3. Digital Platforms

3.1 What Are Digital Platforms?

The current landscape of web-based communication is dominated by a relatively small number of digital platforms, which are operated by some of the world's largest companies. The leading players in this domain are the so-called Big Five: Meta, Alphabet, Apple, Microsoft, and Amazon. The platforms operated by these companies represent key socio-technical infrastructures for consumption and communication on the internet today. They have a significant impact on the presentation and reception of information, online-based commerce, and the dissemination of cultural content (Burgess 2021, 21; Dolata 2020a, 8). This phenomenon is relatively recent, as digital platforms did not emerge in their current form until the 2000s. The rapid rise of platforms such as YouTube and Amazon began around the mid-2000s (Schrape 2021, 81). Since then, the internet has undergone significant changes. In contrast to the previous situation, where news providers, cultural creators, and even private individuals had numerous DIY online websites, content is now largely distributed in a centralized fashion across a few platforms (Burgess 2021, 21). Prior to the rise of platforms, online content was primarily produced and delivered by a relatively small number of actors and received by a much larger number of internet users. By contrast, platforms enable all registered users to create and distribute content independently, whereas the role of the online prosumer – i.e., a producer and consumer in one – was previously unheard of (Flew 2021, 50). The dissolution of strict distinctions between producers and recipients marked a significant shift in online communication, a phenomenon that had been anticipated in early research on digital platforms (e.g., Jenkins 2006; cf. Plantin et al. 2018, 296–97).

The term *platform* did not become widely accepted until the second half of the 2010s (Dolata 2020a, 9) and should still be understood as an umbrella term.

This is because a wide variety of platform types have emerged since then, with very different content focuses and business models, making it difficult to define the term in a uniform manner (Dolata and Schrape 2023, 2). Nevertheless, some overarching characteristics can be identified that characterize digital platforms on a general level. The first fundamental aspect is that platforms are digital infrastructures that operate on the basis of specific technological processes and business models, and that bring together different actors (such as companies, political actors, and private individuals) with different interests. Moreover, as van Dijck, Poell, and de Waal argue, individual platforms are always integrated into a network of multiple and interdependent platforms:

> An online "platform" is a programmable digital architecture designed to organize interactions between users – not just end users but also corporate entities and public bodies. It is geared toward the systematic collection, algorithmic processing, circulation, and monetization of user data. Single platforms cannot be seen apart from each other but evolve in the context of an online setting that is structured by its own logic. A "platform ecosystem" is an assemblage of networked platforms, governed by a particular set of mechanisms […] that shapes everyday practices. (van Dijck, Poell, and de Waal 2018, 4)

This definition posits that the specific handling of user data – including the collection, monetization, and algorithmic processing of this data – is a defining characteristic of the business model of the companies behind the platforms. Moreover, platforms exert a profound influence on the "everyday practices" (van Dijck, Poell, and de Waal 2018, 4) of their users, as they facilitate and to some extent structure specific processes of social exchange and media consumption (Dolata and Schrape 2023, 8; Eisenegger 2021, 17). Consequently, platforms are contingent upon the content production and interaction of heterogeneous actors, including corporations and private individuals. Nevertheless, the communicative rules that prevail in the platform context are ultimately defined by profit-oriented corporations. This means that a top-down relationship between platform operators and users is fundamental to the business model of commercial platforms (Dolata 2021, 101). While certain characteristics can be identified that are constitutive of platforms in general, even a cursory examination of some of the most prominent platforms reveals their heterogeneity. Tarleton Gillespie notes that common definitions of platforms include social media sites such as Facebook and Instagram, as

well as search engines (e.g., Google Search and Bing), app stores (e.g., Apple App Store and Google Play), and dating portals like Tinder or Grindr (Gillespie 2018, 254).

The various types of platforms can be broadly classified into two categories: *infrastructural platforms* and *sectoral platforms*. Most infrastructural platforms, as defined by van Dijck, Poell, and de Waal (2018), are part of the Big Five, which are the most prominent platforms in the digital landscape. The term *infrastructural* is used to describe these platforms because they form the core of the ecosystem described by van Dijck, Poell, and de Waal. Smaller platforms may only be able to function if they can access the services provided by the Big Five. The Big Five act as gatekeepers by providing *infrastructure services*, which include search engines, data servers, app stores, social networks, cloud services, and email services. For instance, numerous platform companies depend on cloud storage services such as Amazon Web Services, Google Cloud, and Apple Cloud, all of which are provided by the Big Five. Consequently, these companies rely heavily on the infrastructure services of the Big Five for their functionality. Furthermore, some of the most prominent platforms are operated by the Big Five themselves. For example, YouTube is owned by Google, while Facebook, Instagram, and WhatsApp are part of the Meta company.

Sectoral platforms (van Dijck, Poell, and de Waal 2018), on the other hand, focus on niche offerings, with individual platforms concentrating on providing news, arranging vacation rentals, or coordinating food deliveries – to name just a few examples. The reliance of such smaller platforms on the infrastructure of the Big Five stems from the integration of specific services from Google and others, but also – as mentioned above – from the use of cloud storage services. For instance, the vacation rental platform Airbnb collaborates with the online mapping service Google Maps, while the streaming services Spotify and Netflix utilize the cloud services Google Cloud and Amazon Web Services, respectively, to store vast amounts of audio and video data and make it available on demand (van Dijck, Poell, and de Waal 2018, 13). In principle, entry into the platform ecosystem is initially open to a wide variety of players. In practice, however, smaller platforms are unable to compete with the offerings of the Big Five and are generally only able to assert themselves in specialized niche markets (van Dijck, Poell, and de Waal 2018, 15).

Further distinctions can be made beyond the initial classification into infrastructural and sectoral platforms. For instance, Ulrich Dolata proposes a distinction between seven different platform types based on the primary services they offer. The first category is search platforms, where Google is

the market leader, and other providers, such as Bing, are largely aligned with Google's services. The second category comprises social media and messaging platforms, with Facebook, Instagram, WhatsApp, X (formerly Twitter) and Snapchat among the most prominent examples. Thirdly, Dolata identifies media platforms such as YouTube, Netflix, Spotify, and TikTok, which are undoubtedly among the most popular platforms and are a key factor in the everyday media use of countless individuals. Fourth, some of the most widely used platforms are retail platforms such as Amazon, eBay, and Zalando. Fifth, numerous booking and service platforms have recently emerged, including in the areas of car and passenger transportation (e.g., Uber, Lyft), accommodation services (e.g., Airbnb, Booking.com, Expedia), and online dating (e.g., Tinder, Parship, Match). Sixth, there are cloud platforms such as Amazon Web Services, Google Cloud, and Apple Cloud. Seventh, there are crowdsourcing and crowdfunding platforms for companies and individuals to use to raise funds for projects, such as Kickstarter, Indiegogo, and Amazon Mechanical Turk (Dolata 2021, 101).

This overview shows that platforms have pervaded numerous domains of private and public life, in some cases assuming a regulatory function in various economic sectors and in others facilitating the development of these sectors. Consequently, the diverse activities of internet users are profoundly influenced by platforms and the companies behind them. The term *platformization* of the internet has been employed in this context for several years. This term was first coined by Anne Helmond and refers to the rise of the platform as the dominant infrastructural and economic model of the social web (Helmond 2015, 1). Alternatively, it is also used to describe the expansion of social media platforms into the rest of the web and their drive to make external web data "platform ready" (Helmond 2015, 1). The dominance of platforms described by Helmond was enabled by the establishment of direct connections – and thus the exchange of data streams – with other websites. One of the ways this was achieved was through the integration of the Facebook Like button (Burgess 2021, 22). Initially, the term platformization was understood in primarily technological terms to refer to the increasing dominance of platforms in digital spaces. However, more recent interpretations of the term have emphasized the social implications of this process. Platformization is now used to refer to the growing social significance of platforms, which is, of course, based on the technological expansion described by Helmond. Additionally, platforms are said to have a steadily increasing influence on various sectors of the economy. This is evident, for instance, in the creative and cultural sector, where

creative professionals are often encouraged to be increasingly present on platforms in order to reach their audiences. Consequently, they must adapt to the regulations of the platforms. This also applies to private individuals, who frequently utilize messenger and social media platforms for a significant share of their communications (Burgess 2021, 21; Eisenegger 2021, 17). In this context, the term platformization primarily refers to the potential for platforms to exert control over users and their data, as well as the content they consume and the social interactions they engage in. This control can be exercised through various means, including controlling access to the internet, monitoring and commodifying data flows and user actions, curating content, and initiating social activities (Eisenegger 2021, 22–23).

The term *platform society* has emerged in academic discourse where it is used to describe the growing influence of platforms in shaping economic and social processes. This concept emphasizes that platforms are an integral part of modern society, influencing both economic and social processes to a significant extent. The term platform society was first introduced by van Dijck, Poell, and de Waal in 2018, who argue that "platforms are an *integral* part of society" (van Dijck, Poell, and de Waal 2018, 2; italics in original). The authors suggest that both economic and social processes are increasingly influenced by privately organized platform companies. It is crucial to differentiate between the platforms themselves, on which active participants engage online, and the companies behind these platforms. It is evident that it is not the platforms themselves that establish the rules that potentially structure action in digital spaces but that these are defined by the responsible companies before they materialize in the interfaces and algorithmic systems of the platforms and influence the actions of users (Dolata and Schrape 2023, 2).

3.2 Functional Logics of Digital Platforms

The question of how platforms build their economic and cultural power is one that requires an understanding of the specific functional logics that underpin this process. These logics can vary in detail depending on the platform in question, but there are certain mechanisms that are constitutive of the anatomy of platforms in general. Van Dijck, Poell, and de Waal state: "[A] platform is fueled by *data*, automated and organized through *algorithms* and *interfaces*, formalized through *ownership* relations driven by *business models*, and governed through *user agreements*" (van Dijck, Poell, and de Waal 2018, 9; italics in orig-