

## 5 Varieties of Internet Platforms and their Transformative Capacity

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### 5.1 Introduction

Internet-based digital platforms have grown rapidly in stature and size over the 2010s. Among these are the many search, networking and messaging, advertising, commercial, booking and media platforms that comprise the key socio-technical infrastructures and institutions of today's Internet. Building on the debates about a digital economy and the emergence of platform capitalism, this chapter focuses on the structures, functions, and reach of commercial platforms on the Internet as well as the interaction of concentration and competitive dynamics in platform markets. From an economic point of view, online digital platforms exert a radical restructuring pressure in particular on already existing economic sectors. However, the truly novel aspect that sets these platforms apart and distinguishes them from their predecessors is that they go well beyond the structuring of economic contexts and reach deep into society: through them, large segments of the private life and public exchange on the Internet are privately organized, curated and commodified. The thesis put forward here is that the major Internet platforms such as Facebook, Instagram and YouTube organize, observe and regulate significant parts of social exchange on the Internet today—via self-created social rules that can be read in their terms and conditions and community standards, and whose implementation is primarily algorithmic. The private-sector operators of the major platforms have thus taken over essential social structuring and regulation functions on the Internet and have created a parallel social world that has so far neither been democratically legitimized nor democratically controlled.

## 5.2 Typology and Definition

From an empirical point of view, the numerous platforms on the Internet differ significantly from one another, calling for a typifying view. The following characteristics of platforms can be distinguished from one another based on their range of services:

- › Search platforms that are provided by Google as a monopoly or that are oriented towards Google;
- › Networking and messaging platforms, such as Facebook (with WhatsApp and Instagram), Twitter, or Snapchat;
- › Media platforms, such as YouTube, Netflix, Apple, or Spotify;
- › Trading platforms, such as Amazon, Alibaba, eBay, or Zalando;
- › Booking or service platforms, for example, in the area of ride-hailing services (Uber, Lyft), travel and accommodation booking (Airbnb, Expedia, Booking.com), or dating services (Match, Parship);
- › Cloud platforms, such as Amazon Web Services, Google Cloud, or Microsoft Azure Cloud, to which individual users, business customers, as well as government institutions outsource their data and the processing thereof;
- › Crowdsourcing and crowdfunding platforms, such as Amazon Mechanical Turk, TaskRabbit (a part of the IKEA Group), Kickstarter, or Indiegogo, which serve as hubs for the competition-based awarding of work orders or in order to finance projects.

Overall, these platforms can be seen to comprise digital, data-based, and algorithmically structuring socio-technical infrastructures that facilitate the exchange of information, the configuration of communication, the organization of work and markets, the provision of a broad spectrum of services, and the distribution of digital and non-digital products (Kenney and Zysman 2016; Srnicek 2017, 43–48). As technical infrastructures, they are based on new possibilities for collecting and processing large amounts of data; the comprehensive digital networkability not only of media, information, and communication but also of material things and production structures; and the sorting and coordination of these processes through learning algorithms (Gillespie 2014; Gillespie 2016). As socio-economic units, platforms are not crowd- or sharing-based (Sundararajan 2016)—even if their success (or failure) depends heavily on the number of users and on their personal contributions, communications, ratings, and preferences—but are installed, organized, and controlled top-down by profit-oriented companies.

### 5.3 Economic Features and Reach

Beyond this lowest common denominator, the field becomes quite heterogeneous. Indeed, the various Internet platforms differ significantly from one another not only in terms of classic economic indicators, such as their turnover, profit, market capitalization, or employment, but also in terms of their economic or social reach and significance (Dolata 2018a; Dolata 2019; Van Dijck et al. 2018, 12–22).

The leading Internet groups Google, Amazon, Facebook, and Apple offer a broad spectrum of coordinated and networked services and businesses, which they have developed into extensive socio-technical ecosystems that extend far beyond their traditional field of activity. Google has long ceased to be just a search engine. It owns YouTube, by far the largest video channel on the web; Google Play, the largest app store next to Apple, offering media content of all kinds; Gmail, the leading email service; Google Maps, the most widely-used map service; and Android, the leading operating system for mobile devices. Finally, Google is one of the largest providers of cloud services next to Amazon and Microsoft. Facebook, for its part, together with its subsidiaries WhatsApp and Instagram, is the undisputed leader in social networking and messaging. Over the past decade, Apple and Amazon have also distinguished themselves as full-service providers of a broad range of services and media content, some of which they now produce themselves. The private-sector regulation of the Internet is essentially carried out via these broadly-based platforms that reach deep into the web and whose services are systematically accessed not only by individual users but also by numerous companies, media producers, government institutions, or other platform companies (Barwise and Watkins 2018).

In contrast, the countless smaller Internet companies offer more specific services on their platforms. As a rule, these are singular and specialized consumer or service offerings that are either purely consumer-oriented, such as ride-hailing services, travel bookings, room referrals, video-on-demand services, and shopping portals, or, like Twitter or Snapchat, communication-oriented. They offer a limited range of services and can generally be assigned to traditional economic sectors, some of which are radically realigned by the activities of the new players. Uber, for example, has brought new momentum to the markets for ride-hailing services, and Airbnb has brought new dynamics to the network-based brokerage of accommodations. Over the past decade, Netflix has developed from a classic video rental service to the world's leading film streaming service, with its own film productions. However, many of these platforms are dependent on the infrastructure of the big Internet companies.

For example, Netflix and Spotify run entirely on the servers of Amazon Web Services and Google Cloud, respectively; and Airbnb and many others integrate the Google Maps' geographical navigation service into their offerings.

Looking more closely at the various offerings of the platform operators and the business models behind them, a notable paradox emerges: In the 2010s, the Internet has brought forth many new commercial service offerings alongside—on the non-commercial side of the markets—very attractive search, information and user-friendly media, networking, and messaging platforms. However, this has neither led to the emergence of fundamentally new economic sectors nor to the establishment of new and previously unknown business models.

The commercial platforms on the Internet do not constitute a new demarcated economic sector—being much too heterogeneous for that—but offer services that can be economically assigned to traditional sectors and markets such as commerce, advertising, and various service sectors and are empirically difficult to grasp under the general umbrella term 'digital economy' (Barefoot et al. 2018). Amazon has revolutionized commerce, and Google and Facebook have expanded the classic advertising markets with the fast-growing segment of online advertising. Uber, applying new transportation concepts, and Airbnb brought new momentum to the markets for ride-hailing services and the web-based booking of accommodations. Netflix has evolved from a classic video rental service to the world's leading movie streaming service over the past decade. Together with newcomers such as Tesla, Google and Apple have also put manufacturers and suppliers in classic industries, such as the automotive industry, under massive pressure with their activities. All of these developments involved more or less radical readjustments in long-standing sectors and markets, which put the respective established players under massive pressure to adapt and change. However, new major industries, such as the electrical and chemical industry in the early 20<sup>th</sup> century or the computer, software and semiconductor industries in the 1980s, have not emerged as a result of the activities of these platform companies (Mowery and Nelson 1999).

It is also remarkable that the economic and employment effects which the spread of these platforms has entailed have so far remained rather modest. An empirical study by the Bureau of Economic Analysis at the US Department of Commerce estimated that the total number of people employed in the digital economy, which includes the entire information and communications technology industry, contributed only 3.9 percent to total employment in the United States in 2016. The share of commercial Internet platforms in total employment was less than 1 percent, in other words, significantly lower even (Barefoot et al. 2018). Moreover, a study by the International Monetary

Fund to measure the macroeconomic effects of the digital economy comes to the conclusion, for the United States, that online platforms and services contributed only 1.5 percent to the US gross domestic product (GDP) in 2015 (International Monetary Fund 2018). Hence, the transformation of the economy towards a platform capitalism or a digital platform economy seems to be still a long ways off.

## 5.4 Concentration, Market Power and Patterns of Competition

It is evident that by now a handful of leading companies have emerged that, with their sprawling ecosystems, dominate key cornerstones of both the social usage and the commercial business on the Internet. Search engines, networking and messaging services, app stores, media services, cloud services, Internet advertising and commerce, and operating systems for mobile Internet access—in all of these areas, the four major Internet companies Google, Facebook, Amazon and Apple are the internationally leading players, albeit each in different constellations. Unlike their potential competitors, they are all highly profitable and are among the companies with the highest research and development spending in the world.

These concentration processes can be attributed, for one, to the interaction between direct and indirect network effects, which is typical for platform markets (Rochet and Tirole 2003; Haucap and Stühmeier 2016). The prominent position of Facebook (with WhatsApp and Instagram) in the area of social networking and messaging, the dominance of Google as a search engine or of YouTube as a video channel, and the central position of Amazon as a trading platform are directly based on the high numbers of users of these platforms, which render them particularly attractive to advertisers, retailers, or product providers. This fosters concentration processes and makes it difficult for alternative offerings to participate as serious competitors.

Secondly, the leading Internet companies today have extraordinary and difference-generating financial power that enables them to invest far more than their potential competitors in expanding their own services and technical and logistical infrastructures (such as server architectures, data collection, and evaluation technologies), in the quality of their search algorithms and in the technical integration of their extensive ecosystems, or, as in the case of Amazon, in the group's own order, logistics and storage systems. That same financial power also enables them to buy interesting external know-how, to secure their domains of business, to penetrate new business areas via some-

times very costly acquisitions of other companies, or to eliminate potential competitors by buying them up early on in the game (Nadler and Cicilline 2020, 36–131, 406–450). All of this too allows the leading companies to stand out against their competitors, provided they do not make any serious strategic mistakes, and to establish high entry barriers for newcomers seeking to get a foot in the door of segments and markets already occupied by themselves.

Although network effects and classical economic concentration processes systematically favour the emergence of dominant companies, they generally do not lead to the formation of monopolies and the complete or extensive elimination of competition and competitors. Concentration tendencies on platform markets, regardless of where they occur, are accompanied by fierce competition.

This is not surprising when looking at the smaller Internet companies like Airbnb, Uber, Spotify, or Netflix. Each and every one of them has to contend with intense competition not only from their immediate competitors but also from the leading Internet companies, media companies, and companies from traditional sectors of the economy, who are challenged by them. The still unconsolidated markets that serve these companies are characterized by a competition that is fierce, complex, and highly volatile (Dolata 2018b).

It should be noted, however, that the leading Internet companies do not operate in a competition-free zone either. In their business areas, they have not secured monopolies, even if they are dominant players. The highly concentrated market for Internet advertising, where smaller companies or newcomers no longer have a reasonable chance of securing any significant revenue opportunities today, is characterized by a duopolistic competition between Google and Facebook. Internet advertising also competes with other advertising media such as TV and magazines. Online commerce is in the hands of Amazon, by far the largest retailer on the Internet. That said, online commerce still comprises only the smaller segment of the retail sector as a whole, which is dominated by large retailers such as Wal-Mart. Even Apple is not a monopolist in the market for multimedia devices, instead facing strong competitive pressure mainly from Asian suppliers such as Samsung Electronics or Huawei (Nadler and Cicilline 2020, 77–131).

In addition, the drive of Internet companies to expand beyond their traditional business fields regularly leads to new competitive dynamics both among one another and with established media, entertainment electronics, and technology groups. Google, Amazon, Apple, and Facebook have gradually developed into Internet-based media groups and have established themselves as full-line providers of a wide range of commercial services and media content. They have a broad portfolio of media offerings that allows them to

penetrate the domains of classic media groups (film, music, book publishers) and established game providers (such as Microsoft, Sony and Nintendo) as well as network-based distribution and streaming companies (such as Netflix or Spotify). Moreover, Amazon, Apple, Google, and Microsoft have since become major competitors of storage space, computer capacity, and cloud services. Finally, the Internet companies regularly compete for supremacy in new technical trends such as virtual reality, machine learning, or image and speech recognition among themselves (Dolata 2018a; Dolata 2019).

Thus, even within its top tier, the commercial Internet is characterized by strong concentration tendencies as well as by intense competition in all its essential segments, which repeatedly challenges the dominance of individual companies. The extraordinary volatility of services, markets, technologies, and users is driving these companies to permanently defend and renew their competitive and market power. The failure to properly evaluate a new trend, ignoring user preferences or a bigger-than-usual product flop can be enough to put them in a fairly difficult situation (Mellahi and Wilkinson 2004). To avoid this from happening, all platform-based companies are forced to be permanently adaptable; in other words, they must be able to anticipate, take in, and integrate, early on and continuously, new technological developments and socio-economic trends and to transform them into attractive commercial offers (Dolata 2013, 56–93).

However, the competitive pressure to which the leading companies are exposed is no longer generated primarily by commercially oriented newcomers but instead above all by their direct competitors. That pressure manifests as an oligopolistic competition between the leading companies, which is carried out mainly through aggressive innovation and expansion strategies into new areas. Under these oligopolistic conditions, the only chance smaller platform companies have of becoming significant (co-)players is to manage to occupy new, still unconsolidated commercial fields that are not yet on the radar of established companies.

## 5.5 What's New?

Much of what characterizes commercial platforms on the Internet economically seems to be not really new and disruptive. The platform companies operate with a very narrow and far from spectacular set of business models—advertising, commerce, subscriptions, or booking fees. They do not themselves constitute a new industry sector of significance, as was the case at the beginning of digitization in the 1980s with the emergence of the PC,

software, and semiconductor industries. In addition, it seems that so far this part of the (digital) economy is of extremely low macroeconomic significance. So: What's new and disruptive?

To answer this question, we have to bear in mind that the aforementioned economic features alone do not adequately reflect both the considerable influence which the leading Internet groups wield on the readjustment of economic structures and processes and the extraordinary social and socio-political clout that they have attained. The rapid spread of commercial Internet platforms over the past two decades has not only triggered massive upheavals and induced substantial restructuring processes in a number of established economic sectors (e.g. retail, advertising markets, media, various service and industry sectors) but has also allowed a number of Internet companies to establish themselves as rule-setting coordinators of corporately owned and internationally oriented markets. In addition, large parts of the social exchange on the web, from private communication and personal self-presentation to the most diverse kinds of public spheres, are now bundled, evaluated, and curated by a few commercially operated platforms.

The private platforms' roles as organizers of markets and curators of social contexts are, along with the commodification of user behaviour (Zuboff 2019), the essential characteristics that make them a disruptive force and enable them to act as central regulatory bodies in today's Internet.

## 5.6 Organization of Markets

The leading Internet companies have long since been much more than dominant economic actors who compete with other market players. In addition, they are operating, coordinating, and controlling their own markets as well. In these privately owned and online-mediated markets, the Internet companies assume the rule-setting role of market coordinators: they do not act merely as intermediaries who simply make market transactions of third parties technically possible, but rather structure, regulate, and monitor the activities of all market participants.

This affects some of the major platforms of the leading Internet groups. Indeed, Amazon maintains the largest trading platform for third-party providers on the Internet, Amazon Marketplace, which by now generates higher sales than the corporation's own online retail business (Khan 2018). Google operates YouTube, a central media platform on the web, and organizes the framework conditions and monetization opportunities for YouTuber and Influencer as well as professional media producers through its YouTube Partner



Program (Burgess and Green 2018). Apple, Google, and Amazon also have large app stores where software developers compete for commercial attention, based on guidelines and commission models set by the market coordinators (Dolata and Schrape 2014).

As a result, privately regulated and socio-technically constituted market regimes have taken shape on the Internet that clearly stand out from other markets. They are neither primarily organized, regulated, or guaranteed by the state nor do they constitute themselves through the self-organized and deliberative interaction of various non-state actors (Aspers 2011, 148–168; Ahrne et al. 2015). Instead, they are installed, operated, and controlled by individual companies. The platform operators act neither as competing market participants nor as neutral intermediaries, but rather as rule-setting and regulatory actors who endow themselves with far-reaching authority and powers of intervention and who thus assume essential functions that are prerequisites for the acceptance, functionality, and reliability of the market. Further, the technical infrastructures provided by the platform operators are not neutral architectures through which connections are merely established. Instead, through the rules inscribed in them, they form these markets' institutional foundation, the basis that guides actions and structures processes and to which providers, consumers, and users must orient themselves if they wish to play a part.

Plans to establish platform-specific private currencies go a significant step further. With this, the privatization of market regimes described above could be extended to include the much more far-reaching prospect of private-sector regulation of macroeconomic interrelationships. Eventually, sovereign tasks, previously performed primarily by democratically legitimized and politically independent institutions, could be, at least partially, delegated to private companies or consortia. This could concern, for example, the regulation of money supply, interest rate policy, and the safeguarding of price level stability or banking supervision, which have so far been the domain of central banks.

Such plans are most advanced at Facebook. In mid-2019, with the Libra project, the social media company presented not only an initial concept for a digital currency but also an appropriate regulatory and institutional framework (Schmeling 2019; Taskinsoy 2019; Mai 2019). The core organization slated to spearhead this project was the Libra Association, a consortium of Internet companies, payment providers, and other organizations, designed as a private-sector counterpart and parallel structure to the central banks. This body was intended to not only be responsible for the design and enforcement of Libra rules and the technical infrastructure of the digital currency but also for managing the Libra reserve, create Libra money and control

the money supply, monitor payment channels and admit new Libra traders (Libra Association 2019).

Although these plans have since been scaled back following massive political pressure (and the Libra Association was renamed to Diem Association), their basic direction is clearly recognizable. Their general direction of impact was the bid to relativize the importance of central banks and governments in a central area of macroeconomic management and to supplement or replace these with private-sector forms of macroeconomic regulation. In this sense, the original plan comprised the takeover of quasi-sovereign *economic* regulatory tasks by the private sector, which, as we will see below, are substantially expanded by the assumption of quasi-sovereign *social* structuring and curating tasks.

## 5.7 Curation of Sociality

In addition to organizing and regulating markets, the platforms—in particular the widely built-out and networked ecosystems of the leading companies—have taken over essential social ordering and regulatory functions on the Internet, which are summarized here as curation of social relationships and social behaviour. Through their numerous services and offerings, these platforms filter information and communication processes, shape individual behaviour and organizational action, and structure social relationships and public spheres—and do so in a far more comprehensive manner than even large media corporations have ever been able to do (Couldry and Hepp 2016, 34–56). While media corporations remain embedded in society and in its institutional structure as powerful opinion-forming actors with a limited reach, the large platforms, with their own rule-setting, structuring, selection, monitoring, and sanctioning activities, constitute no less than the institutional foundations of a private-sector sociality on the Internet, which have, over the past two decades, evolved largely decoupled from democratic institutions and state influence (Dolata 2020).

The basis of curation is formed by binding and sanctionable social rules. They are expressed in the general terms and conditions of the companies and, above all, in community standards (Facebook), guidelines and rules (YouTube; Twitter), in which the platform operators formulate in detail what they consider to be politically unacceptable, offensive, obscene, erotic or pornographic, or glorifying violence and terrorism. These guidelines that form the basis of social curation are largely translated into technical instructions, structurings, sortings, and rankings, which I refer to as technically mediated curation.

First, this manifests as a technically mediated structuring and design of social action frameworks that both enable and channel the activities of a diverse range of users. This includes the given user interfaces and default settings of the platforms, which have an action-structuring effect by enabling certain activities and excluding or impeding others. The numerous features embedded in the platforms (such as Facebook's Reactions or Twitter's Trending button) can also be summarized as action-orienting and opinion-forming structural elements inscribed in technology. In addition, Application Programming Interfaces (APIs) are used to integrate the web presences of countless third parties into the platforms' scope of action and to establish extensive links between the platforms and external websites, other platforms and apps (Van Dijck 2020; Nieborg and Helmond 2019; Helmond 2015; Gerlitz and Helmond 2013).

Secondly, these structure-building effects of technology are supplemented by approaches to a technically mediated institutionalization of social rules and regulation of social processes, which is implemented primarily through the use of algorithms. Algorithms translate the social rules and norms that are valid on the platforms into technical instructions; monitor and sanction participants' activities; decide what is important and what is not, according to social relevance criteria inscribed in them; select, aggregate, and rank information, news, videos, or photos on this basis; structure private information and communication processes as well as public discourses; and constitute public spheres and communities that would not exist without them. With all this, algorithms essentially become the nucleus of a technically mediated framing, control, and curation of social action on platforms (Gillespie 2014; Gillespie 2016; Just and Latzer 2017; Yeung 2018; Katzenbach and Ulbricht 2019).

Another major step in the curation of sociality is the establishment of a corporate-owned oversight body at Facebook, responsible for monitoring, moderating, and evaluating content on the platform. The Oversight Board, active since 2020, staffed with external experts and financed by the company, seeks not only to monitor and further develop the implementation of the social rules laid down in the Community Standards but also has the authority to judge disputed content and, if necessary, have it removed from the platform (Harris 2020). This regulatory body with a quasi-sovereign function is set up as a kind of constitutional court and supervisory committee, albeit without the democratic legitimacy of such bodies or the ability to exert influence on fundamental corporate decisions.

As a result of the combination of these factors, especially the leading Internet groups are now far more than infrastructure providers that provide connectivity; media groups that have a broad portfolio of their own media offerings; or advertising, retail, hardware, and service companies that continue

to generate the majority of their revenues and profits with their traditional businesses. The few large platforms that today both enable and shape large parts of private and public life on the Internet can be understood as differentiated societal systems with a distinct institutional foundation, which the companies as platform operators structure and control to a considerable extent and by means of their own rules, regulations, and committees—right up to the assumption of quasi-sovereign tasks by the companies that, hitherto reserved for state authorities, so far largely skirt democratic legitimation and control.

## 5.8 Conclusion and Outlook: Political Regulation of Platforms?

The economic but above all social structuring and regulatory power that the leading Internet companies have attained with their platforms is what I refer to as regulation by platforms: the intentional structuring and regulating not only of economic markets but also, and in a much more comprehensive way, of larger societal relations and processes, carried out by Internet companies as platform operators and aligned with their economic exploitation interests.

Against this background, I will conclude by briefly discussing the scope for a political regulation of platforms. In fact, the second half of the 2010s has seen an increase in government efforts to achieve political regulation and control of the major platforms. In Europe, since the mid-2010s, such activities have been concentrated in two main areas of action.

A first line of activities brought forward above all by the European Commission has attempted to limit economic market power. The Commission has pursued a series of infringements of EU antitrust law by Internet companies and has repeatedly imposed heavy fines, especially on Google and on Facebook, among others, for an abuse of their dominant position in online advertising, with search engines or through the mobile operating system Android (Viscusi et al. 2018, 404–419; Haucap and Stühmeier 2016; European Commission 2019).

A second line of activities has focused on legal and regulatory interventions in the regulatory sovereignty of platforms—for example, in the form of the European General Data Protection Regulation (GDPR); the ‘right to be forgotten’ on the Internet, introduced by the European Court of Justice, in a landmark decision; or the German Network Enforcement Act (NetzDG), which obliges the providers of leading social networks such as Facebook, YouTube, or Twitter to block illegal content in a timely manner or to remove

it from their platforms and to report on it on a regular basis (Schulz 2018; Chenou and Radu 2019).

However, the scope of these political interventions has so far remained extremely limited. Paradoxically, these attempts by the state to intervene in the social regulatory sovereignty of platform operators have tended to strengthen the regulatory power of the platforms, namely, by delegating sovereign functions of jurisdiction and enforcement to private sector actors and by providing this shift with political legitimacy. Germany's Network Enforcement Act, for example, has done little to change the fact that companies such as Facebook, Google, or Twitter largely decide for themselves which content they delete and which they do not, and has, indeed, even strengthened the companies in their role as content moderators and as decisive instances of content evaluation or selection. Further, the enforcement of the right to be forgotten has also been assigned to the platforms themselves, which have thus become more integrated into the legal system and, as private-sector organizations, have been entrusted by the government with quasi-sovereign tasks (Chenou and Radu 2019).

Overall, the political regulatory approaches, to date, are not suitable for substantially correcting or controlling the regulatory sovereignty of the platform operators. However, the presentation of a Digital Markets and Services Act by the EU Commission at the end of 2020 (European Commission 2020a; European Commission 2020b) and a lawsuit filed by the US Federal Trade Commission against Facebook, which aims for nothing less than a split-up of the group, show that the question of how the overwhelming power of Internet corporations and their platforms can be limited and more publicly controlled is no longer being considered only in Europe but now also in the United States. In this context, two more far-reaching directions in which considerations about stronger political regulation of Internet corporations should develop are becoming increasingly apparent.

These considerations include first the radical unbundling of the widely networked platforms of the Internet corporations—such as the decoupling of YouTube and other platforms from the Google corporation, or the splitting up of the ecosystem of Facebook, Instagram, and WhatsApp (Nadler and Cicilline 2020, 378–382). However, such considerations, which would, admittedly, involve a rather brutish dismantling, should be justified less by a limitation of these corporations' economic market power than by the aim of limiting their extraordinary socio-political structuring and regulatory power.

A second direction in which the discussions should go is the setting up of public supervisory and regulatory bodies, for example, at the European and US levels. Controlled by parliament and staffed with recognized and pub-

licly appointed experts, these authorities should be set up as democratically legitimate alternatives to corporate supervisory bodies (such as Facebook's Oversight Board) and be equipped with far-reaching information, control, and sanctioning powers. They could also be tasked to disclose, control, and impose conditions on algorithmic filtering functions, ranking and rating principles, as well as community standards, and the search and selection criteria based upon them (Dolata 2018c).

However, even the proposal for public supervisory and regulatory authorities would not, if implemented, lead to a private-state co-regulation of platforms on an equal footing—if only because of the extreme information and knowledge asymmetries of the parties involved. Indeed, political regulators are much less knowledgeable about the extensive socio-technical systems and systemic contexts they are supposed to regulate than those who have developed and now operate these systems. Hence, in this case, too, the responsibility for structuring and regulating economic and social processes on the Internet would remain primarily with the platform operators. But at least then their activities could be regularly evaluated, controlled, and sanctioned by a democratically legitimized body.

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# **The Future of Work**

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