players initiated the Gaia-X certification project. The initiators claim to create a secure, state-certified network of data centres. However, consumers and workers have hardly benefited so far, as companies are still monetizing personal data without hindrance due to legal loopholes in the General Data Protection Regulation (EU GDPR). To improve the situation for the general public, the Gaia-X project must be brought under democratic control: Trade unions and civil society organizations for data and consumer protection must be involved in supervising the cloud platforms and the enforcement of Gaia-X rules.

A second important part of basic internet infrastructure is search engines, through which web content is mostly accessed. Regarding these, Europe is currently at the mercy of an oligopoly, of which all providers are located outside the EU: Google (USA), Bing (USA), Yandex (Russia) and Baidu (China). These four have each built up their own vast search index – a database in which all findable websites with content and links are

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analysed and systematically stored. Other, new search engines currently have no chance on the market, no matter how good their search algorithms, design or business model are. A single small company cannot match the lead of the "big four" with their databases. Europe should therefore use public funds to build its own search index and make it available to the public. With access to this European search index, European companies could finally set foot in the search engine market, even with a limited budget.

Third, internet browsers, cloud applications and software of all kinds, which increasingly only work with an internet connection, are also part of important digital infrastructures. Here, the state should generally provide financial support for the free and open source (FOSS) movement, which makes software available non-commercially and freely. Open-source software is now built into almost all digital applications and thus also represents a public good that must be protected and promoted. In contrast to proprietary, commercial software, open-source preserves the technological sovereignty of its users, since no vendor lock-in effects can occur. In addition, open code also enables better security auditing of critical software.

Curtail platform-power

Digital platforms not only function as providers of essential digital infrastructures; they also double as business models. This platform-based business model exhibits two functions. First, platforms are multi-sided markets that facilitate transactions between different user groups. In this process, value is extracted by way of commissions or user fees. However, second, platforms collect the data created in those transactions. Extracted user data is subsequently aggregated, evaluated and access to it is sold or leased to third parties, for example, for advertising purposes (Srnicek 2017). To intensify data extraction, platforms employ algorithms that promote content that is more likely to trigger user engagement. As a result, information is assessed regarding its utility for the platform, not for the user. The reason is simple: The longer a user remains on a platform, the more behavioural data and personal information is generated, in turn, increasing the revenue stream. Put simply, platforms are about profit, not people – even though some of them are called "social" media.

A second major problem for platform users relates to platform markets' monopolization tendencies. The more users a platform has, the more attractive it is (the so-called network effect) – for both users and platform owners. Resultingly, the major platform incumbents such as Google, Facebook, Weibo and Amazon have worked intensely in recent years on getting their networks to grow, capturing more and more share of their respective industries in the process. This growth has led to the number of marketplaces, search engines or smartphone operating systems considerably diminishing, leaving only a few global corporations able to provide competitive products (Statista 2019 b). Today, data, capital and power are increasingly centralized in the hands of the platform incumbents, which leads to smaller and non-commercial platform providers being crowded out of their respective industries (Zuboff 2019). This increased market power gives the major platforms a "too big to fail" status, often rendering them additional leverage against social and environmental protection legislation.

Level the playing field for cooperatively-run platforms

Two things are urgently needed to counter this centralization and its adverse effects on platform users: Stronger regulation of the platform incumbents (Morozov/Bria 2018; Srnicek 2017) and direct support for alternative, commons-oriented platforms (Scholz 2016; Schneider 2018). On the regulatory side, the focus needs to be on making competition law fit for the platform economy context. Even though recent revisions on both the German and the European level have taken a relatively progressive approach towards platform markets (for example by defining platform gatekeepers), at least two important tools are still lacking to substantially counter platform-power. First, competition law should take a page from the US-American book and introduce the possibility of breaking up the incumbent tech companies into individual parts. Fines alone will not suffice to level the playing field let alone build a thriving commons-oriented internet (Digitalcourage e. V. 2020). Second, policymakers need to strengthen both interoperability and open data approaches if they want to break up data silos and create a level playing field for new privacy-preserving services (Piétron 2019). With the Digital Services Act and the Digital Markets Acts, the European Commission has recently presented draft regulations for stricter rules for online platforms (European Commission 2020). The legislative initiatives are supposed to regulate personalised advertising, recommendation systems, and rankings, to establish interoperability, and to specify liability rules for illegal content. For the initiatives to become law, they still have to pass through the European Parliament and the European Council. Until then, fierce lobbying attempts by the digital platform concerned are expected (Corporate Europe Observatory 2020).

On the alternative platforms' side, policymakers should strive to implement public platforms. These platforms could be run by either states or municipalities and provide public services in key areas such as mobility, housing, or health. The existence of such public platforms would provide users with a common-goods-oriented alternative to the extractive business models of platform incumbents. The Jelbi mobility platform, established by Berlin's public transport authority, and the Sundhed health platforms, established by the federal government of Denmark, provide examples. For municipalities and state actors to provide public platforms as digital common goods, they need access to the private platforms' data. Politicians should support uniform data-sharing standards and integrate them into all public procurement processes. Further, policymakers

could provide support for existing cooperatively-run platforms with a social mission. An exemplary organization is CoopCycle from Paris, a secondary cooperative that provides software for platform-based delivery collectives across Europe. Up & Go from New York City is a cooperatively-run platform for cleaning services that provides a stable income for migrant workers. And Hostsharing from Hamburg is a cooperatively-run web hosting provider with an explicit ecological mission. Yet, because platform cooperatives are often small businesses that are unable to invest heavily in software development, their products tend to be inferior when compared with those of the platform incumbents such as Deliveroo or Helpling (Pentzien 2020 b).

Policymakers could remedy this situation. For instance, funding could be provided that actively supports software development for cooperatively-run platforms. In Germany, current guidelines make this difficult. In fact, start-up-oriented financing instruments such as *INVEST – Venture Capital Grant* or the *High-Tech Start-Up Fund* are currently reserved for companies that pursue a venture capital model. As such, public financing instruments need to be opened up to approaches beyond the shareholder-value model. In addition, public procurement guidelines could be restructured so that platforms with an explicit socio-ecological mission receive preferential treatment in public tenders (Pentzien 2020 a).

Changes in the legal framework are also needed if cooperatively-run platforms are to thrive. For example, while the GDPR is a major achievement from a data protection perspective, it does little to increase competition among platforms (Schechner/Kostov 2019). On the contrary, because the major platform incumbents already possess the resources needed to adequately implement the law's ambitious data protection requirements, current rules tend to benefit the status quo. In addition, existing cooperative statutes make life harder for the alternative platforms. In Germany, for example, it is impossible for individuals to sign for cooperative shares online. To become members, they have to print out a form, sign it manually, and then send it to the cooperative. This legally enforced media discontinuity substantially curtails the ability of German platform cooperatives to build up an international user base (SEND e. V. 2020)

Protect civil and consumer rights

Not only platforms implement a business model that makes money from data; many other allegedly free services also do. For example, free apps share personal information such as geographic location, gender or online activities directly with advertising and profiling companies (Forbrukarrådet 2020). Online media that advertise digitally do not even receive the revenues themselves as they mainly go to digital marketing and advertising companies. Especially for journalism, this leads to an enormous loss of revenue for independent quality media. As a result, quality suffers and those with a particular interest in shaping public opinion increasingly finance content. These services are, therefore, by no means free. Rather, our data represents the currency in which we pay for the use of online services. The digital marketing and advertising industry uses personal data of users to track them over time and on various devices and websites (Kingaby this issue). The use of machine learning and large data sets (big data) further perfect such procedures. In addition, search engines such as Google and commercial portals such as Amazon can easily adapt product presentation, filters or recommendations. The decision architecture of those websites is largely inscrutable for users, and the criteria providers implement in their interface design are generally incomprehensible.

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We identified three major threats evolving from these unfathomable practices (see Figure 1). First, achieving informational self-determination is almost impossible as citizens can neither fully see what their data is being used for nor protect against access. Second, online marketing for commercial purposes is constantly increasing. It primarily serves to increase sales and profits of the advertising companies. In 2018, more than 240 billion euros were spent on digital marketing worldwide, with search engine, banner and Social Media advertising being the most common (Statista 2019 a). Online marketing itself consumes a considerable amount of energy and resources, unnecessarily burdening the environment and climate (Kingaby this Issue; Pärssinen et al. 2018). In addition, online marketing aims at increased consumption levels. Thus, personalized advertisement has been shown to lead to more purchases than traditional advertising on TV, radio or billboards (Dinner et al. 2014). Instead of catering better to existing consumption needs, online marketing often evokes new consumption desires (Frick et al. 2020). Social Media further fuel this trend since their attention-seeking architecture often promotes consumerism and conspicuous consumption. Social Media are also increasingly used for self-expression and distinction. The platforms' mechanisms ("craving for likes") and algorithms (ranking of posts) further enhance these attention-grabbing dynamics. These influences may well result in excessive consumption, putting further strain on an already depleted ecosystem. Third, a kind of commercial surveillance system is put in

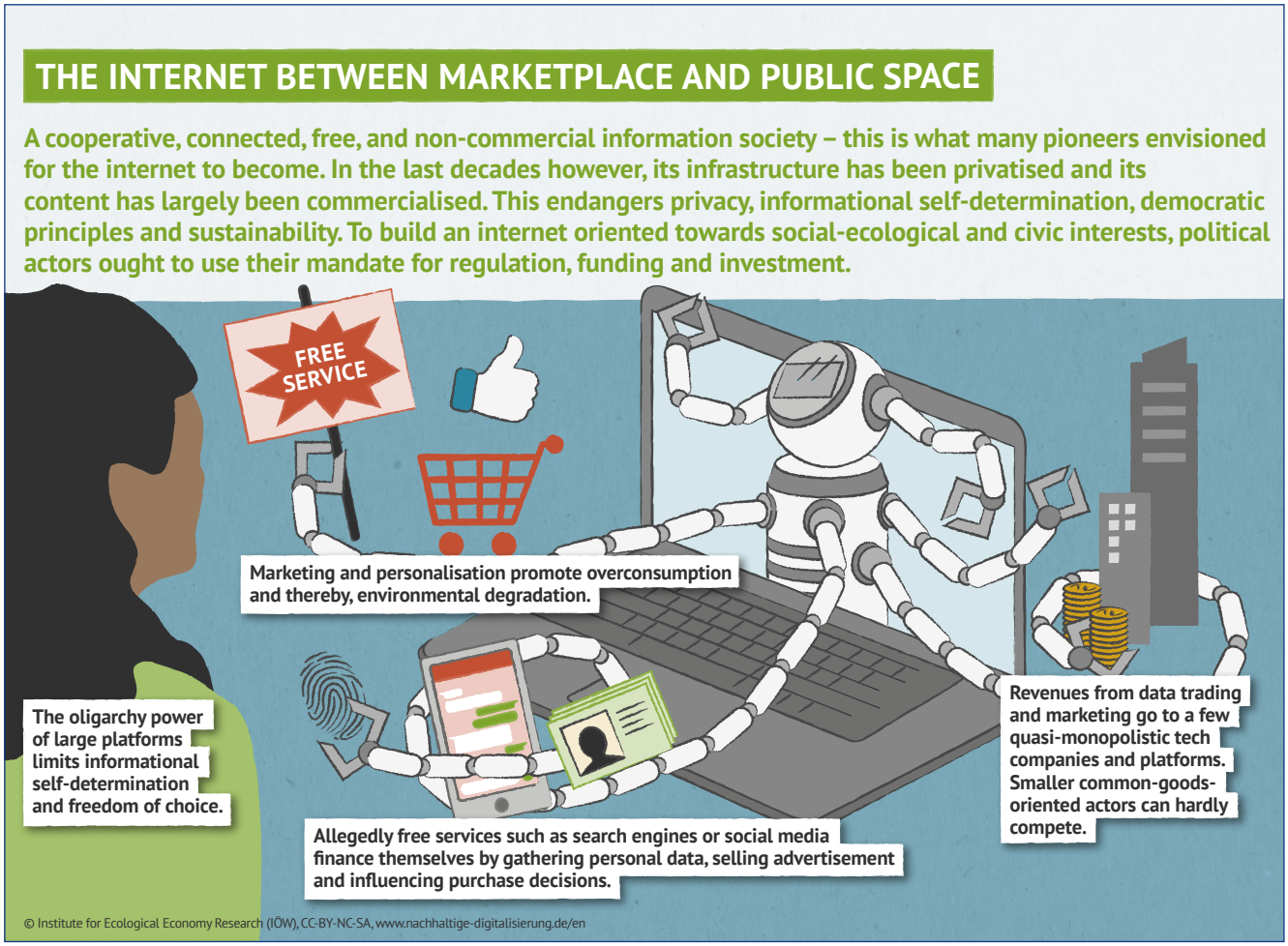

Figure 1: The internet between marketplace and public space

place. Information asymmetries resulting from these practices give the respective companies power advantages and endanger not only individual privacy but also sustainability goals and the democratic political structure (Seemann 2018).

Protecting informational self-determination is an international challenge: All companies that want to do business in Europe and address EU citizens must comply with the GDPR. Yet enforcing it requires many procedures and also fines. Conflicting laws in other countries force companies there to hand over data to their secret services (e. g. in the USA the Cloud Act and the FISA Act). This challenge will be more difficult to resolve. At the very least, digital infrastructures serving as a social utility service, such as search engines, should respect the basic right to informational self-determination. Search engines and commercial platforms have to be forced to make the criteria and priorities of their search and display algorithms visible and thus make financed placement (advertising) identifiable (Kingaby this issue). The European draft legislation Digital Services Act creates new transparency rules for users. Accordingly, platforms that use recommendation algorithms should explain in their terms of use which factors guide the recommendation, and must ensure that users can adjust these parameters, including the option to completely switch off feeds that are individually tailored to them. In addition, online tracking should be subject to approval, and "privacy by default" should be mandatory for websites – and not "privacy by making users read long text and click a lot of buttons and creatively hiding the decline button", as many websites are currently interpreting the GDPR.

The EU regulations GDPR and ePrivacy have taken important first steps in data protection. The ePrivacy regulation intends to prohibit digital groups and advertising companies from evaluating users' digital communications. For 2020, the expansion of the ePrivacy regulation has been announced. It remains to be seen whether it will lead to real improvements in data protection and legal certainty. In any case, network activists are critical of telecommunications companies' attempts to influence the reform of the regulation (Thüer 2018). In addition, the implementation of data protection acts should be monitored more closely at the political level, and any failure to implement them should be sanctioned (Wiebe/Helmschrot 2019). End-to-end encryption and restricting the (meta-)data collection

of digital services should be made mandatory (as in the case of Signal or GNU Social). Similarly, legal barriers must be imposed on the currently ubiquitous tracking and centralized accumulation of personal data on the internet.

Enable sustainable business models for digital services

We have all grown accustomed to the convenience of using all kinds of apps, mail services, newspapers, magazines or Social Media without paying. Thus, service providers are often not able to make a profit through their digital service, instead offering their services to advertising companies and thus relying on a data-driven business model. Notwithstanding these models, positive examples can be found that do not make data their source of profit: Search engines such as Duckduckgo or Startpage, as well as platforms and networks such as Mastodon or the Free Software Foundation Europe and apps like Drip, set good examples: they use free and open-source software without tracking, advertising or trading personal data. Non-profit journalism such as Correctiv and The Guardian work with voluntary contributions to find ways for journalism independent of marketing. Improved models of reader financing are being applied, such as joint flat rates for different media or the amalgamation of various players, for example in cooperatives such as RiffReporter. Yet these best practices are a niche phenomenon, with few being able to seriously threaten the dominant commercial platforms and tech companies. In the current incentive system, their business models are just not as profitable as those of the established platforms. Power dynamics could be changed in important ways by levelling the playing field for platform cooperatives and strict data protection. But, for many, questions remain: How could free services be financed if selling data and advertising space is no longer an option? What could an alternative, but also successful, business model look like?

Alternative financing models for digital services must be created. One solution is to question the self-evident free nature of digital services. Examples such as the e-mail provider Posteo show that fair payment for such services can make sense. A user fee can substitute data trading and advertising. Increased payment can also help to ensure that this important work is rewarded instead of being purely voluntary. In addition, new and smaller providers will be more likely to compete with large digital companies and build a more diverse, decentralized and therefore sustainable digital market.

Developing and implementing alternative business models for digital services should be politically promoted or the state itself should provide services oriented towards the common good. For example, online media and journalism can be supported by the state. In countries with smaller markets than those in Germany, subsidising newspapers with public money has, for some time, been common practice. However, models must be found to prevent state influence on content. Independent journalism must be financed independently. This financing may also mean direct (donations, flat rates) or indirect (taxes, fees) financing by readers, listeners, and viewers. One possibility for such financing is micropayment. Micropayment refers to the payment of small amounts and enables digital services to be purchased and used. It is important that this digital payment is fast and user-friendly, does not require excessive energy and resource use (c. f. blockchain technology), prioritises data protection and preserves the users' informational self-determination. The GNU Taler payment system, for example, adheres to these guidelines. For each transaction, the customer can decide what information he/she wants to give to the seller. Transactions can be traced for revenue but not for expenditure, facilitating tax collection and preventing illegal activities such as undeclared work and payment fraud.

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Towards a better internet – A mandate for political action

A political framework is essential to countering the described problematic developments and promoting informational self-determination, diversity, decentralization, openness, and sustainability – in other words, a better internet for all. This corresponds with the proposed "European model" of digitalisation that puts people and the planet before profit (WBGU 2019). Data-intensive commercialization, power concentration and economic power asymmetries need to be replaced by models of fair distribution. This replacement means breaking the oligopolies that are a danger to internet resilience and democratic decision-making and then laying the ground for, or even providing, decentralized, data-secure alternatives. In an overarching approach, political design should aim to make the inherent decision-making architectures of digital spaces transparent and to renegotiate their ownership and creative power democratically. In addition, to secure the internet as a place of freedom, more support should be given to public-interest actors and applications. It tends to be forgotten that digital technologies such as the internet, the smartphone or what nowadays goes by the name of Artificial Intelligence were and are

developed not only by the private sector, but to a large part with state funding (Mazzucato 2015). Funding of further developments of these technologies should be tied to public welfare and sustainability criteria. This includes that applications developed with government funding should be available for the public and in line with open data and open-source approaches (c. f. Pohl et al. this issue).

We conclude with an invitation to political actors to recognize the vast implications the internet has on society. Political governance instead of Big Tech is indispensable if the principles of a society oriented towards the common good are also to apply in digital spaces. The internet's infrastructure is to be seen as a public good committed not only to the self-interest of corporations but also to the common good of society.

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