# THE PLATFORMIZED INTERNET: ISSUES FOR INTERNET IAW AND POLICY

# **Terry Flew**

# INTRODUCTION: THE PLATFORMIZED INTERNET

Conversations about the Internet in the 2010s tended to go along two distinct tracks. One track pointed to the new affordances of digital and social media. The other focused upon the growing concentration of ownership and control over the Internet by a small number of giant digital corporations. In the first approach, the distinctive features of a digital, globally networked, and functionally integrated communication system were seen to have:

- reduced barriers to participation in the production and distribution of media content;
- blurred distinctions between media producers and consumers;
- enabled greater openness, sharing, and interactivity for media users;
- weakened the 'gatekeeper' functions and market power of traditional mass media outlets; and
- allowed for far more diversified and personalized interactions with media content across an everwidening array of digital devices and platforms.

The media economist Eli Noam has summarized this vision of what he terms the 'past Internet' in these terms:

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The past internet was a system of interconnection and interoperability arrangements created to a large extent by computer scientists, most of them in US universities and affiliated research labs. It enabled the linkage of individual networks and thereby the easy flow of information across such networks. It was based on a common set of values, a non-profit sharing ideology, and a libertarian philosophy of minimal government. The decision process was one of rough consensus. This mechanism was so successful that it enabled the emergence of the key communications system around the world.<sup>1</sup>

At the same time, there was a growing concern over the course of the 2010s about the concentration of control over key digital markets. Tim Wu identified the possibility that, as with earlier communications systems such as broadcasting and telephony, digital communications markets could come to be dominated by a small number of highly diversified 'information empires'.<sup>2</sup> The growing market power of the so-called FAMGA (Facebook, Apple, Microsoft, Amazon and Google) saw Google now accounting for 90 per cent of the global search market in 2019, and Google and Facebook accounting for 60 per cent of digital advertising worldwide, and estimated to be the 'virtual gatekeepers' of over 70 per cent of all global Internet traffic.<sup>3</sup> It has now become apparent that we no longer lived in a world of the open Web, and that the political economy of the largest global digital corporations and their dominance of digital markets needed to be factored in to any discussion about Internet law and policy. Discussions of the Internet, once dominated by speech considerations, identification of opportunities for participation, the empowerment of marginalized groups and innovation agendas, were now increasingly dominated by questions of economic, political, and cultural power and how best to regulate it. Terms used to describe this age have included the 'platform society',<sup>4</sup> 'platform capitalism',<sup>5</sup> and 'digital capitalism'6.

The shift partly captures a changing tenor of the times. The sunny optimism of earlier times now seems inappropriate in considering the digital world, with the rise of white nationalist movements and authoritarian populist political leadership around the world, and the extent to which both of which have clearly

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been fuelled through the Internet and social media. There is also a more critical perspective toward capitalist businesses more generally, particularly among the young: a 2018 Gallup survey, for instance, found that more Americans aged 18-29 had a more positive view toward socialism (51 per cent) than capitalism (45 per cent).7 The global 'techlash' has been brewing for some time, with even publications such as The Economist calling for a reining in of the power of global tech giants.<sup>8</sup> Periodic public shocks, such as the murder of 50 people in two mosques in Christchurch, New Zealand on 15 March, 2019 by a self-described 'ecofascist' and 'ethnonationalist', who livestreamed the atrocity on Facebook Live for 17 minutes before the footage could be blocked, draw attention yet again to the social responsibilities of digital platforms, and questions of their accountability for content distributed through their sites.

I would suggest that we can best understand these dual trends in terms of a *platformization* of the internet. We can see the critical role played by successful digital platforms in curating the open web, and enabling participation and engagement at scale among evergrowing sections of the global population. Theorists of digital culture were right to identify this as a major transformation of communication, whose implications are deep and pervasive, not least in terms of the ongoing relationship between the digital platforms and the traditional gatekeepers of mass communications media, whose business models and media practices have been radically transformed through such engagements.<sup>9</sup> At the same time, these participatory practices are mediated through a political economy centred around the capturing and circulating of data, and the resultant commodification of interactions as raw materials for global advertising and information markets. The network effects of 'winner-takermost' digital markets have generated concentrations of ownership and control, and consequences flowing from this, which are recognisable in terms of the evolution of publishing and broadcast media industries, and indeed in earlier phases of capitalism, such as the 'trust busting' era of the 1910s and the 'New Deal' of the 1930s.<sup>10</sup> One interesting consequence, which has paradoxical implications, is that the platformized Internet is more able to be regulated by governments than the open Web, as internal governance is a core defining feature of digital platforms.<sup>11</sup> As a result, the push for renewed forms of external regulation comes

at a time when it is no longer possible to say that regulation is inherently doomed to fail. At the same time, there is a challenge in developing a common framework for understanding digital platforms, which are diverse not only in terms of the industries with which they are engaged, but the business models and forms of network effects upon which they accumulate capital and generate revenues and profits.

# WHAT IS A PLATFORM?

The term 'platform' has several meanings. It has architectural meaning as a raized site upon which people and things can be placed for a specific purpose (a railway platform, a diving platform, an offshore drilling platform, etc.), a geological meaning as a base layer on top of which other things can emerge or be created (*e.g.*, the continental shelf as a platform), a figurative meaning as the foundation for advancement (*e.g.*, a strong defence as a platform for attack in football), and a political meaning (*e.g.*, the statement of principles, or policy platform, of a political party or movement).

In computer science, a platform is understood to be a distinct computing system that provides the combination of hardware and software that leads to the development of software and applications which are unique to it. From the 1990s onward, computing software was designed for operation on one of two platforms: the Microsoft Windows operating system and Mac OS. Computer games were designed for use on one of the competing console platforms such as Sony PlayStation, Nintendo, and Microsoft Xbox. The digital and mobile app environment is dominated by the platforms of Apple and Google. Third-party developers work with large platform providers such as Apple, Google, Microsoft, and Facebook to make their software and apps available from their platforms.

From a computer science perspective, digital platforms have been defined as 'a set of digital resources including services and content—that enable value-creating interactions between external producers and consumers.'<sup>12</sup> The platform both enables and regulates 'core interactions between platform participants, including consumers, producers, and thirdparty actors', through a combination of 'architectural and governance rules that seek to balance platform control with the necessary incentives for platform

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participants to engage with the platform and generate value for one another'.<sup>13</sup> In this definition, a digital platform differs from digital infrastructure, as the latter constitute the computing and network resources that allow multiple stakeholders to coordinate their service and content needs. In this definition, the Internet is digital infrastructure, while companies such as Apple, Google, Microsoft, and Facebook are digital platform providers, upon whose platforms sit a layer of services that provide digital content (games, news, entertainment, etc.) to consumers.

In this definition, platforms thus sit within a series of layers of the Internet environment, built upon foundational infrastructure such as broadband or 5G networks, and are the sites from which applications, services, and content can be accessed.

# Figure 1 Computer science view of platforms

CONTENT
APPLICATIONS & SERVICES
PLATFORMS
INFRASTRUCTURE

The contemporary picture with platforms is, however, more complex than this, for three reasons. First, there are now a plethora of companies that refer to themselves as 'platforms', which have no connection to computing other than the nature of their services being accessed by digital means. AirBnB, Uber, Grindr, Tinder, TripAdvisor, Yelp, Craigslist, Spotify, Esty, LinkedIn, WordPress, Netflix, Patreon, Kickstarter, and many more are all understood to be platforms, along with the more obvious platforms such as Google, Microsoft, Amazon, Apple, and Facebook, but not only do their relevant industries and business models differ from one another, but the issues that they present from a policy point of view also differ profoundly.

Second, the line between platform and service is now blurred. Although many of the companies listed above are essentially service providers rather than platforms in the technical sense—third-party developers do not develop applications for the TripAdvisor platform, for instance—all can be said to be providing services within their own platform. The case of Amazon is interesting in this regard. It is not, strictly speaking, a platform provider, but it acts as a platform for the delivery of its own services, be they books,

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shopping products, streamed media content (Amazon Prime Video) and, since the acquisition of Whole Foods in 2018, food and groceries.

This bring us to the third issue, which is the blurring of the lines between platforms and infrastructure. At a time when most online content was accessed through the World Wide Web, as a nonproprietorial system that all content providers could access based on shared protocols, it made sense to see the infrastructure as existing independently of the platforms and services sitting on top of it: the networks of 'fat pipes' through which digital content navigates the globe. But as content increasingly migrated to mobile media, and was accessed through platforms such as Apple iOS and Google Android, or from apps acquired through the App Store or Google Play, the latter increasingly constituted the infrastructure of digital media itself, and not just the platforms. In particular, Google and Facebook have engaged in processes whereby 'platforms become infrastructures ... as ... infrastructures are being platformized.'14

The result is that what we refer to as platforms can operate across the whole of the computer science value chain. The most significant digital platforms, such as Apple, Google, Facebook, Microsoft, and Amazon, are providers of infrastructure, content and services as well as platforms, and are thus closer to fully fledged *ecosystems* than narrowly defined platforms. In this respect, the policy distinctions between infrastructure as shared public resources, platforms as intermediaries, and applications, services, and content that sit atop these platforms but are independent of them have become fundamentally blurred.

# Figure 2 How digital platforms move across all layers of the digital ecosystem



We can identify three influential definitions of platforms that seek to capture the complex and multilayered nature of their operations. In *The Platform Society*, van Dijck, Poell, and de Waal define a platform as being 'fueled by data, automated and organized through algorithms and interfaces, formalized

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through ownership relations driven by business models, and governed through user agreements'. <sup>15</sup> They argue that the collection of data is at the core of the platform business model, as use of the platform vields detailed information about the user, in terms of their interests, preferences, tastes, and behaviors. These data can then be made available to third parties through application programming interfaces (APIs), giving detailed information on user behaviors and metrics, enabling the further development of applications and services on the platform. The algorithmic processes through which automated instructions transform user inputs into desired outputs, and connect users to content, products, and advertizements, is also a core element of platforms. The ownership structures and business models of platform companies vary, but the 'free' model, where users trade convenient access to content and services for personal information is a very common one. Finally, platforms engage in various governance arrangements with their users and other stakeholders, as seen with the often highly complex Terms of Service that a user is required to accept in order to make effective use of the platform in question.

A second definition of platforms, which focuses upon their political economy, is that of Nick Srnicek in *Platform Capitalism*. Srnicek defines platforms as 'a new type of firm; they are characterized by providing the infrastructure to intermediate between different user groups, by displaying monopoly tendencies driven by network effects, by employing cross-subsidisation to draw in different user groups, and by having a designed core architecture that governs the interaction possibilities.'<sup>16</sup> Srnicek identifies four core features of platforms as being:

- a) They are digital intermediaries that bring together customers, advertizers, service providers, producers, suppliers, and even physical objects themselves, providing tools that enable not only interaction on the platform, but the capacity to build products, services, and marketplaces on the platform;
- b) They benefit from positive network effects, whereby the more users are on the platform the more important it is to be on the platform, and the more scope there is to improve its performance, which in turn generates 'lock-in' effects and tendencies toward monopoly, while requiring

relatively low investment in infrastructure which enables rapid growth;

- c) They frequently engage in cross-subsidisation, so that provision of free services (*e.g.*, Google Gmail accounts) can be funded through other activities (*e.g.*, Google advertising). This gives these companies a structure that appears more sprawling than is characteristic for traditional corporations, who more commonly pursue vertical integration across the value chain;
- d) They have a core architecture that both sets the conditions of use of the platform, and incorporates design elements that aim to keep users engaged with the platform, so as to generate further data through behavioural interactions (*e.g.*, the Facebook 'Like' buttons).

A third definition is that of Tarleton Gillespie in *Custodians of the Internet*, who places practices of *moderation* to be at the core of platform businesses. Gillespie observes that platforms emerged in the period after the growth of the open Web, with moderation providing 'the commodity that platforms offer ... by offering a better experience of all this information and sociality: curated, organized, archived and moderated'.<sup>17</sup> For Gillespie, platforms are online sites and services that:

- a) host, organize, and circulate users' shared content or social interactions for them;
- b) without having produced or commissioned (the bulk of) that content;
- c) are built on an infrastructure, beneath that circulation of information, for processing data for customer service, advertising, and profit; and
- d) platforms do, and must, moderate the content and activity of users, using some logistics of detection, review, and enforcement.

As a result, platforms cannot survive without practices of moderation, and hence require forms of external as well as internal governance. At the same time, they are deeply ambivalent about such practices 'in part to maintain the illusion of an open platform and in part to avoid legal and cultural responsibility. Platforms face what may be an irreconcilable contradiction: they are represented as mere conduits and they are premized on making choices for what users see and say'. <sup>18</sup>

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# THE EVOLUTION OF DIGITAL PLATFORMS

The rise of digital platforms has been associated with a shift in the nature of Internet intermediaries. As the Internet became globally popular in the 1990s, an intermediary was considered to be the conduit providing the Internet service to the user. In a manner similar to cable services and telecommunications companies, Internet service providers were understood to be the connectors of those producing and accessing content, understood here as akin in a legal sense to 'speech' rather than to 'media'. As intermediaries, they were not liable for what was communicated, any more than the phone company could be held accountable for what people said to one another across their telephone networks, or the post office for the content of letters sent by mail. Such a definition of intermediaries, enshrined in legislation such as Section 230 of the US Communications Decency Act 1996 and the European Union's 2000 Electronic Commerce Directive, has been described as 'legally elegant',<sup>19</sup> as it absolved platforms of legal liability for content, while also allowing them to curate, modify, and delete content without thus becoming publishers. It was also consistent with the general thrust of communications policy in the 1990s and early 2000s, which promoted the deregulation of telecommunications on the grounds of a binary distinction between carriage and content, or between the delivery of communication services, which were essentially economic transactions that the state had only a limited role in governing, and the services themselves. The latter were deemed to possess a cultural and citizenship dimension as media content, and hence warranted regulation in the public interest.

The use of the term 'platforms' accelerated in the late 2000s and early 2010s, with the rise of social media. Although they largely retained a computingbased definition as a technical base upon which other programs will run, the term was starting to be used far more broadly. Of particular importance in this regard was the rise of Web 2.0. The term Web 2.0 began to circulate after the 'dot.com' stock market crash of 2001, and Tim O'Reilly referred to Web 2.0 as including software and applications that could 'harness network effects to get better the more people use them'.<sup>20</sup> For O'Reilly, Web 2.0 involved 'the network as platform, spanning all the connected devices;

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Web 2.0 applications are those that make the most of the intrinsic advantages of that platform'.<sup>21</sup> The business analysts Don Tapscott and Anthony Williams referred to these platforms as 'low cost collaborative infrastructures', that harnessed collective intelligence to promote multilayered participation and sharing among the creators, distributors, and users of digital content.<sup>22</sup> The platform providers in turn benefitted from positive network effects, occurring when the benefits of using a product or technology become greater as that platform, and its network of users and participants, grows in size.

By the late 2000s, the Internet was increasingly being understood in terms of its platforms. The hardware and software giants such as Apple and Microsoft were now joined by fast-growing companies such as the search engine giant Google and social media platforms Facebook and Twitter. The Internet was being understood less as a large-scale system for the distribution of information across a networked digital infrastructure-what former U.S. Vice-President Al Gore termed in 1994 the 'information superhighway'-and more as an enabling framework for mass collaboration, social sharing, and 'pro-am' media content production. This was the golden age of social media, and what Yochai Benkler termed social production, in the networked knowledge economy.<sup>23</sup> Axel Bruns identified the rise of the 'produser', who was both producer and consumer/user of digital media content.<sup>24</sup> The archetypal form of collaborative digital platform was Wikipedia, which had grown rapidly through the 2000s. Bruns identified the core elements of 'produsage' on Wikipedia as being: (1) open participation in content creation; (2) ad hoc governance based around shared community norms; (3) Wikipedia entries as a perpetual work-in-progress; and (4) Wikipedia content as nonproprietary content and common property.

The flip side of the creation of these vast networks of collaborative infrastructure was the accumulation of enormous amounts of data on the platforms upon which such activities took place. The key point, as noted by Google chief economist Hal Varian, was that in a world where 'most economic transactions involve a computer ... the computer creates a record of the transaction'. <sup>25</sup> From this seemingly obvious proposition, a number of possibilities follow. Computerenabled transactions allow for more efficient forms of contracting as more information can be available to the contracting parties: it was on this basis that

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Google would revolutionize advertising, as it enabled more precise data to be generated on the relationship between exposure and search and purchasing decisions than was ever available from conventional advertising channels. It enables vast amounts of data extraction and real-time analysis of data and the modification of variables as required. It allows for real-time experiments with how modifications made to online tools and products affect user behavior, at a far lower cost than other means of constructing a simulation. Finally, computer-mediated transactions allow for 'customization and personalization of the interactions by basing current transactions on earlier transactions or other relevant information. Instead of a "one size fits all" model, the Web offers a "market of one."<sup>26</sup>

From a far more critical perspective, Shoshana Zuboff identifies such mechanics of data extraction and analysis as the extraction of what she terms behavioral surplus from the users of digital platforms by the leading digital platform companies.<sup>27</sup> Google revolutionized online advertising by enabling microtargeting at scale that could match search to advertising, and could use accumulated data to continuously improve services or create new products. Beyond this transformation of a single industry, Zuboff argues that a new model of surveillance capitalism came into play, whereby human experience as rendered through digital platforms becomes raw material processed through automated machine processes that can 'not only know our behavior but also shape our behavior at scale' (author's emphasis).<sup>28</sup> From this perspective, the rise of social media platforms such as Facebook and Twitter not only generates new sources of personal information, and hence data that can be used to predict behavior, but also generates 'behavioural types', or forms of personality evaluation that can be further refined not simply in terms of predictive analytics. Types of behavior can be aligned to predictions about the susceptibility to advertising messages and the marketing of commercial services, e.g., the propensity to 'Like' contents of a News Feed may be more revealing of personality type than the content that is actually liked.

The result has been that the rise of social media pulled in two quite different directions simultaneously. On the one hand, it substantially enhanced a core attribute of the Internet, which is 'the flourishing of many different ways for humans to innovate and interact'.<sup>29</sup> There was new scope for peer production and crowdsourced innovation, taking advantage of the capacity of digital networks to decentralize the conception and execution of problems and solutions, harnessing diverse and often intrinsic motivations for individual contributions toward collective action, and enabling innovative forms of governance and sharing of returns unencumbered by the rigidities of contract and intellectual property law. At the same time, critics have been identifying the political economy of large-scale data mining through social media sites. The point was that social media was not simply generating what had generically come to be known as 'big data' but that its attachment to human emotions opened up new techniques for analysing, managing, and directing online activity on digital platforms to commercial goals. Zuboff defines surveillance capitalism as 'a new economic order that claims human experience as free raw material for hidden commercial practices of extraction, prediction, and sales', and as 'a new global architecture of behavioral modification'.<sup>30</sup>

# TYPES OF DIGITAL PLATFORMS AND DIGITAL PLATFORM COMPANIES

What is apparent from the evolution of digital platforms, from relatively simple enabling intermediaries such as search engines to perhaps the dominant form of socioeconomic organization today, is the extent to which they are becoming increasingly difficult to generalize about. Some form of taxonomy of the diverse array of types of digital platforms is important not simply to make sense of this fast-changing environment, but because the legal, policy, and regulatory implications of classification by type, and the social, economic, cultural, and other issues that they raise, differ significantly. As noted above, locking in too early on a particular concept, as happened with the idea of Internet intermediaries in the 1990s, can present problems from a policy and regulatory standpoint.

One form of taxonomy is presented by Nick Srnicek in his book *Platform Capitalism*, where he proposes a fivefold classification of digital platforms:

1. Advertising platforms, where services are provided to users for free, in exchange for access to usage data, that then provides the basis for selling access to sites to advertisers. This was the

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business model pioneered by Google as a search engine, and Facebook as a social networking site.

- Cloud platforms, where management of continuous access to IT-based resources is 'rented out' as a service to other companies. Amazon Web Services (AWS) pioneered this model of provision of digital infrastructure, and other companies such as Google, Microsoft and IBM have developed such cloud platforms.
- Industrial platforms, where manufacturing increasingly takes place on and through proprietary corporate platforms: this is the 'Industry 4.0' model pioneered in Germany, and adopted by companies such as General Electric.
- Product platforms, where products and services are leased out such as cars (Zipcar), or made available on an unlimited subscription basis, such as music streaming services (Spotify, Pandora);
- Lean platforms, which hold no physical assets, but broker relations between buyers and sellers of services. Uber, AirBnb, Deliveroo, TaskRabbit, Airtasker and others have been pioneers in this model, otherwize known as the 'gig economy'.

Although it is a useful taxonomy at some levels—particularly in emphasizing that traditional companies (GE) and businesses (car manufacturing) can adopt platform models—this model is limited by its inattention to the diversity of platform-based activities taking place within single companies. Apple, Google, Microsoft, and Amazon, for example, are all engaged in adverting-funded activities, cloud-based services, and the provision of product platforms. It is also limited in understanding the significance of these platforms from a user or consumer standpoint.

A second approach, undertaken by economic geographers Paul Langley and Andrew Leyshon, understands digital platforms as a combination of practices of intermediation and processes of capitalization.<sup>31</sup> They argue that the underlying intermediary logic of platforms is that they 'solve coordination problems in market exchange by extending the distance-shrinking networking capacities of the Internet first identified during the 1990s'.<sup>32</sup> In particular, they address the coordination challenges associated with multisided markets, but in doing so 'go beyond the making of multi-sided markets through software code to also include the creation and coordination of network effects'.<sup>33</sup> The challenge of multisided markets is

not unique to platform-based companies: it has been a feature of the media industries for over a century, as advertising displaced sales as the primary source of commercial revenue. What is distinctive, and has proven to be very economically successful, is the combination of software, code, algorithms, and design through which this challenge is addressed, leading to the rise of platfrom capitalism. They focus upon five types of platform based on their business models:

- Online markets, involving the direct sale of products and services, both physical and digital, where the platform takes the role of a broker or intermediary and receives a percentage of revenues (Amazon, eBay, Craigslist, Alibaba, etc.);
- 2. Social media and user-created content, where the platform acts as host and content distributor (Facebook, Flickr, YouTube, Twitter, Medium, etc.);
- 3. Sharing economy platforms, that enable the hire of assets and services that would otherwize not be available (Uber, Lyft, AirBnB, JustPark, etc.);
- Crowdsourcing platforms, that enable contractual work, freelance and informal labour, and access to know-how (Amazon Mechanical Turk, TaskRabbit, Upwork, etc.);
- 5. Crowdfunding/P2P lending platforms (Kickstarter, Indiegogo, Patreon, etc.).

As with Srnicek, we can see that Langley and Leyshon's taxonomy is highly illustrative, yet at the same time inconclusive. The categories can blur into one another, *e.g.*, Patreon and Medium differ in terms of business models, but have similarities in terms of content accessed. They also again raise different legal, regulatory, and policy questions, as issues that arize in the sharing economy context may differ from those facing workers in the gig economy, which are different again to content questions surrounding social media platforms.

A third approach is that of Nooren *et. al.*, who observe that there is no shared definition of digital platforms, and that we need to analyse the specifics of each platform, not least because platforms compete by means of the characteristics of the platform itself.<sup>34</sup> They differentiate platforms in the first instance by the business models with which they are associated. One element of this is the revenue model, which may involve: (1) direct payment, whether through

a subscription model (*e.g.*, Netflix) or a 'freemium' model, where a basic service is available but more advanced features have to be paid for; (2) an advertising model, whether linked to search (*e.g.*, Google) or display (*e.g.*, Facebook); (3) an access model, where the platform provider charges third parties for the right to sell on their platform (*e.g.*, Apple's App Store); and (4) an acquisition or growth model, where the platform is developed without a revenue model, with the idea being that it will be acquired at a later date by a larger platform company.

The second way in which Nooren et. al. differentiate platform models by the extent to which they derive direct and/or indirect network effects. Observing that a common feature of digital platforms is that they 'internalize demand externalities within or between different user groups' (p. 270), they distinguish between direct network effects, where 'a platform becomes more attractive for users as the total number of users on the same side of that platform grows' (e.g., Facebook, LinkedIn, Skype, WhatsApp), and indirect network effects, where 'a platform becomes more attractive for one group of users (e.g. advertizers) as another group of platform users (e.g. consumers) grows'.<sup>35</sup> Platforms such as Facebook and Google, as well as Apple through its App Store, have benefitted from both forms of network effects.

The result is the existence of four types of platforms, based upon whether they are primarily digital resellers of content to consumers (*e.g.*, Netflix), whether they are primarily based around direct network effects (*e.g.*, WhatsApp, Skype), whether they are primarily based around indirect network effects (*e.g.*, YouTube), and whether they achieve both direct and indirect network effects (*e.g.*, Facebook, Google, Apple App Store).

# PLATFORM ECONOMICS AND MULTISIDED MARKETS

One way in which to understand platforms is in terms of their business models. Van Dijck *et. al* identify platforms as working through the interplay between: datafication, or the capturing and circulation of data; commodification, or the conversion of data into tradeable digital products and services; and selection, or the engagement of users and participants into ranking, selection, and curation processes.<sup>36</sup> McAfee and

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Brynjolfsson identified platforms as taking advantage of the economics of free, perfectly reproducible and instantly accessible information, and as digital environments 'characterized by near-zero marginal cost of access, reproduction, and distribution'.<sup>37</sup> Evans and Schmalensee (2016) identify platforms as multisided businesses that 'need to attract two or more types of customers by enabling them to interact with each other on attractive terms. Their most important inputs are generally their customers'38. In Platform Revolution,39 Parker, van Alstyne, and Choudary differentiate platform businesses from what they term 'pipeline businesses' by the manner in which the former produce and distribute products and services through a linear value chain, whereas platform structures operate around a complex value matrix in which:

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Different types of users – some of them producers, some of them consumers, and some of the people who may play both roles at various times – connect and conduct interactions with one another using the resources provided by the platform. In the process, they exchange, consume, and sometimes co-create something of value. Rather than flowing in a straight line from producers to consumers, value may be created, changed, exchanged, and consumed in a variety of ways and places, all made possible by the connections that the platform provides. <sup>40</sup>

Central to the platform business model is participation in multisided markets. The most successful digital platforms have been engaged in 'combinatorial innovation', where it is the capacity of the platform for 'putting together in new ways things that were already there'41 that is the basis of commercial success and added value for market participants. They respond both to the demand for reintermediation, or the desire for digital market participants to have shared spaces for interaction that operate at scale and benefit from network effects, and the capacity of digital platforms to bring together buyers and sellers of underutilized assets (cars/drivers and passengers with Uber, property owners and tourists with AirBnB, etc.). Although it is obviously advantageous to be the first successful multiplatform business in a field—as with Amazon with online book sales-users are not necessarily tied to a single platform, and engage in what is known as

'multihoming', or using multiple platforms and holding multiple apps that do similar things.

The key to positive network effects is to grow the various elements of the platform together, so that sellers are aware that there are multiple potential buyers on the platform, and consumers adopt the platform because of the range of available products and services on it. A successful platform is one that recognizes the *complementary* products and services that coexist on the site: the successful of Apple iPhones, for instance, derives in part from the availability of a very wide range of digital apps developed for the Apple App Store, and easily usable with Apple hardware and software.

Media industries have often taken the form of *dual markets*, where commercial media firms typically compete in two markets: the market for consumer attention with their media content, and the market for advertizer revenues, where other businesses pay for access to those consumers through their engagement with that content. Digital platforms disrupt this business model by their engagement with at least three market participants: consumers, other businesses as advertizers, and media content creators and publishers. The Australian Competition and Consumer Commission (ACCC), in its *Digital Platforms Inquiry*<sup>42</sup> captured these relationships in the following manner.

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# Figure 3 Relationship between digital platforms, consumers, advertisers, and media content creators



Source: ACCC, 2018, p. 37.

For media content providers, digital platforms offer the attractions of reach to a much wider range of potential consumers, new types of relationships to advertizers, and potential access to richer sources of user data than that generated from their own sites. Notably, they have been seen as the means of reaching younger online users, who have been turning away from traditional newspapers and broadcasters. They also offer reintermediation: as the number of potential media content sources proliferates online, digital platforms offer some form of curation of access, whether by the platforms themselves (as with Apple + News and Google News), or on the basis of the recommendations of one's network of friends (as with Facebook NewsFeed). The range of interactions of digital platforms with their users are shown below:

# Figure 4 Interactions of digital platforms with their users



Source: ACCC, 2018, p. 22.

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At the same time, the risks are considerable. Content becomes freely available on digital platforms untethered from its traditional mastheads, advertizers can work with the much more targeted strategies offers by companies such as Google and Facebook, rather than traditional media companies. Consumers become more reluctant to pay for media content, as there are freely available substitutes online for that

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content which requires either direct payment or the viewing of advertising as the condition for access. Other issues, ranging from possible breaches of copyright to the rize of 'fake news' sources will be considered in alter chapters. The key issue, however, is that, having been at the centre of interactions between media content creators, consumers and advertisers for much of the 20<sup>th</sup> century, traditional media businesses increasingly find themselves the providers of content for digital platforms, against whom they are competitors-and ones with some considerable disadvantages given the centrality of data to targeting and personalisation-for advertising revenues. The question of how to secure the future generation of news in such an environment has become a concern of policymakers in several countries.43

All digital platforms face distinctive governance challenges, by virtue of their sheer size and scale, the distinctive stakeholders that they engage, and their need to maintain a digital environment where all participants feel that it is safe to engage and interact with others. Internal governance, or corporate self-regulation, has frequently proven inadequate to the task. The development of external rules and regulations for digital platforms, however, faces some distinct challenges. One is that all businesses can potentially become platform businesses. The Australian-based pizza delivery company Dominos has built a global brand on the basis of a platform business model. Noting that its major competitors, such as Pizza Hut, had invested heavily in stores, it instead chose to focus on driving orders through its app, noting that most pizzas are ordered to be eaten at home, and that what consumers most often want is a pizza that is delivered quickly, is hot on arrival, and has the toppings they prefer. It is certainly conceivable that the future of takeaway food is as much a platform business as a bricks-and-mortar one, but the policy and regulatory issues this presents are generic ones rather than sector-specific ones (e.g., wages and working conditions for those who deliver the food). This points to the more general point that, if platforms are understood in terms of a business model, as Parker et. al. propose, and this is inherently superior to the 'pipeline' business model, then the question arizes as to whether platforms as best regulated through generic business law principles, such as competition and consumer protection laws.

A second and related point concerns the diversity and porosity of platforms. One example is the notion

that platforms are primarily the distributors of media content created by others. This is the case with digital platforms and news distribution: Google, Facebook, Apple, and Twitter rely upon making content available that they have no direct role in producing. But in entertainment media, the picture is more complex. Netflix, Amazon Prime, and-since 2019-Apple are very much in the business of commissioning and licencing content, and the success of digital media platforms has been very much around their capacity to make available high-end media content as they rely upon subscriptions rather than advertising for revenue. Even YouTube has been evolving from being primarily an outlet for user-generated content to one where the company maintains ongoing relationships with a range of content creators.<sup>44</sup> Digital platforms have long benefited from laws which classify them as digital intermediaries, and hence having immunity from provisions associated with being a publisher or media company, but in many instances have found that the basis from building an ongoing digital brand has increasingly involved them in the content creation business as well as that of content distribution.

# ADDRESSING THE PLATFORMIZED INTERNET: ECONOMIC POLICY OR COMMUNICATIONS POLICY?

There is currently a 'policy turn' or a 'regulatory turn' in the field of Internet governance. After two decades where the broad priority was to maximize the potential for speech, commerce, and participation and engagement, there are renewed demands throughout the world for governments to address the perceived power of digital tech giants.<sup>45</sup> The platformisation of the Internet, whereby particular companies increasingly dominate aspects of online activity, either as near-monopolies (e.g., Google in search, Facebook/ Instagram in social) or as oligopolies (e.g., Google, Apple, and Microsoft in the apps market) is a part of this, as there is a history of the concentration of ownership and control in particular industries leading to 'trust busting' and/or demands for regulation in the public interest.

The 'populist turn' in politics is also relevant, as various mantras associated with neoliberal globalization, such as the sanctity of global commerce and the

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need to facilitate the growth of markets rather than try and control corporate actors, are being challenged from a variety of angles.<sup>46</sup> In the United States, this is very apparent among the contingent of candidates for the 2020 Democratic Party Presidential nomination, who are generally more interventionist toward large technology companies than was the case with the Clinton or Obama administrations. Sen. Elizabeth Warren (D-MA) has announced a detailed platform to address the power of Google, Facebook, and Amazon, through a combination of anti-trust and structural separation measures, and a reclassification of 'core' operations as having a public utility dimension for technology companies over a certain size.<sup>47</sup>

The biggest factor, however, is arguably the realisation that Internet communication is increasingly dependent upon private communications platforms, so that laissez-faire approaches toward speech in the part of governments has produced a public sphere that is increasingly governed by a small number of private corporations. What Langvardt has referred to as 'a new layer in the governance structure' of the Internet has meant that the largest digital communication platforms now have a variety of powers over speech, including the power of content moderation, the power to regulate the structure of media markets through control over the terms of content distribution, the power to manage cultural flows by promotion or suppressing particular forms of expression.<sup>48</sup> In Langvardt's view, the latter management of digital content through algorithmic filtering represents a capacity to 'manipulate the underlying physics of popular opinion by constantly reinventing technologies of communication at the software level'.49

What is apparent in the discussions internationally is that the primary concerns about the power of big tech direct the conversation toward either economic policy or communication policy solutions. Where the discussion revolves primarily around competition, market access, innovation, privacy, and the uses of consumer data, the measures proposed tend to come from economic policy agencies, and the resolutions are primarily shaped around economic policy instruments. In the United States, the Federal Trade Commission' Bureau of Competition is monitoring proposed and recent merger and takeover activity in technology markets to see whether they are in breach of existing antitrust laws.<sup>50</sup> The FTC may also issue a large fine against Facebook for privacy breaches that

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may have put the persona information of the site's users at risk.

In Australia, the ACCC has clear powers with regards to mergers and takeovers, and could rule that mergers such as that of Facebook with WhatsApp are in breach of Australian competition law, although it is not clear whether an Australian agency has any kind of jurisdictional authority over companies not domiciled in Australia. It has made recommendations in other areas in its Preliminary Report, but such measures, that range from revisions to communications law to an 'algorithmic regulator' monitoring changes to the classification and ranking of news content, clearly need to be adopted by communications regulators.<sup>51</sup>

In other instances, the focus is on the implications of digital platform companies as large-scale content distributors for media and communications policy. In the United Kingdom, the House of Commons Disinformation and 'Fake News' Final Report is clear in recommending a revision to UK communications law that would create a new category, between platform and publisher, that would see technology companies assume legal liability for content identified as harmful after it has been posted by users.<sup>52</sup>

The online hate speech laws pass in Germany that placed strict requirements upon social media platforms such as Facebook and Twitter around the rapid removal of content liable to be deemed as hate speech were a strong move in this direction, leading to massive investments in content moderators based in Germany.<sup>53</sup> In Australia, the question of whether media and communications laws need to be revized to incorporate media convergence and substantive shifts in how media content is distributed and consumed have been on the policy agenda for some time as they have in the United Kingdom and in the European Union.<sup>54</sup> In contrast to the FCC in the United States, whose remit is currently circumscribed around broadcasting and telecommunications, both the Australian Communication and Media Authority (ACMA) and Ofcom in the United Kingdom have long had a remit to act as convergent media regulators, and to monitor, classify, and restrict content hosted on the Internet.

Periodic public shocks, such as the Christchurch mass shooter Brenton Tarrant using Facebook Live to livestream his atrocities against worshippers in a New Zealand mosque, draw attention to the complex boundaries of public and private that surround digital communications platforms. They constitute

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'public moments that interrupt the functioning and governance of these ostensibly private platforms, by suddenly highlighting a platform's infrastructural qualities and call it to account for its public implications'.<sup>55</sup> The issues that they raise are characteristically communications policy issues, as they are threshold cases in the boundaries of acceptable and unacceptable speech and content hosted in the public sphere, and they point to the degree that the digital platform companies are becoming *de facto* media companies, insofar as they are critical gatekeepers around the circulation of digital media content in all of its forms.

It is possible that the digital platform companies will ride out the current wave of concerns about their conduct, and calls for new forms of public interest regulation. The Trump administration in the United States is unequivocally deregulatory, and large companies of all forms have considerable powers to thwart new regulatory initiatives and to lobby legislators to prevent laws being passed that are contrary to their interests. Although it would be unusual for Silicon Valley to become Trumpian, it is certainly a possibility if corporate self-interest is the paramount concern of the companies involved. Alternatively, companies such as Google and Facebook may simply redefine themselves so as to be outside of the remit of any regulations proposed. It has long been a boast of Google, for instance, that their combination of collective brain power and corporate agility far exceeds that of regulators seeking to constrain their operations. Shoshana Zuboff cites former Google CEO Eric Schmidt as saying:

High tech runs three times faster than normal businesses. And the government runs three times slower than normal businesses. We have a nine-times gap ... so what you want to do is you want to make sure that the government does not get in the way and slow things down.<sup>56</sup>

If the challenge of digital communications platforms is approached primarily as an economic policy question, then I anticipate that many of the problems that have triggered concerns about the tech giants will remain. Structural separation within the giant companies, such as divesting YouTube from Google Search, or WhatsApp and Instagram from Facebook, will not in themselves address concerns about privacy or the misuse of personal data. Indeed, they may generate new problems: one thinks here about how a greater choice of media outlets can generate further polarisation, and how this can in turn accentuate crizes of trust in the media.

Moves toward enabling greater personal ownership of data, as proposed with California Governor Gavin Newsom's idea of a 'data dividend', whereby Google, Facebook, and others pay users for the use of their data, would transfer some of the economic surplus back to users, but accepts the underlying business model whereby 'free' services are provided in exchange for access to personal data.<sup>57</sup> Provisions around strengthening personal privacy provisions, while important, nonetheless come up against the so-called privacy paradox, whereby the concerns that users express about loss of privacy do not manifest themselves in behavioural change, partly because the loss of privacy has become a trade-off for the more effective operation of platforms and the services they provide.

One of the problems with the economic policy driven approach is that it primarily focuses upon empowering individuals against digital platform giants, whether in terms of ownership of data or greater privacy in communications. The paradox of such a position was revealed when Mark Zuckerberg floated the idea of a more 'privacy-focused Facebook', which is less about protecting the privacy of users from Facebook harvesting their data, as it is about removing communication from the public realm, and the associated problems of content moderation, legal liability, and adverse public image that is has been presenting for Facebook. If our concerns are seen less in terms of personal privacy, and more in terms of rebuilding trust in communications media across all platforms, and communications platforms and content provision that is in the public interest, then we need to be addressing more than simply the better functioning of digital economy markets. We need to be addressing the social responsibilities of digital platform companies, and the capacity for harnessing the power of digital platforms for the public good.

# NOTES

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- Eli M. Noam, "From the Internet of Science to the Internet of Entertainment," in *Handbook on the Economics of the Internet* (Cheltenham, UK: Edward Elgar, 2016), 553–69.
- Timothy Wu, The Master Switch: The Rize and Fall of Information Empires (New York: Alfred A. Knopf, 2010).

- Vincent Mosco, Becoming Digital: Towards a Post-Internet Society (Bingley: Emerald, 2017).
- Jose van Dijck, Thomas Poell, and Martijn de Wall, *The Platform* Society: Public Values in a Connective World (Oxford: Oxford University Press, 2018).
- 5. Nick Stnicek, Platform Capitalism (Cambridge: Polity, 2017).
- Jonathan Pace, "The Concept of Digital Capitalism," Communication Theory 28, no. 2 (2018): 254–69, https://doi. org/10.1093/ct/qtx009.
- The Economist, "How to Tame the Tech Titans," The Economist, January 18, 2018, https://www.economist.com/news/ leaders/21735021-dominance-google-facebook-and-amazon-badconsumers-and-competition-how-tame.
- 8. Economist.
- 9. Yochai Benkler, *The Wealth of Networks* (New Haven, CT.: Yale Univesity Press, 2006).
- Patricia Mazepa and Vincent Mosco, "A Political Economy Approach to the Internet," in *Handbook on the Political Economy of the Internet* (Cheltenham, UK: Edward Elgar, 2016), 163–80.
- Geoffrey Parker, Marshall Van Alstyne, and Paul Sangeet, Platform Revolution: How Networked Markets Are Transforming the Economy (New York: W.W. Norton & Co., 2016).
- Panos Constantinides, Ofa Henfirdsson, and Geoffrey Parker, "Platforms and Infrastructures in the Digital Age," *Information* Systems Research 29, no. 2 (2018), 381.
- 13. Constantinides, Henfirdsson, and Parker.381.
- 14. Gillespie.
- van Dijck, Poell, and de Wall, The Platform Society: Public Values in a Connective World. p. 9.
- 16. Srnicek, Platform Capitalism. 35.
- Tarleton Gillespie, Custodians of the Internet: Platforms, Content Moderation, and the Hidden Decisions That Shape Social Media (Cambridge, MA: Harvard University Press, 2018)., 14.
- 18. Gillespie.17
- 19. Gillespie.
- Tim O'Reilly, "What Is Web 2.0," September 30, 2005, https:// www.oreilly.com/pub/a//web2/archive/what-is-web-20.html.
- 21. O'Reilly.
- 22. Don Tapscott and Anthony Williams, Wikinomics: How Mass Collaboration Changes Everything (New York: Penguin, 2006).
- 23. Benkler, The Wealth of Networks.
- Axel Bruns, Blogs, Wikipedia, Second Life and Beyond: From Production to Produsage (New York: Peter Lang, 2008).
- 25. Hal Varian, "Computer Enabled Transactions," American Economic Review 100, no. 1 (2010): 1–10.
- 26. Varian. 6
- Shoshana Zuboff, The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power (New York: Hachette, 2019).
- 28. Zuboff.
- Stephen J. Schultze and Richard S. Whitt, "The Interent as a Complex Layered System," in *Handbook on the Economics of the Internet* (Cheltenham, UK: Edward Elgar, 2016)., 69
- Zuboff, The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power. ix.
- Paul Langley and Andrew Leyshon, "Platform Capitalism: The Intermediation and Capitalisation of Digital Economic Circulation," *Finance and Society* 3, no. 1 (2017): 11–31.
- 32. Langley and Leyshon. 15.
- 33. Langley and Leyshon. 15.

- Pieter Nooren et al., "Should We Regulate Digital Platforms? A New Framework for Evaluating Policy Options," *Policy and Internet* 10, no. 3 (2018): 264–301.
- 35. Nooren et al., 270.
- van Dijck, Poell, and de Wall, The Platform Society: Public Values in a Connective World.
- Andrew McAfee and Erik Brynjolfsson, Machine, Platform, Crowd: Harnessing Our Digital Future (New York: W. W. Norton & Co., 2017). 137.
- David S. Evans and Richard Schmalensee, Matchmakers: The New Economics of Multisided Platforms (Boston: Harvard Business Review Press, 2016).15.
- Parker, Van Alstyne, and Sangeet, Platform Revolution: How Networked Markets Are Transforming the Economy.
- 40. Parker, Van Alstyne, and Sangeet. 6.
- McAfee and Brynjolfsson, Machine, Platform, Crowd: Harnessing Our Digital Future. 138.
- 42. Australian Competition and Consumer Commission, "ACCC Digital Platforms Inquiry - Preliminary Report," Preliminary Report (Sydney: ACCC, December 2018), https://www.accc.gov. au/focus-areas/inquiries/digital-platforms-inquiry.
- Australian Competition and Consumer Commission; Frances Cairncross, "The Cairncross Review: A Sustainable Future for Journalism" (London: UK Government, February 12, 2019), https://www.gov.uk/government/publications/ the-cairncross-review-a-sustainable-future-for-journalism.
- 44. Jean Burgess and Joshua Green, YouTube, 2nd ed. (Cambridge: Polity, 2018); Stuart Cunningham and David Craig, Social Media Entertainment: The New Intersection of Hollywood and Silicon Valley (New York: NYU Press, 2019).
- Terry Flew, Fiona Martin, and Nicolas Suzor, "Internet Regulation as Media Policy: Rethinking the Question of Digital Communication Platform Governance," *Journal of Digital Media* and Policy 10, no. 1 (2019): 33–50, https://doi.org/10.1386/ jdtv.10.1.33\_1.
- 46. Jeffrey Freiden, "The Politics of the Globalization Backlash: Sources and Implications" (Annual meeting of the American Economics Association, Philadelphia, PA, 2018), https://scholar. harvard.edu/files/jfrieden/files/the\_politics\_of\_the\_globalization\_backlash.pdf.
- Elizabeth Warren, "Here's How We Can Break up Big Tech," Medium, March 8, 2019, https://medium. com/@teamwarren/heres-how-we-can-break-up-big-tech-9ad9e0da324c?fbclid=IwAR1U51hiY\_nB2QwXjTwdRMkec9rFKHfJU00TMs2hhUPQNIDOMtOWrEdU1ek.
- Karl Langvardt, "A New Deal for the Online Public Sphere," George Mason Law Review 26, no. 1 (2019), https://papers.ssm. com/sol3/papers.cfm?abstract\_id=3149513.
- 49. Langvardt. 4.

A

- Federal Trade Commission, "FTC's Bureau of Competition Launches Task Force to Monitor Technology Markets," February 26, 2019, https://www.ftc.gov/news-events/press-releases/2019/02/ ftcs-bureau-competition-launches-task-force-monitor-technology.
- Australian Competition and Consumer Commission, "ACCC Digital Platforms Inquiry - Preliminary Report."
- House of Commons, Digital, Culture, Media and, and Sport Committee, "Disinformation and 'Fake News': Final Report," Eighth Report of Session 2017–19 (London: House of Commons, 2019).
- 53. Yascha Mounk, "Verboten: Germany's Risky Law for Stopping Hate Speech on Facebook and Twitter," New Republic, April 3, 2018, https://newrepublic.com/article/147364/ verboten-germany-law-stopping-hate-speech-facebook-twitter.
- Terry Flew, "Convergent Media Policy: Reflections on the Australian Case," in European Media Policy for the Twenty-First

.....

۲

### JOURNAL OF INTERNET LAW

Century: Assessing the Past, Setting Agendas for the Future, by Seamus Simpson, Hilde van den Bulck, and Manuel Puppis (London: Routledge, 2016), 219–37.

- 55. Mike Ananny and Tarleton Gillespie, "Public Platforms: Beyond the Cycle of Shocks and Exceptions," in *Interventions: Communication Research and Practice* (67th Annual Conference of the International Communications Association, San Diego, CA, 2017).
- 56. Zuboff, The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power. 104.
- Kartikay Mehrohta, "California Governor Proposes Digital Dividend Aimed at Big Tech," Bloomberg, February 13, 2019, https://www.bloomberg.com/news/articles/2019-02-12/ california-governor-proposes-digital-dividend-targetingbig-tech.

۲