Department of Economics and Finance

Chair of Law and Economics

On the relationship between big data, privacy and antitrust regulation: the Facebook case

Mentor

Prof. Gianluca Faella

Candidate

Ilaria Regalbuto

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Table of contents

In 2004, when asked about how he got the e-mails, addresses and pictures of so many people using Facebook, Mark Zuckerberg replied: “People just submitted it. I don’t know why. They ‘trust me’. Dumb f**ks.”

Introduction

"The Internet is becoming the town square for the global village of tomorrow."

(Bill Gates)

Today's world is highly complex: things are not just black or white, but rather there exist thousands of shades in-between, and every of them is still arguable. This is the result of our social, cultural and, above all, technological evolution as mankind. It is between the XX and the XXI century that Internet appeared and overturned our lives in many ways, from working, to studying, trading, and doing the most common things. It seems magic, while it is just a matter of coding, softwares and wires. Though it represents a big portion of our being, very few people actually know how it works. The same happens for social networking sites: billions of users are interconnected by invisible strings and interact virtually. On the one hand the cool aspect is the possibility to share passions and interests, to exchange opinions and to find support and friendship from a person living on the other side of the world. The problem, on the other hand, is that it is very difficult for authorities to regulate a so diversified and extended system in a uniform way, especially if they are in front of something new. Social networks have been existing for less than two decades and they are still to be fully discovered, both in their pros and cons. Today the discussion is focusing on personal data, competition and consumer protection: the concern is that social platforms' owners are using the data collected for sheer profit to the detriment of consumers. Given the increasing number of users who subscribe to social networks in particular, the risk is that such firms become all-knowing, even more precise than a global census, and they sell out information for money. It is duty of the competition authorities and the data protection legislation to shield users from being exploited, especially without knowing. Another issue is represented by the quasi-unlimited power of these giants in the competitive market: they are well-established, they have customers' loyalty on their side, and national governments hardly ever stand up against them. In the last few years the European antitrust regulation, in particular, has been making progress in leaps and bounds, especially after some exemplar cases in the high-tech sector, such as the ones against Microsoft, Apple and Google Alphabet. The obstacle is the apparent incompatibility of legislations coming from different fields of law: it seems impossible to decide whether to enhance free competition and profitability or examine the true harm on consumers. Among the most popular firms active in the social networking

market, Facebook stands out. Mark Zuckerberg's platform has been existing for few years, but it has been adapted to the different market trends and, above all, to consumers' needs. People want to express themselves freely, and as time goes by the tendency to share information, photos, and opinions online has increased. Consequently, the more data users upload on the network, the higher are the revenues for the company collecting them. Nonetheless, life is not all roses, and with great power comes great responsility. Facebook, like many other social media companies, is under investigation both in Europe and in the United States for many reasons, from the spread of fake news, to the abuse of dominant position, to information leaking. Despite all the negative publicity, Facebook currently counts more than 2.7 billion monthly active users and continues to expand itself, either buying new startups and entering new sectors as Facebook Inc., or just offering its already-existing services as Facebook.
International authorities know that it is no longer possible to neglect this reality. The social platforms are imposing themselves on the market and have no intention to be disturbed while they grown and establish themselves. A regulation is now necessary, especially because the majority of users do not understand the functioning of this system and they need protection as consumers. Moreover, nothing coming from Internet is predictable: everyday generic content and pieces of information are created and injected online, and it obviously takes some time to get to know everything in its shades. Even if it is not black or white, even if competition law is based on points of view and counterweights and numerical standards that sometimes do not fully describe a situation, antitrust authorities are trying to keep up with the change, considering the positive and negative factors, the possible future scenarios, the risks and the advantages of their decisions. This thesis analyzes the complexity of this world, in particular the reality of multi-sided platforms and social networks, and tries to address how the authorities are responding to all these changes. The Bundeskartellamt V Facebook case may be considered an *exemplum*: today it is no longer possible not to deem data-opolies a threat for competition. Not everyone, though, agrees that privacy and personal data protection should be antitrust concerns, even if there is enough information to state that big data collection and exploitation may be detrimental to consumers and to the competitive market as a whole.

Chapter 1: The role of antitrust

1.1 Objectives and tasks

The main task of the antitrust authorities is to regulate the market through the enforcement of rules aimed at guaranteeing a free and unfettered competition. It is important to do so in order to promote efficiency, innovation and, above all, consumer welfare. Reducing costs and prices, offering better products and services, encouraging a pluralism of information and giving consumers a greater possibility of choice boosts the economic development, which is not only fundamental from a political standpoint, but it also represents a way to improve social and living conditions. Furthermore, competition has to be protected in order to achieve a functional allocation of resources, a productive efficiency, more and more dynamic processes and technologies and to ensure market equality and fairness, especially to small-medium firms and to new entrants. The practices analyzed and eventually reported by competition authorities are restrictive agreements (horizontal or vertical), unilateral anticompetitive conducts (such as the abuse of dominant position) and concentrations (when two firms decide to combine). In general, the competition policy acts through the enforcement of competition rules, the control of state aids, the sector regulation, and the competition advocacy to not restrict competition in a way which is detrimental to the society, but this is a very broad concept. Nowadays the fundamental principles of the antitrust matter need to be developed and refined in a ever-changing world, where the physical and online realities have to coexist and not collide. The competition rules "continue to change in a permanent effort to adapt to the evolution of economic theory, business models, patterns of customer behaviour, economic realities and social and political conditions"[1]. Should privacy and data protection be concerns for the antitrust authorities? Is data exploitation detrimental to consumers? Should authorities consider big data as a competitive factor, as an entry barrier? These are some of the questions that need an answer as soon as possible.

[1] Siragusa, Mario and Faella, Gianluca, Trends and Problems of the Antitrust of the Future (Sep. 11, 2012)

This legal wing has mainly to do with economics. It was born as an integration of economics in the legal field in the Sixties, when a new approach to the analysis of cases was introduced. Thanks to economists and academics like Coase, Calabresi, Becker, Friedman, and in general the Chicago School[2] approach, the economic analysis of law has become a new and very effective instrument to apply, amend and interpret legal rules, especially in the evaluation of damages, taxes, competition matters and corporate proceedings. "Thanks in part to Chicago School efforts today we have an antitrust policy that is more rigorously economic, less concerned with protecting non-economic values that are impossible to identify and weigh, and more confident that markets will correct themselves without government intervention."[3] Is it the end, though? Antitrust today should not only be about the economic analysis: today's world is not the same as the one of sixty years ago, and many innovations have changed our perception of things and way of living. Moreover, the antitrust itself has never focused only on the concept of economic efficiency –which is certainly important, but not enough when carrying out a market analysis–, but also on public health, environmental protection, pluralism of information and many other aspects. The social media market would need a protection, or, better, the users of social media platforms actually need to be protected from being exploited, from a non consent-required collection of personal data and from companies whose interest is only to gain competitive advantage over rivals. Maybe it is time for the antitrust to start working on the issues of big data and users' privacy, in addition to all the other factors already taken into consideration. From the illustrative graph (see *Figure 1*), it it clear what is the central topic that authorities have to take into consideration: trust and the Internet. They do not get on well right now, but maybe with a specific regulation they could, making it possible to help consumers to be more aware and to receive transparent and accurate information about the platforms they are using or they are planning to subscribe to. Moreover, a regulation as such would be fundamental for the enhancement of the competitive process on a new market, the one of social media.

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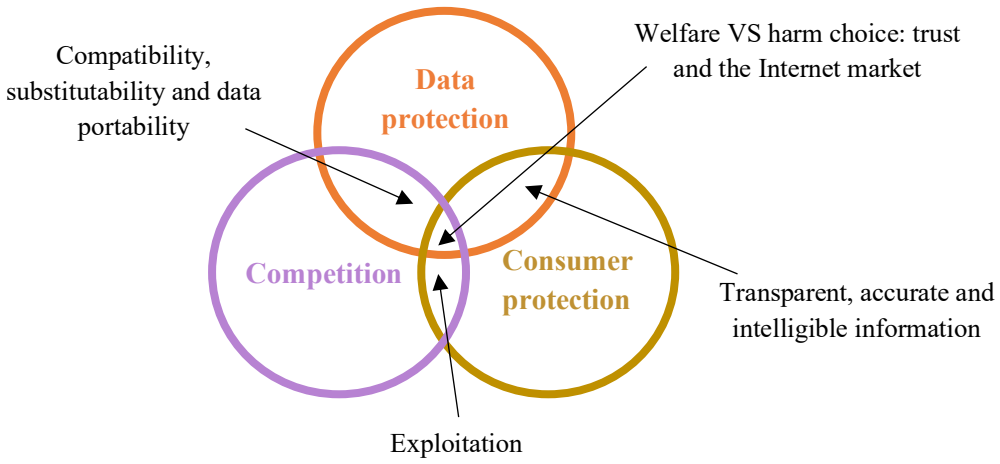
[2] Chicago School is a neoclassical economic school of thought that originated at the University of Chicago in the 1930s. The main tenets of this school of thought are that free markets best allocate resources in an economy, and that a minimal, or even no, government intervention is the best option for economic prosperity

[3] Hovenkamp, Herbert, The Harvard and Chicago Schools and the Dominant Firm (June 21, 2010). U Iowa Legal Studies Research Paper No. 07-19



(Figure 1)[4]

First of all, it is useful to define the objectives of competition law, which can be economic and non-economic. The economic objectives focus on the protection of the competitive process, in order to achieve an efficient allocation of resources and to promote consumer welfare. About this, some debates have been opened: is it better to focus on the concept of efficiency or on the welfare, and which welfare should authorities look at? There exist three types of efficiency: the allocative, the productive and the dynamic one. The allocative efficiency happens when the resources are employed in a way that guarantees the optimal satisfaction of the society's economic needs; in a nutshell, this is the maximization under the assumption of a perfectly competitive market. When there is a monopoly, an efficient allocation is not reached, because the prices of goods increase, the quantity decreases and the resources are not optimally employed. The productive efficiency, on the other hand, is when the ouput is maximized by using the most effective combination of inputs, reducing the cost structure. These two concepts of efficiency are static, guarantee certainty and more focus in the short-run, and for this they conflict with the third one, the dynamic efficiency. This one is reached through inventions, development and diffusion of new technologies and production processes. This kind of dynamism increases the social welfare in many ways, from reducing costs and prices, to offering new, more functional and higher quality products on the market, and this becomes important especially in the long-run, when the initial uncertainty finally shows positive results. Another debate is about welfare: there are two possibilities, to look only at the consumer one or to

[4] The graph is proposed by the EDPS - European Data Protection Supervisor

consider the total welfare, so the situation as a whole. The word "welfare" can be substituted with "surplus" in this case. The total surplus is the sum of the consumer and the producer surpluses. It is not said that an antitrust decision must be based only on the consumer surplus, even if consumers are the main target of the market regulation, but it can also take into consideration the neutral redistribution that commonly happens between consumers and producers at a total welfare level. On the other hand, there are non-economic objectives, which are not related to economic factors such as welfare and efficiency. Some examples are the enhancement of the democratic system and other socio-political purposes, the protection of small-medium enterprises and the competition fairness. There is a doubt whether the antitrust should pursue also non-economic objectives, also given its economic origin, but also because there may arise conflicts between the two types of objectives, that sometimes do not get along.

1.2 The two poles

The oldest and most illustrative antitrust systems are the North-American and the European ones: historically, they were the first models to be introduced and were afterwards adopted worldwide, with some differences in the enforcement, but with substantial convergences. These two poles, however, will not be the only ones in the future: in the next years, indeed, there will be a multipolar system with developing nations such as China, Brazil and India[5] as new players. The most relevant pieces of legislations for the antitrust regulation are the Sherman Act (1890) from the United States and the Treaty on the Functioning of the European Union[6] (1958) from Europe, even though there are many more. The United States and Europe differ in more than something: as said above, there is a debate about the objectives to be taken care of by the competition authorities, and while the United States base their analysis only on economic objectives, Europe considers also other factors. The European Commission indeed not only promotes the protection of competition and consumer welfare, but cares a lot about the integration of markets among all the Member States, which goes

[5] As stated by Siragusa, Mario and Faella, Gianluca in Trends and Problems of the Antitrust of the Future (Sep. 11, 2012)

[6] Better known in the shortened form "TFEU"

at the same pace as the adoption of a single currency. The Treaty of Rome (EEC Treaty) of 1957 was in fact aimed at creating a large, common market, where competition law was thought as a tool to facilitate and encourage the integration between EU members, which represents indeed a non-economic objective. The United States, on the other hand, following also the influence of the Chicago School, do not have this necessity and focus notably on economic objectives. The origins of the North-American antitrust system dates back to the end of the XIX century, when the first modern antitrust law was introduced, the Sherman Act. The aim was to prohibit any competition-distorting practice, including the possible anticompetitive use of *trusts*, a legitimate tool for which a person or an organization was given the power to control money, resources, or assets on behalf of others. The Sherman Act promotes the consumer protection from the exercise of market power of firms and supports the value of freedom to enter the market and be successful without being excluded by rivals. The first European antitrust regulations, instead, date back to the years after the World War II: one of the most important tasks at that time was to complete the European integration, carried out also through common regulations as this one. Europe emerged as a model because of its strong ideas of maintenance of competition and market fairness. It has to be said that Europe currently has a more interventionist and regulatory approach than the United States, and applies long-term considerations on cases, even if in some situations it is hard for both legislations to distinguish between an anticompetitive behaviour and a legitimate form of competition. For example, when there is a possible exclusionary conduct, it has to be analyzed whether it really aims at excluding rivals from the market or it is just an aggressive, positively competitive behaviour. The biggest issue here is the geographic boundaries of such regulations: each country has its own antitrust principles, and out of a specific area of influence these principles change or have some differences in application that make a national legislation not valid anymore. Regarding the social media, this is an important theme: would it be possible to find and adapt an international regulation, since the Internet is an unbounded network of global scale and scope? Certainly it would be difficult, but at the same time this would be the most effective way to guarantee the same degree of protection and rights to users from all around the world.

Chapter 2: Facebook, Inc.

2.1 The story of Facebook

In the 2000s many companies competed firmly attempting to gain market share in a new high-tech market: the social networking one. Social networks are virtual communities where the keyword is "friending": building online relationships, updating on events and activities, sharing photos and comments and sending messages. Since the price of these new services is equal to zero, the competition is all about quality: quality of the service itself, plus privacy. Privacy was indeed a valuable factor for early users of social networks, because nobody really trusted the new reality. Trust is "*the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party*"[7], and trust is important for successful online interactions[8]. In addition, where there is trust and loyalty, the perceived cost of a service is lower. For cost it is meant the data collected, the attention given and the time spent on the platform.

Initially, it was MySpace to win the competition and to become the number one in the social media market: between 2005 and 2008 it was the largest social network with more than 100 million users per month worldwide. People, however, were still scared and believed that it was not safe to use MySpace's platform, due to the numerous incidents of sexual assaults that was reported and publicized by the traditional media. In conclusion MySpace had a "poor reputation in terms of trust"[9] and was not able to relieve the public opinion. That is how Facebook presented itself on the scene: *an antidote to scepticism*. It sold itself as a privacy-friendly alternative to MySpace: initially, indeed, only people with a university-issued ".edu" e-mail address could join, and only university classmates or close friends could see one's profile. Moreover,

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[7] Mayer, Davis and Schoorman, 1995

[8] As stated by Coppola, Hiltz and Rotter, 2004; Jarvenpaa and Leidner, 1998; Meyerson, 1996; Piccoli and Ives, 2003

[9] Catherine Dwyer, Starr Hiltz, Katia Passerini, "Trust and privacy concern within social networking sites: a comparison of Facebook and MySpace", Americas conference on information systems (2007)

Facebook hired a chief privacy officer and articulated a short and very clear privacy policy, considered the core of users' experience. Facebook promised its users they had the power and the freedom to modify or delete information from the platform at anytime. Those features of closed-network and strict privacy settings made Facebook a trustworthy choice and consequently crowned it as the new number one on the market.

Looking more in depth at Facebook's origins, this is how everything started. In 2003 a network named "Facemash" –created by Mark Zuckerberg– started being popular among Harvard students. It was based on a well-known game, the "hot or not": the visitors of the site were asked to vote the most attractive girl basing their decision on two comparing pictures. By word of mouth, the page attracted 450 users in the first four hours and more than 20,000 photos were viewed. Some days later, the site was shut down by the university administration, and Zuckerberg was expelled and charged of breach of security, violation of individual privacy and copyright. The charges were dropped in the end, nothing remarkable happened after all, but this first experiment was useful to Zuckerberg to understand the speed, the size and the numbers of his network. The "Harvard Crimson", an independent student newspaper of Harvard, stated about the Facemash episode: "It is clear that the technology needed to create a centralized website is readily available [...] The benefits are many.", and Zuckerberg wanted exactly to give birth to a centralized, universal, online face book of Harvard. On February 4th 2004, Zuckerberg officially launched "TheFacebook". It took its name from the *facebooks*, the brochures given to freshmen (first-year students) to encourage them to interact with other students and feel more integrated. The network initially had the purpose of allowing people to make new friends, to share homework, to get invited to events, to second-hand books sales, and to keep in touch with others.

"To give people the power to build community and bring the world closer together."[10]

[10] This is the mission statement of the Facebook Inc. The quote is taken from Trautman, Lawrence J., Governance of the Facebook Privacy Crisis (Mar. 31, 2019)

TheFacebook then exploded on the university network. According to Zuckerberg's roommate "When Mark finished the site, he told a couple of friends… Within 24 hours, we had somewhere between 1,200 and 1,500 registrants." In a month or so, more than half of the undergraduate students in Harvard was registered to the platform; sometime later, the site expanded to the universities of Stanford, Columbia and Yale, then it gradually reached most universities in Canada and in the United States. The 2004 management team was composed by Mark Zuckerberg (founder and CEO), Eduardo Saverin (CFO), Dustin Moskovitz (VP programming) and Chris Hughes (PR director). That year, in July, the company was incorporated in Delaware[11]. Between 2004 and 2005, the operational base was moved to Palo Alto, in California, while the name of the website was changed into "Facebook" after *facebook.com* was purchased for $200,000 to be used as domain name[12]. On September 2006 Facebook was finally available to anyone aged thirteen and with a valid e-mail address. One year later, it had about 100,000 business pages (the so-called company pages) that were able to attract new potential clients, offering them their products and services. The IPO[13] took place in May 2012. Today the Facebook, Inc. is active in the social networking, social media and high-tech sector, and currently owns more than 80 companies, among which there are WhatsApp[14], Instagram[15], Oculus VR[16] and Giphy[17].

Facebook first logo (2005-2009)

Facebook current logo

This table (*see Table 1*) represents the increase in the amount of monthly active users in 15 years, from the origins in 2004 to 2019. It can be seen that year after year the number of Facebook users has increased –quite slowly in the beginning, but around 2011-2012 it exploded–.

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[11] Delaware's business law is one of the most flexible in the United States, that is why many companies decide to incorporate there

[12] The domain name is the string that describes and identifies a specific page on the Internet

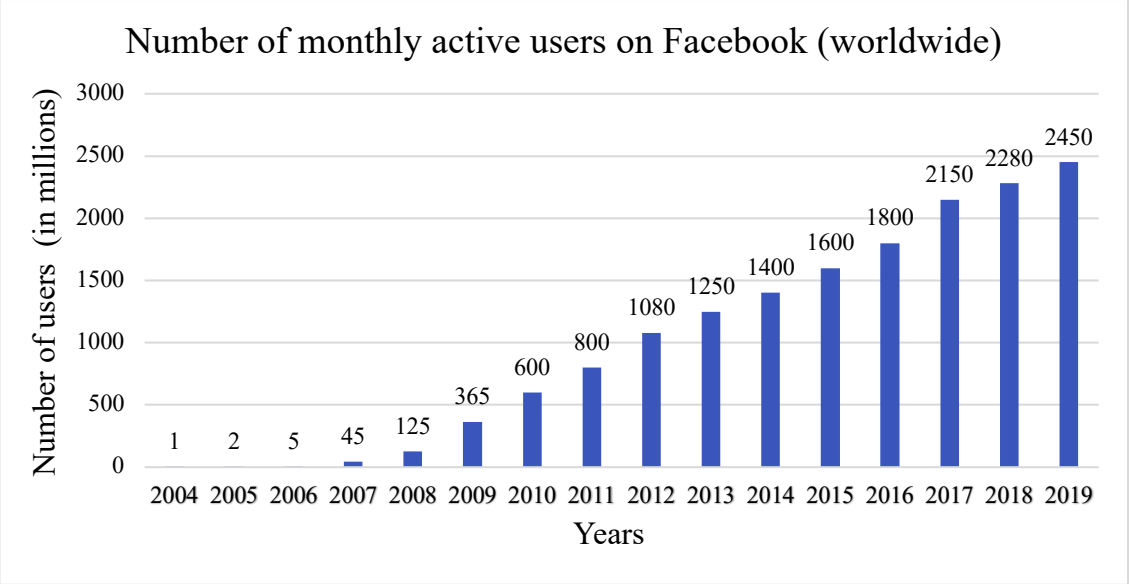
[13] The initial public offering happens when a private company goes public and is listed on a exchange to starts selling its stocks to the general public

[14] An instant messaging platform

[15] A photo and video sharing social network

[16] The company producing the virtual reality headsets

[17] Online database and search engine for GIFs



(Table 1)[18]

Looking at other statistics, Facebook's growth is happening mostly in developing countries where it is claimed it will gain more than 250 million users between 2019 and 2023[19]. Facebook is undoubtedly the most popular social platform on Earth, with its approximately 3 billion monthly users worldwide (*see Table 2*). Moreover, Facebook itself estimated that roughly 3.15 billion people use at least one of the Facebook's family of products every month on average, and considering that the world population is about 7.8 billion people[20], this result is terrific.

"We also help people discover and learn about what is going on in the world around them, enable people to share their opinions, ideas, photos and videos, and other activities with audiences ranging from their closest friends to the public at large, and stay connected everywhere by accessing our products, including Facebook, Instagram, Messenger[21], WhatsApp, Oculus."[22]

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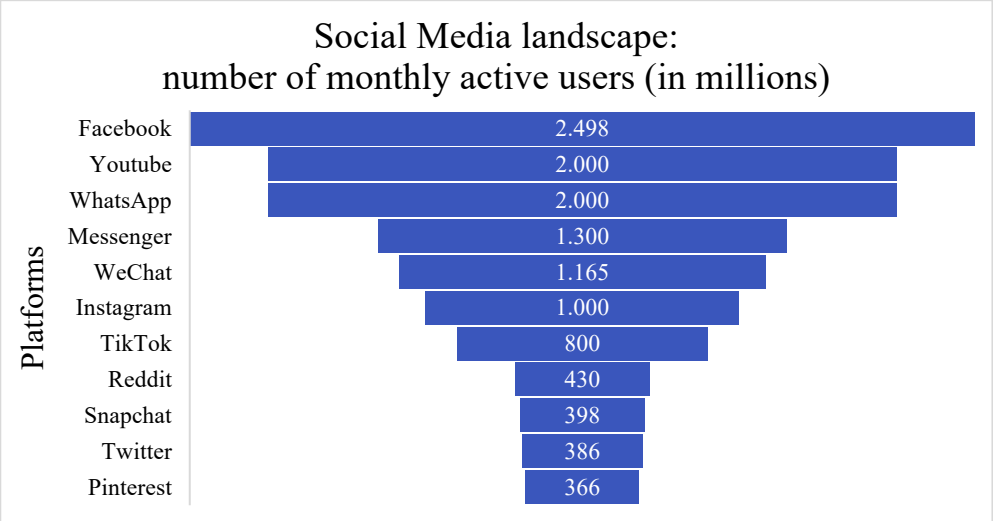
[18] Source: Facebook, Internet World Stats / Statista, 2019

[19] According to eMarketer, a market research company providing insights and trends related to digital marketing, media and commerce

[20] Source: Worldometers

[21] A messagging app developed by Facebook

[22] This is the vision statement of Facebook Inc. The quote is taken from Trautman, Lawrence J., Governance of the Facebook Privacy Crisis (Mar. 31, 2019)



(Table 2)[23]

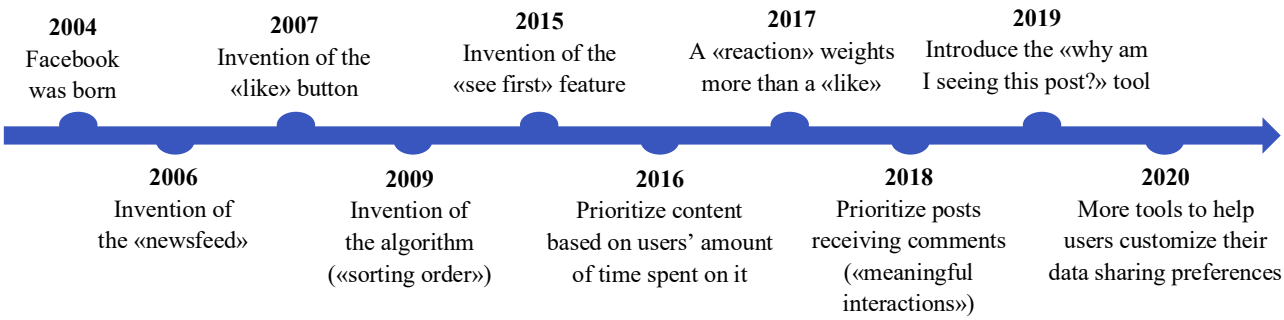
2.2 How Facebook works

Algorithms are sequences of well-defined, finite, computer-implementable instructions, typically used to solve problems, to process data or to perform computations. Facebook, like many social networks nowadays, uses algorithms to influence the content every user sees on his feed, showing only the most relevant news instead of following a chronological order. For "relevant" it is meant the content a user will certainly like, according to his interests. Some years ago, before switching to algorithms, the chronological order was very popular among social networks, but then the feed started being shaped on the single user's behaviour online: interactions, tags, likes, queries, keywords, people tags and so on. Without this system, with the constantly increasing number of users, subscribers, posts, content posted, it would be impossible to sift, analyze and interpret data, and data are very important for such platforms. For this reason, algorithms constantly change: they evolve to offer the best experience possible on the social network and to provide more and more accurate data to analysts. Algorithms are also useful to target advertising: since platforms collect preferences and usage information, it is easy for advertising companies to target announcements, having more possibilities to hit the customer directly. The primary

[23] Source: Company data via Data Reportal Global Digital Statshot / Statista, 2020

goal of algorithms is indeed to keep users scrolling down through posts, in order for them to see more advertising and to be tempted to consume.

Facebook has followed this path (*see Figure 2*): it introduced the newsfeed (user's principal page, where all the news and posts appear), it created the "like" button and the "reactions", it prioritized content according to users' interests, basing everything on algorithms and according to consumers' engagement level.



(Figure 2)[24]

The aim is to make users interact more and more with other users and business pages, and to trace a pattern of their interests, in order to outline their profile and target advertising. Facebook currently uses four ranking signals to customize a user's newsfeed: relationships, content type, popularity and recency. For relationships it is meant the people the user interacts the most with, through messages, tags or likes and reactions. The content type relates to the cathegory of the post, which can be a photo, a video, a link. The popularity is given by the number of likes, comments and engagements, especially the ones coming from a user's friends. The recency puts the newest posts at the top. The debate about customization against privacy starts here. The Facebook data sharing policy is well described in this table (*see Table 3*). The data collected are personal, related to usage, locations and behaviours on the social network: they can be shared among the whole Facebook group and with integrated third party apps, websites and advertisers. The disclosure of such data follows specific legal principles, but the permission of users to share them is not always required, in this case targeted advertising business providers.

[24] Timeline suggested by Paige Cooper, "How the Facebook algorithm works in 2021 and how to make it work for you", Hootsuite (Feb. 10, 2021)

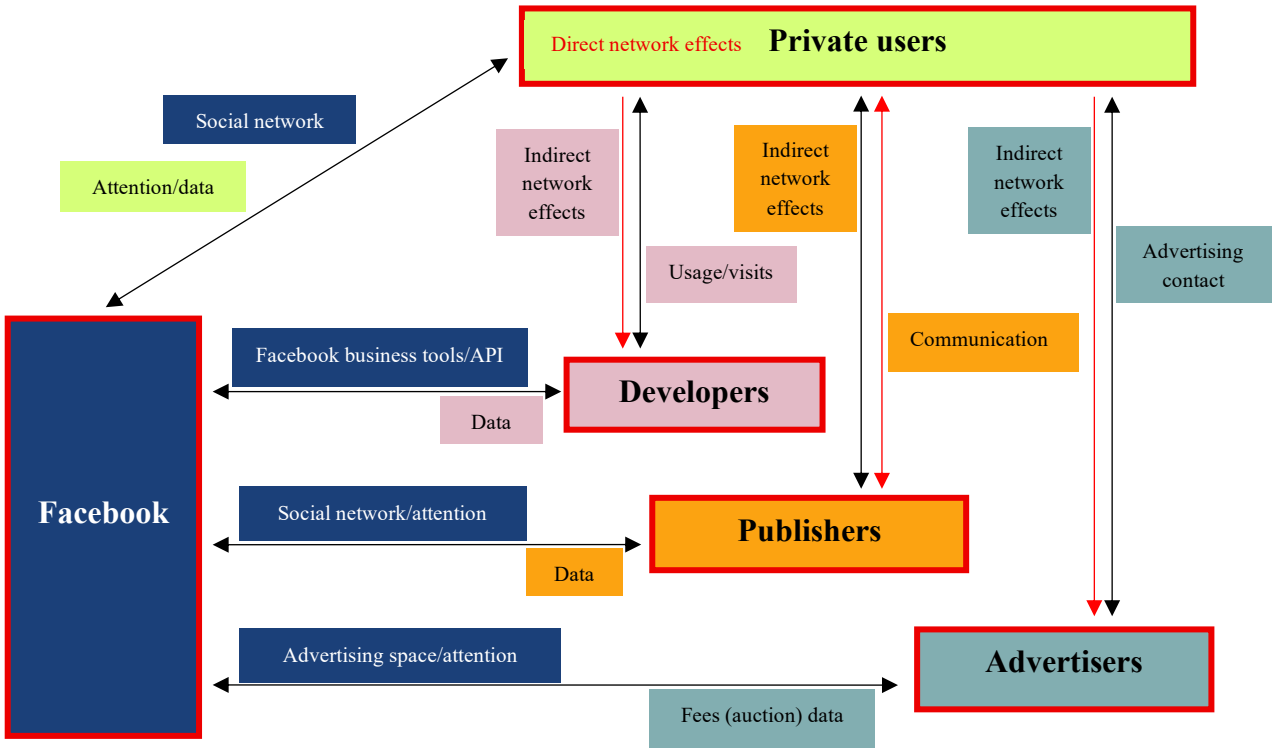
Company	Collected data	Data shared with	Disclosures	Consent
Facebook	(i) **Personal data** (ii) **Experience and usage data** (such as visualized content, personal engagement, user frequency and duration) (iii) Specific **location data** (iv) **Behavioural data** from third party advertisers through "relevant ads on and off" service	(i) Companies that are part of the **Facebook group** (ii) Integrated third party apps, websites or other services, and **third party advertisers**	(a) **Legal request** (a search warrant, a court order or a subpoena) (b) Where the law **so requires**, included from jurisdictions outside of the United States (c) To detect, to prevent and to address any fraud or other **illegal activity** (d) Its own **protection** or that of others (e) To **prevent death** or imminent bodily **harm**	**Permission required** to share personally identifiable data with third party advertisers or analytics partners **No consent needed** for: (i) Targeted advertising and aggregated data transfer (age, sex, location and personal reference) to vendors, service providers and business partners (ii) The transfer of personal data to countries outside the EEA[25]

(Table 3)[26]

Focusing a little more on the targeted advertising and the information transfer, this table (*see Table 4*) explains in a simple way all the exchanges taking place between all the parts involved in the Facebook's business model. There are five main actors: the platform, the advertisers, the publishers, the developers and the private users. Facebook directly deals with final users thanks to the social platform and it receives back attention and a huge amount of data; then it also deals with all the other actors, exchanging data with them. There exist both direct and indirect network effects between the users and developers, publishers and advertisers: as users increase in number, the others are more attracted and their gain is higher, and then they can exchange more data with the platform. In the end, everything can be summed up with this: more interactions and exchanges mean more data, higher revenues and more power for Facebook.

[25] European Economic Area

[26] The table is proposed by Chirita, Anca D., in "The Rise of Big Data and the Loss of Privacy" (2016)



(Table 4)[27]

Talking about the high-tech market, which includes also the social networking sector, it has to be said that it does not have an easy time: innovation, disruptive technology and rapid changes represent an advantage for the firm introducing them, but a challenge for all other competitors. Products follow a short innovation cycle –after six months or a year they are considered *passé*–, there is a high risk of quality deterioration, the technological development is very fast and variable, and rivals firmly compete to gain economies of scale, network effects and a dominant position on the market. This is what happens in the macroenvironment. In the microenvironment, on the other hand, a firm active in this sector deals with many risks, concerning the ability to manage the relationship with users, software developers and advertisers and the high level of competitiveness and dynamism. A firm such as Facebook has to pay attention to its current position: the management of growth and its possible decline, the present and future legal actions, class actions and lawsuits and the complex evolving of laws about privacy, content, data and customer protection. It has to prepare a strategy against a possible unfavourable media coverage to save its credibility and control and manage

[27] The explanatory graph is taken from the Bundeskartellamt case summary (Feb. 15, 2019)

the costs, the personnel and the reputation. Changes, acquisitions and investments could be negatively accepted by the public: in this case, retention and acquisition of new users would be at stake, such as the capital coming from the shareholders. The retention of users is fundamental also on a daily basis: a decrease in the engagement level would cause the same effect on revenues earned with the advertising and the marketing. Another issue is represented by security breaches, hacking and phishing attacks, especially in the this era of data-opolies. Finally, the ultimate worry is represented by the competition authorities from all over the world, that are keeping an eye on every step Facebook is taking.

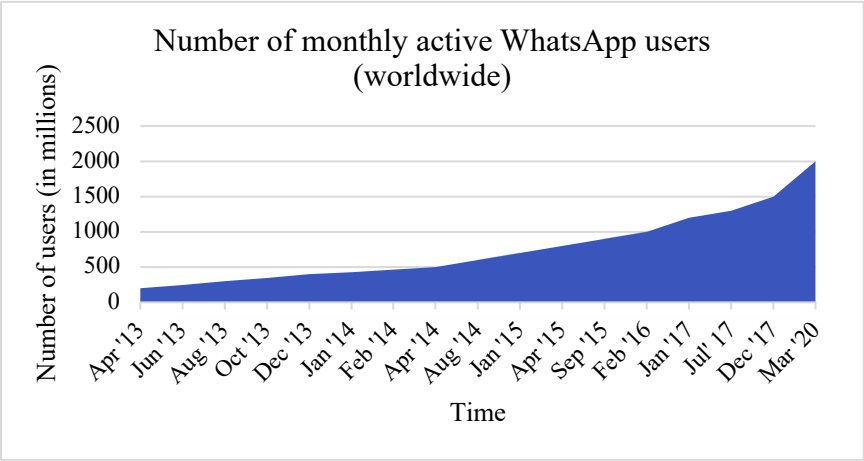
2.3 The acquisition of WhatsApp

Two firms can decide to combine to get some benefits: this is called concentration. The above-mentioned firms can be active in the same relevant market or in different ones. This business concept has to do with control: control is the ability to exercise an effective and decisive influence on another firm, in the present or in the future. The object of control may be one or more undertakings constituting legal entities, or the assets of such entities, if they represent wholly or partly the undertakings. A concentration may be justified by economies of scale and scope, synergies, a better control of inputs or distribution channel, but at the same time antitrust authorities have to examine whether the positive effects outweigh the negative ones. The risks are related to the maintenance of a targeted level of competition: merging means the disappearance of a competitive constraint[28] and an incentive for firms to coordinate[29]. Before merging, indeed, the two entities have the duty to report their intentions to antitrust agencies, that carry out an ex-ante assessment and then give (or deny) the permission to merge. The notification has to be done according to some thresholds: if

[28] This is called a "non-coordinated effect": it consists of the elimination of important constraints, giving some firms greater market power

[29] This is called a "coordinated effect": it is a change in the nature of the competitive process, which may facilitate a collusive equilibrium. A collusion is when two or more firms coordinate, especially on prices, and it is considered a severe criminal offense: cooperation is indeed not unlawful per se (under 10% of market share it is assumed to be lawful), but over some levels of market power and especially with the aim of restricting competition (i.e. cartels) is considered an unlawful restrictive agreement for the antitrust

the merger meets the thresholds of Article 1[30] of the European Regulation 139/2004, it has to be reported to the European Commission; otherwise, according to Article 16[31] of the Law 287/90, to the ICA[32], the Italian national authority (in the case of Italy). Between 2013 and 2014, WhatsApp had about 400 million monthly active users (*see Table 5*), which is a discrete but not excessive result, while Facebook had about 1.3 billion worldwide monthly users. The share of both platforms in social media services in the European Economic Area was around 30-40%, and there was no reason to believe a higher share.



(Table 5)[33]

The Commission also stated: "In this market high market shares are not necessarily indicative of market power and, therefore, of lasting damage to competition". Moreover, the two firms were active in two different relevant markets, the one of

[30] (2). A concentration has a Community dimension where: (a) the combined aggregate worldwide turnover of all the undertakings concerned is more than EUR 5000 million; and (b) the aggregate Community-wide turnover of each of at least two of the undertakings concerned is more than EUR 250 million, unless each of the undertakings concerned achieves more than two-thirds of its aggregate Community-wide turnover within one and the same Member State. (3). A concentration that does not meet the thresholds laid down in paragraph 2 has a Community dimension where: (a) the combined aggregate worldwide turnover of all the undertakings concerned is more than EUR 2,500 million; (b) in each of at least three Member States, the combined aggregate turnover of all the undertakings concerned is more than EUR 100 million; (c) in each of at least three Member States included for the purpose of point (b), the aggregate turnover of each of at least two of the undertakings concerned is more than EUR 25 million; and (d) the aggregate Community-wide turnover of each of at least two of the undertakings concerned is more than EUR 100 million, unless each of the undertakings concerned achieves more than two-thirds of its aggregate Community-wide turnover within one and the same Member State […]"

[31] "The concentrations […] shall be notified in advance to the Authority if the combined aggregate domestic turnover of all the undertakings concerned exceeds 511 million euro and if the aggregate domestic turnover of each of at least two of the undertakings concerned exceeds 31 million euro […]"

[32] Italian Competition Authority; AGCM, "Autorità Garante della Concorrenza e del Mercato"

[33] Source: WhatsApp, Facebook / Statista, 2020

instant messaging (W) and the other one of social networking (F), so it did not seem risky for competition if they combined, afterall. The concept of relevant market is a key point of the antitrust analysis: before starting any type of examination, it is fundamental to understand and define properly the market in which a firm is active. In the case of the high-tech sector, and in particular the one of social media, it is tough, because such platforms can change their services continuously. Taking Facebook as an example, many elements have been added year after year: from simple messages and photos, to posting long videos, links, videochats, 24h-lasting stories, and many more. Moreover, it is sometimes very difficult for authorities to define differences between platforms: in the end, a user can chat with WhatsApp, Facebook, Instagram, Tumblr, Snapchat, but only WhatsApp is considered an instant messaging platform, while Facebook and Instagram are deem to be social networks, but Instagram is more suitable than Facebook for the photo sharing, and so on. What's more, talking about market power and its definition –which is as complicated as the one of relevant market–, the dynamic nature of social media services may affect drastically and suddenly their shares in the market, because a breakthrough in the innovation field can even make a new entrant the most powerful competitor in the market. According to the European Merger Control Regulation, the Commission considered that the instant messaging app market had low switching costs, low barriers to entry, so customers were not locked-in, and there was always the possibility of multi-homing[34]. Furthermore, at that time WhatsApp pointed out that it had never stored any relevant data and Facebook underlined that the merger was not dangerous, because there was at least another very strong firm on the market (i.e. Google), so competition would be preserved. This statement was not really pertinent, because Google was active in another market, the search engine one, so it made little sense to say that, but it is to be underlined that the concept of relevant market is somehow tricky when it comes to the social media sector. Two merging firm in the social media sector generally plan to combine also their data: this is a costly, time consuming, long and complex process, since two different databases with dissimilar systems have to be integrated. The antitrust authorities have to examine whether this data combination may help or incentivate the exclusion of competitors from the market. In the case of Facebook and WhatsApp, the data

[34] Multi-homing means to be present on different networks at the same time (for example, to be subscribed to Facebook, but also to Instagram, Snapchat, Tik Tok, Reddit, and so on…)

combination was seen as a tool to offer new products and innovative technologies to consumers. Furthermore, "Any privacy-related concerns flowing from the increased concentration of data within the control of Facebook as a result of the transaction do not fall within the scope of the European competition law rules, but within the scope of the European data protection rules."[35] Here it is the problem: data protection was not considered falling within the scope of the competition law, while maybe it should have been. The merger in the end was allowed by the Commission: on February 19th 2014 Facebook, Inc. acquired WhatsApp for $19 billion. The story did not end here, though. After the acquisition, on August 25th 2016, WhatsApp shared and merged data with Facebook and users accepted the new terms on a "take it or leave it" condition. On May 11th 2017, the AGCM, the Italian competition authority, fined WhatsApp $3 million for forcing users to share their personal data with Facebook. Seven days later, the Commission itself fined Facebook $110 million to have provided misleading pieces of information about the WhatsApp takeover. On December 18th 2017, the CNIL, the French competition authority, issued a notice for lack of legal basis about the share of personal data between WhatsApp and Facebook on a "take it or leave it" condition. A similar situation happened when Zuckerberg decided to acquire Instagram, "a vibrant and innovative personal social network and an existential threat to Facebook's monopoly power."[36] Facebook acquired Instagram in April 2012, for $1 billion, and after some time a perfect merging of data was reached: the easy access to Facebook data (profiles, friendship network) and the automatic photo sharing on Facebook through Instagram were guaranteed. Moreover, thanks to this complementarity between the two social media, a dramatic increase in the demand for Instagram was initially registered, and the long-run growth of both platforms caused positive spillover effects[37] on third party apps on Facebook[38]. In this graph (*see Table 6*) it is possible to see the sudden but predictable increase in the number of active users of Instagram in the years 2013-2018 after the acquisition: from less than 500 million to one billion

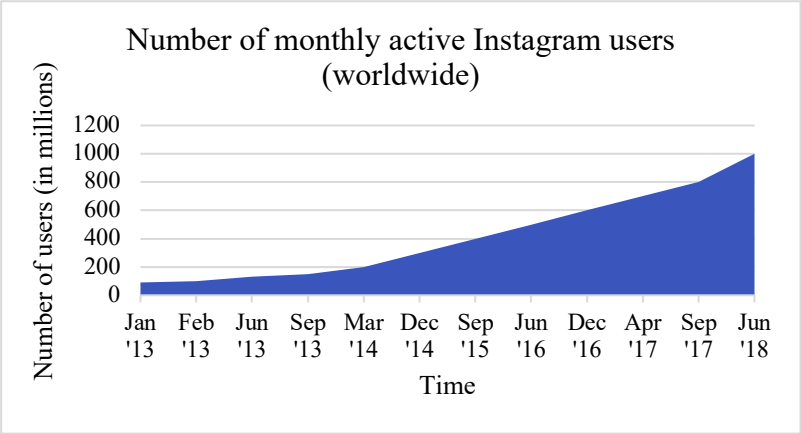
[35] Comm., 3 October 2014, M. 7217 – Facebook-WhatsApp, para. 164

[36] Kang, Cecilia and Isaac, Mike, "U.S. and States say Facebook illegally crushed competition", The New York Times (Dec. 9, 2020)

[37] The spillover effect is an economic event that occurs because of something else in a seemingly unrelated context

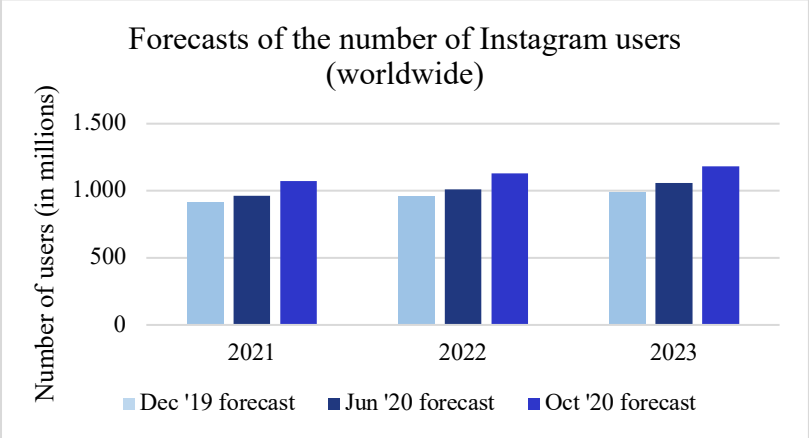
[38] Source: Li, Zhuoxin and Agarwal, Ashish, Platform Integration and Demand Spillovers in Complementary Markets: Evidence from Facebook's Integration of Instagram (Jun. 9, 2014)

users. It has to be added that in the last five to six years Instagram has imposed itself as the number one social network for the influencer marketing, and also thanks to this the number of monthly active users skyrocketed, as shown below.



(Table 6)[39]

This new marketing sector consists of the advertising of products and services carried out by popular personalities (fashion influencers, singers, actors, business owners, athletes and content creators). "Brands are set to spend up to $15 billion on influencer marketing by 2022, per Insider Intelligence estimates, based on Mediakix data."[40] There exist predictions for the next years: the number of worldwide users is expected to reach 1.2 billion in 2023, as depicted in this graph (*see Table 7*).



(Table 7)[41]

[39] Source: Instagram, TechCrunch / Statista, 2018

[40] Source: "Influencer marketing: social media influencer market stats and research for 2021", Business Insider (Jan. 6, 2021)

[41] Source: eMarketer / Statista, 2021

In conclusion, the acquisitions of Instagram and WhatsApp represent two milestones in the Facebook, Inc.'s story. From the company's point of view, it was a way to become bigger, more profitable and more powerful on the market, also because these acquisitions allowed Facebook to enter new segments of the social media sector. From an antitrust standpoint this marks an historic event, because it brought to the rise of the Facebook's monopoly in the social media market. It is from that moment, when it became clear that an acquisition could be an easy way to merge also personal and sensitive users' data, that the competition authorities started debating about the lawfulness of such actions.

Chapter 3: Multi-sided platforms

3.1 The economics and the functioning of two-sided platforms

"If I am giving you something of value at no cost,
I will charge you with your time[42], not your money…"[43]

Nowadays many firms of the online economy and the social media sector are characterized by multi-sided platforms. The most common business model is the two-sided one (*see Figure 3*). Generally speaking, in the two-sided model there is an audience maker and a market maker: the first one can be a newspaper, a website, a social platform, a television channel, while the second one is an advertising company. The platform acts as an intermediary betweeen the two groups of consumers of the service and is a reliable source of pieces of information or content. This type of business facilitates the exchange in transactions, minimizes the transaction cost, since it brings buyers and sellers together, it builds audiences, finds suitable matches to queries, and provides shared resources at a lower cost. The audience maker provides a free service to users (news, weather forecasts, videos, reviews, entertainment) and earns revenues from the placement fees that the market maker pays in order to publish an advertisement on the common platform. The fee depends on the number of users, the exposure, the size or length of the posting. The sides have a strict relationship: they both participate to the business, they are equally committed to the target and they have to work together to find a balance betweeen their demand curves, since this is not a single company, but more similar to a joint venture. The fact that the service provided is free and continously improved and updated is because the audience maker wants to attract the largest possible amount of consumers, in order to earn more and more from the advertising firms, generating a sort of loop, where the network expands itself for customers, revenues and commercials.

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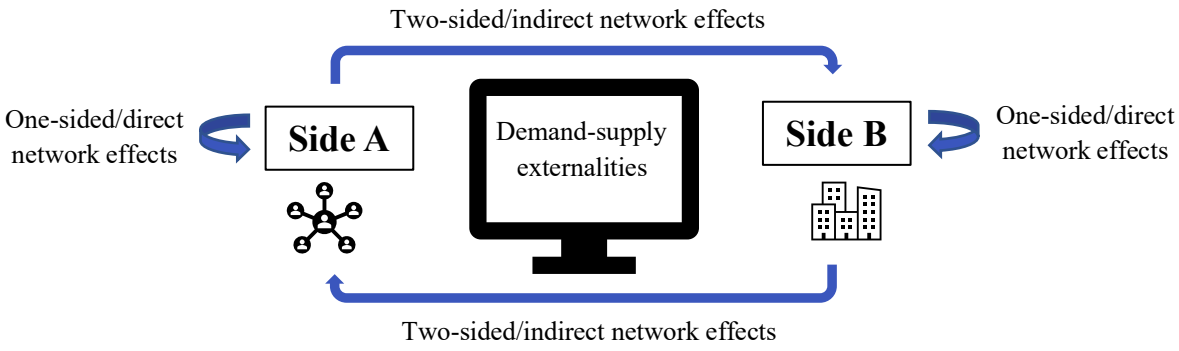
[42] This is called attention exchange and is at the basis, for example, of the freemium business models. In these, it is given the possibility to users to pay a fee to use the platform without any advertising pop ups or to use it for free but with the presence of many advertising messages

[43] Saul Hansell, "Web site ads, holding sway, start to blare", N.Y. Times (Mar. 17, 2001) at A1 (quoting Scott Kurnit, then-Chief Internet Officer of Primedia)



(Figure 3)

The web economy finds its foundation on invisible engins such as softwares and coding: in the last few years many firms have entered this market thanks to IT competences, but a high percentage of these has failed because of the high levels of rivalry. Afterall, it is not enough to generate value and benefits for customers, offering them information and entertainment at zero cost. It is also very common for firms to mash-up, combine their economic and intellectual forces, or to carry out a fast strategic morphing to survive. Many factors come into play. Anyway, the experts of the social media sector know that the Internet market is fast moving: it attracts everyday potential entrants and it is pretty easy to steal the supremacy to the dominant firm because of the instability of the market and thanks to the potential provision of new technologies. In this case long-term planning is quite useless, while large doses of dynamism and flexibility to changes are required. More specifically, a small number of firms tend to compete in two-sided markets, because of the network effects impact and the high fixed costs. Big companies have a solid customer base, which guarantees them continuative exposure and revenues, while new entrants have to work a lot on the acquisition and the retention of clients through investments on the platform and on equipment. Moreover, incumbent firms offer a larger net coverage and even if the heterogeneity of customers may limit the size of network effects, this does not threaten their advantage. Generally speaking, the sides of multi-sided business models interact between each other: there are at least two different groups of customers which enter in contact thanks to the common platform, and both network effects –direct and indirect– and membership externalities are significant. These factors play a very important role especially in the social media market that grows thanks to the expansion and the enlargement of the network. Direct network effects exist when the number of

consumers on one side increases, brings about a more valuable service to be offered, so attracts more and more users on each side, causing membership externality. As the number of users increases, the reviews about the service are better, so even more users are attracted: this is called demand-supply externality. Given this, in the social media economy, many multi-sided platforms fight against rivals to take control of the industry, and such externalities are a reason for high levels of concentration. This brings power and profits, but, at the same time, the attention and the scrutiny of the antitrust authorities. On the other hand, indirect network effects occurr when the quantity and the quality of complementary products increase, so the value of the starting product increases too. Sometimes multi-production is used to reduce costs and to reach economies of scope, other times it represents the only way to sell any product at all.

"Our top priority is to build useful and engaging products that enable people to connect and share with friends and family through mobile devices, personal computers and other surfaces."[44]

The primary issue arising from a multi-sided platform is the so-called *chicken-and-egg problem*. It is essentially about how to get both sides on board: first of all, obtaining a critical mass of users by offering a free service or paying them to use it (penetration pricing strategy[45]), then investing on that side to increase the number of participants which in turn encourages the other side to participate. In the end, it is not clear if it is the content that attracts people or the customers that lure commercials. Another issue to be considered is the *balancing of the interests* of the two parts: any decision may affect one side positively and the other one negatively. This happens because the two components face two different demand curves and corresponding elasticities of demand, so when they combine they have to decide an optimal pricing strategy, consider any possible impact of a change in price, in the service offered, in future investments.

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[44] A quote by Mark Zuckerberg taken from Trautman, Lawrence J., Governance of the Facebook Privacy Crisis (Mar. 31, 2019)

[45] A pricing strategy for which goods and services are sold at a lower price in order to attract new customers and take them away from competitors

3.2 Competitive worries raised by two-sided platforms

First of all, it has to be said that the evaluation to be carried out by the competition authorities in the social media economy field is complex. Standard, formulaic rules cannot be applied here, since this is not a common business, but a new way to sell something valuable for customers without making them *tangibly* pay. This sector is relatively new, knowledge is still insufficient and the impact of this reality may be underestimated in the examination. Here a qualitative research is more suitable than the traditional quantitative one: to look at the true nature of competition is the key to understand this ecosystem.

On the one hand, the advertising side may even follow a usual path, but the evaluation mechanism of these platforms as a whole is not straightforward. This economy survives primarily thanks to the content side, because without it no audience would exist, but even without capital it cannot outlive: both of them are needed. Antitrust issues arise because of the atypical and misbegotten pricing strategy: an individual price charged on either side does not track costs or demand of that side, as the product or service is sold for free. There are also some doubts about the size of barriers to entry. All of this complicates the evaluation of authorities, which are interested in protecting the competitive spirit of the free market. It is known, indeed, that the main threat to competititiveness is dominant firms, because they may harm consumers and they could possibly impose an increase in price, especially if they merge with other firms. When a company holds market power, it can prevent new entrants and maintain prices high: as a matter of fact, market power is described as "the ability to set prices above the marginal cost level"[46]. The point here is that prices are even below the marginal cost level, so it is very difficult to understand whether a platform has market power, since the price is not equal to its marginal cost[47]. This seems wrongful and economically unsustainable per se, but in reality it is not, since this ecosystem supports itself smoothly, thanks to the "cross-subsidization"[48] of the advertising side. The charge in

[46] United States v. E.I. du Pont, 351 U.S. 377, 391 (1956)

[47] Price=Marginal Cost is the economic efficiency condition applied in every business under the perfectly competitive market assumption

[48] Körber, Torsten, Is Knowledge (Market) Power? - On the Relationship Between Data Protection, 'Data Power' and Competition Law (Jan. 29, 2018)

any other similar situation would be of predation, since the zero-price is not only a penetration strategy, but a long-run equilibrium price. Indeed, according to the Brooke Group Test of Predatory Pricing[49], the plaintiff must show that the defendant's prices are below an appropriate cost measure and that the defendant had a reasonably prospect or a dangerous probability (under §2 of the Sherman Act[50]) of recouping its investment in below-cost prices. Here nothing of this applies or at least seems logic applying. Furthermore, if there is an increase in price on one side, this may result unprofitable for the platform as a whole. If a social network site decides for example to sell its service at a price higher than zero, customers may decide to switch to another platform, and as the number of users decreases, also the amount of advertising and revenues will do so.

About barriers to entry –the other critical point of the competition analysis– there are two schools of thought[51]. The more appropriate one states that *an entry barrier is an advantage that incumbent firms have, while new entrants cannot secure*. Some examples are represented by patents, resulting from the decision of the patent offices rather than investments or efforts, tax breaks, government policies and regulations. The other one states that *by means of it [barriers to entry], the incument firm can earn supra-competitive returns without attracting new entrants, since it is hard to enter*. If it were easy to enter, the competitive level would increase and the advantage of the incumbent firm would vanish. If it is costly to enter, there is no evidence of any antitrust issue, because maybe this is the result of risky investments carried out by the incumbent firm over time; moreover, the concept of "costly" is very relative and, looking at the current situation of capital markets, everyone can invest and find enough funds to enter a sector.

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[49] Brooke Group Ltd. V. Brown & Williamson Tobacco Corp. 509 U.S. 209 (1993)

[50] "Every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations, shall be deemed guilty or misdemeanor, and, on conviction thereof; shall be punished by fine not exceeding five thousand dollars, or by imprisonment not exceeding one year, or by both said punishments, in the discretion of the court"

[51] According to Evans, David S. and Schmalensee, Richard and Noel, Michael D. and Chang, Howard H. and Garcia-Swartz, Daniel D., Platform Economics: Essays on Multi-Sided Businesses (2011)

3.3 Antitrust authorities and social media

Google Alphabet, Amazon, Facebook, Twitter, IBM, Microsoft, Apple, and other high-tech and social media platforms are the target of investigations and litigations from the competition authorities: usually the charges are attempt to monopolize or to abuse their dominant position in Europe and in the United States. In the social media market, in particular, Facebook is regarded as a monopoly by the press[52] and the general opinion: "It's safe to say social networking is Facebook"[53] and nobody would disagree. Others say that Facebook's monopoly is a natural result of network effects –a "no fault" monopoly–, powered and fed by anticompetitive practices[54]. It is not clear who is right, since sometimes perceptions are far from truth: even if it is a fact that Facebook is powerful, well-established and successful, "Monopoly is a term that idiots like to throw around to sound smart at parties, but really don't know what the hell they're talking about[55]". For the antitrust, monopoly is defined as the power to raise prices above the competitive level or to exclude competition. Being dominant on the market, accomplishing a monopoly is not unlawful per se: it can naturally happen or being sought; the problem is the abuse of this privileged position, that is revealed through the competition authorities analysis.

Firstly, the antitrust has to define properly the relevant product and geographic market of a company. The relevant product market consists of all the products that current and potential customers perceive as effective substitutes. As the relevant product market gets broader, the more complex is to assess market power. The geographic market, instead, includes all the physical or online shopping options that customers consider interchangeable. In the online market it is easier to switch from one firm to another one because of the wide range of choices and the cheap, non-limited-by-distance access. However, the creation of a natural, global market is hampered by language barriers and by impediment or inability of Internet access. Authorities typically consider national areas for social media. The biggest issue with the new media is that it is very difficult

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[52] Erika Murphy, "Facebook's curious social monopoly", E-Commerce Times, 2010

[53] Kevin Kelleher, "How Facebook learned from MySpace's mistakes", CNN Money (Nov. 19, 2010)

[54] Rubenr, "Facebook's antiprivacy monopoly", Deobfuscate (May 3, 2010)

[55] Simon Rich, "Don't be evil", New Yorker (Oct. 18, 2010)

to distinguish platforms and so to segment them properly: there are no specific, legal criteria that can help the competition authorities in doing this. Facebook is a social network, but is not specifically a videosharing, entertaining platform such as YouTube, nor a professional purpose network such as LinkedIn, nor a messagging platform such as WhatsApp. Still, Facebook permits to chat, post and see videos, create a professional network and offer entertainment. Furthermore, there exist social networks not based on personal profiles, but on interests and hobbys, and they can be considered as belonging to the same segment of Facebook. So, what can it be done? The segmentation is inconclusive from this perspective, or at least it may give a point of view, but just one and not as precise as needed. Antitrust authorities generally take into consideration more options and points of view, but nothing is sure, especially because it does not exist a competition legislation which clarifies the segmentation of social media. Secondly, after the definition of relevant product and geographic markets, the market share evaluation comes: in Facebook's case, it is not straightforward. An alternative could be to calculate the total page views, which is easy but imprecise, or the number of registered users, whch highlights the committment level of customers to the platform through the calculation of active users. A beneficial but very complex way to evaluate market share would be to calculate the exact time spent by each user on the platform and the attention effectively given to what appears on their screen. Another option is the assessment of the share of advertising revenues, which is useful but not enough to prove abuse of dominant position or attempt to monopolize. There is also the estimation of the competitive level in the information market, which is particularly noteworthy[56]. It has to be underlined, anyway, that competitiveness about personal and non-personal information is not for protection purposes, but for exploitative ones: to increase revenues from applications developers, advertising firms, to raise money from investments in capital markets following market trends.

"The true product Facebook brings to the market is not its technology, but the social information about, and access to, its vast user base."[57]

[56] All these alternatives are proposed by Waller, Spencer Weber, Antitrust and Social Networking (Oct. 24, 2011). North Carolina Law Review, 2012

[57] Chris Butts, "The Microsoft case 10 years later: antitrust and new leading "New Economy" firms", 8 Nw. J. Tech. & Intell. Prop. 275, 290 (2010)

Thirdly, the firm position analysis comes. It consists of analyzing the relative position of competitors, the presence and height of barriers to entry, the pressure exercised by potential entrants, and the countervailing buyer power. Barriers to entry are a good indicator of market power, even better than market share: in the social media sector, the technology is wide available, capital costs are low, but, in addition to network effects, there is also the stickiness of the system. First of all, for some years Facebook has been *socially mandatory*, since there were no close substitutes and it became the first social network to become so popular worldwide. Secondly, it is a pretty difficult and long process to deactivate permanently and finally delete a Facebook account, and in any case the company owns the posts and pictures of the ex-user. Thirdly, Facebook does not allow third parties (other sites) to acquire directly information, and in the past it was intricate even for the users themselves to transfer all the pieces of information to another social network. In a nutshell, the company has the power to lock-in users. To sum up, information gaps, switching costs and brand loyalty are the obstacles that a rival of Facebook has to overcome. Furthermore, the demand for its products is inelastic, since, even if there exist alternatives, those are of inferior quality, less developed, less innovative and, above all, less popular.

After having understood that Facebook has market power in the social networking platforms market, it has to be determined whether it violates the antitrust regulation, also considering that, if there exist a valid justification for an anticompetitive business conduct, that is not unlawful. The focus is on the concept of "attempted monopolization". According to the §2 of the Sherman Act, this means any exclusionary behaviour carried on by existing monopolists, and in the United States the necessary elements to prove this attempt are the intent to monopolize, the exclusionary behaviour, and the dangerous probability to succeed. In the European Union, the definition given by Art. 102 of the TFEU comprehends any exploitative or exclusionary abuse carried out by a firm which have achieved before a dominant position on a specific relevant market. Such rule is a greater threat for firms with high market shares, because they are more likely to have achieved –or considered to have achieved– a dominant position. The general target in EU is 40% of share in a relevant market, but this numerical target does not apply to all the cases. Under 40% of market share, the authorities generally conduct an individual assessment, for which they consider the market position of the firm and of all its competitors, the presence and the extent of barriers to entry, the significance of network effects and other factors which may nurtur the dominance. A

broad range of conducts is also analyzed: bundling, predatory pricing, denial to grant access to an essential facility, which can be aimed at reducing competition in a market. In North-America, on the one hand, there exists a more robust system of private right of action from competitors and customers, while in Europe it is more common that the investigations are conducted directly by the authorities in charge. Both the legislations, anyway, consider as a very serious matter any information and data policy harming competition and denials to grant access and interoperability.

Chapter 4: Data

4.1 Data-opolies

In a data-driven economy, advertisers, sellers, software and app developers, and accessory makers depend on this one thing, and the biggest risk is represented by data-opolies, powerful poles with an infinity of data in their hands, acquired thanks to their supersonic velocity of circulation and inimitable accumulation capacity. The European Commission is and has been fighting especially against the big five "GAFAM": Google, Apple, Facebook, Amazon and Microsoft. The Economist[58] called them "BAADD": too big, anti-competitive, addictive and destructive to democracy. Given their advantageous position, such companies nowadays may gain more power on the market because they can acquire the most promising start-ups and develop their innovative ideas in order to carry them away from the competitive environment before they grow and become direct competitors or are bought by rivals.

"All the major platforms started out in someone's garage. They were all tiny companies with smart and resourceful owners, a good idea and a significant but undeveloped growth potential."[59]

In 2017 the Commission fined Google €2.42 billion for leveraging its monopoly in search to comparative shopping[60]: it manipulated the ranking and the algorithms of the search engine to favour Google Shopping, its own shopping comparative site. This represented an abuse of dominant position according to the EU antitrust, since Google had 90% of market share in a stable market, with high barriers to entry caused by network effects and data, and took unlawful advantage of this. In the United States, conversely, this action was positively accepted: according to the authorities, Google

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[58] Evan Smith, "The techlash against Amazon, Facebook and Google – and what they can do", The Economist (Jan. 20, 2018)

[59] Hovenkamp, Herbert, Antitrust and Platform Monopoly (Nov. 14, 2020). Yale Law Journal, Vol. 130, 2021, U of Penn, Inst for Law & Econ Research Paper No. 20-43

[60] Case AT. 39740, Google search (shopping), 2017, E.C. 1/2003

offered the product considered the best one for customers and, moreover, the negative impact on other websites was only incidental, so no fine was imposed. In the same period the EU Commission fined Facebook €110 million for providing incorrect, misleading information during the 2014 investigation under EU merger regulation of Facebook's acquisition of WhatsApp[61].

A traditional monopoly has per se anticompetitive effects on competition: the price increases and the quantity decreases, so there is allocative inefficiency, the quality of products and services is reduced, and there is the deadweight loss. The harm is higher as the duration of the monopoly protracts. In this case, data-opolies do not exercise power by charging higher prices, but certainly they are not harmless, even if the price is constant and the quality is unchanged –because of network effects and their importance for the number of users–. "Antitrust institutions and analysts have failed to provide an adeguate response to markets without prices[…] "trade", for purposes of the Sherman Act and the Clayton Act[62], encompasses zero-price transactions. To continue ignoring welfare harms in these markets would be both unjust and inefficient."[63] The potential harm created is indeed related to the political, moral and social spheres: first of all, privacy is at stake, also because sometimes is protected by opaque policies. As technology evolves and improves, more and more data are needed and are collected by these companies, increasing the awareness that such businesses use data for their own benefit. This is called the age of "surveillance capitalism". This type of capitalism finds its basis on the buying and selling of special weapons, *data*, that do not even need a US State Department export license, because they are not recognized as such and their market is unregulated[64]. After the introduction of social networks and smartphones, today it is very easy to have access to the personal data of billions of people, because everything is collected in the small computer that everyone has in its pocket. This reality gave birth to a new industry, the one for data, and

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[61] European Commission Press release IP/17/1369: "Mergers: Commission fines Facebook €110 million for providing misleading information about WhatsApp takeover" (May 18, 2017)

[62] The Clayon Act is an amendment of the Sherman Act. It regulates business activities and defines the unethical and unfair practices, such as monopolies

[63] Newman, John M., Antitrust in Zero-Price Markets: Foundations (Jul. 31, 2014). University of Pennsylvania Law Review, Vol. 164, 2015, University of Memphis Legal Studies Research Paper No. 151

[64] Sharon Weinberger, "Inside the massive (and unregulated) world of surveillance tech", TED Salon: Brightline Initiative (Nov. 2020)

consequently for targeted advertising, and since these weapons are becoming more and more powerful and are available to the highest bidder, the danger for consumers is very high.

> ***"At its core, surveillance capitalism revives Karl Marx's old image of capitalism as a vampire that feeds on labour, but with an unexpected turn. Instead of labour, surveillance capitalism feeds on every aspect of every human's experience."***[65]

Data-opolies are able to reinforce their own power on the market by offering innovative services and lock-in users on their platform more and more. They can also influence the public thinking, and the perception that customers have about them is not an exception. Moreover, they have a good durability: the data-market is highly competitive, there are huge sunk costs, the data amount and network effects are essential to survive, so the true power is in the hands of few, big companies, that sometimes are also sustained by national governments. The biggest problem is that consumers do not have the instruments and enough information to imagine and really understand how much their data are valuable for these companies to be competitive on the market, and until the situation is not managed properly by the international authorities, until there is not an effective regulation of the data-market, there will not be an actual privacy protection.

4.2 The role played by big data

Big data: one of the most common and misleading expressions, referring to traces and online deposits of people, things and their interactions. Firstly, why are they called "big"? It has nothing to do with the amount or their relevance, as the adjective could evoke. They were called like this in the past because they were large sets of data for which a supercomputer was needed to interpret and amass. Nowadays, the name makes reference to their ability of entering in relation with other data, creating a vast net of interconnections[66]: the individual himself, the individual with others, and groups of

[65] Harvard Business School Emerita Professor Soshana Zuboff, "The age of surveillance capitalism", 2019

[66] Taken from the paper "Six Provocations for Big Data" by Boyd, Danah and Crawford, Kate (Sep. 21, 2011)

individuals. Once processed, data are the most relevant commodity, competitive factor, in the digital market: they can be sold to any entity, such as any other good, following the common rules of demand and supply, and nowadays the demand for data is very high. Data, alongside attention, are actually the currency of multi-sided businesses and are a valuable resource to optimize resources and to generate revenues. For example, thanks to simple information about the user, such as the location and the visited pages online, it is possible for Google, the most popular search engine, to answer very precisely to queries, providing in less than half a second all the details needed.

"Our data race from Munich to Miami and to Hong Kong in fractions of a second. In this new data world, we all leave digital traces every moment, everywhere."[67]

Data certainly play a fundamental role, but now the question is: is knowledge market power?[68] Firstly, the answer depends on the type, the quality and the relevance of data, and given the very costly processing, they are better to be worth the investment. Owning a large amount of data does not mean to have more power. Somebody believes that to collect and accumulate data is not an abusive action, since any firm can do it, and it is not even considered an abuse to the essential facility doctrine when a company decides not to grant access to competitors to the data already stored, because they are not seen as an essential facility for companies to be profitable. There exist no legal obligation to share data, especially because maybe customers themselves do not want them to be shared: for example, they accept to share with platform A but not with platform B. Others, on the other hand, believe the opposite[69]. The social media logic imposes that any type of data is filed, from music listened to, to books read, videos and films watched, relationships created, in order to guarantee a more accurate prediction of users' taste and to display them personalized advertising. In the end, it can be said that owning information is a tool both for social network holders and content providers, who monetize from targeted advertising. From the point of view of the user, this

[67] Viviane Reding, "The EU protection reform 2012: making Europe the standard setter for modern data protection rules in the digital age – innovation conference digital, life, design", Munich, Speech/12/26 (Jan. 22, 2012)

[68] Körber, Torsten, Is Knowledge (Market) Power? - On the Relationship Between Data Protection, 'Data Power' and Competition Law (Jan. 29, 2018)

[69] The reference here is to the Bundeskartellamt v Facebook case

represents a way to improve the quality of the service provided, making it more attractive and interactive, and perfectly shaped for everyone. Especially in the two-sided platforms it is important for the "free side" to offer a high quality, free of charge, well-taylored service, because customers otherwise may decide to go away from the platform, since it has a zero price and zero switching costs. Given the technological improvement of the last years, nowadays users are more and more demanding and less and less forgiving: they get tired of things easily, above all if a platform does not work the way they like it. Anyway, data could be considered as a high barrier to entry in any digital sector, since it is not possible for a new entrant to reach the levels of big corporations such as Facebook, Microsoft or Google. There exist indeed *big data rich* and *big data poor*, according to the ability of creating data, meaning to collect it and expertise in analyzing it. This prevents competitors from acquiring needed data and, considering the consumer welfare, it deprives users of competition benefits. The asymmetry of information is a fact, but it is not enough to prove a charge of exploitation: it is possible that a percentage of users are unaware of what happens behind the scenes, but it is unlikely that nobody knows. Some should know and maybe do not care or do not understand how far this practice has gone. Another possible negative consequence for customers is the price discrimination: the knowledge that data-opolies have about habits, shopping targets, interests, may reflect users' willingness to pay. Even if this is not a matter to be considered by the antitrust authorities to define market power, it is something bad that could happen. Anyhow, a hidden price discrimination cannot be concelead for too long: customers have reviews and price comparative systems in their hands and if they find out that the seller is discriminating, they may decide not to buy from him again and will report it, causing a damage to his image. In any case, this is unpredictable: maybe the service offered by such a platform is better and handier than others, so in the end nothing will happen, even if a consumer is worse-off.

An open debate on big data is about their processing. Geoffrey Bowker, informatics professor at the University of California Irvine, stated that "Raw data is both an oxymoron and a bad idea; to the contrary, data should be cooked with care". With this statement, he suggests that data are always the result of cognitive, institutional and cultural processes, since it is up to humans the decisions about what to collect and how to do so. With this meaning, it is clear that data can never be truly "raw" –this adjective is improper–, but it can be used as "no processing was performed following the

collection of data"[70]. Moreover, it is quite usual today to try to analyze humanistic disciplines also quantitatively, even if it is not simple at all: on the one hand the risk is to interpret the information badly, on the other hand is to objectify a non-objective reality and suggest a non-objective truth. There exist, though, many issues related to the data processing. The first problem related to this practice is that big data refer to the "exact right now" and follow an unpredictable pattern. Secondly, the value of small data cannot be forgotten, even if the scale is modest and the information is related to a single individual, in targeted advertising everything counts. Thirdly, due to their enormity, data nowadays cannot be visualized in their totality: they firstly need to be mathematically counted and only then it is possible to try to create a context. Differently from Geoffrey Bowker's opinion, Chris Anderson, American reporter and writer, believes that, even if the data collected by the data-opolies are mostly behavioural, numbers can reveal patterns without any reworking, or, as said, "cooking". He points out that even if models work perfectly in biology, science, physics, in the digital market no similar effort is required: data can be examined by statistical algorithms. In a nutshell, he thinks that it is not important to understand why users click on a link, but to realize that, if they do so, this information is acquired by algorithms and elaborated to become useful. The idea is that today we are not aware of the why of people's actions, but since something is done, now it is possible to track everything with a millimetric precision, and this seems a further step in technology. "Sixty years ago, digital computers made information readable. Twenty years ago, the Internet made it reachable. Ten years ago, the first search engine crawlers made it a single database. Now Google and like-minded companies are sifting through the most measured age in history, treating this massive corpus as a laboratory of the human condition. They are the children of the Petabyte[71] Age."[72]

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[70] Nick Barrowman, "Why data is never raw", The New Atlantis (2018)

[71] A petabyte is a unit of information corresponding to 2^{50} bytes

[72] Chris Anderson, "The end of theory: the data deluge makes the scientific method obsolete", Wired (2008)

4.3 The protection of users' personal data

"Personal data are a raw material, an asset for the Internet economy."[73]

According to Article 4(1) of the European GDPR[74] 2016/679, "personal data" means "Any information relating to an identifiable natural person ("data subject"); an identifiable natural person is one who can be identified, directly or indirectly, in particular by reference to an identifier such as name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person." There exist different types of personal data[75]: the direct personal data (e-mail address, mobile device contact, calendar, phone number, birth date, name), the highly sensitive personal data (sexual orientation, religion, race, health status) and behavioural data (preferences and interests). Many social networking companies are currently facing an increasing scrutiny from the antitrust authorities: it is still under examination whether personal data are the price to be paid to use online platforms and whether firms are exploiting the unsophisticated trust and confidence of users. Margrethe Vestager, the current executive vice-president for "A Europe Fit for the Digital Age" and Competition[76] in the European Commission, stated[77]: "A lot of people tell me they are worried about how companies are using their data. I take those worries very seriously. Privacy is a fundamental part of our autonomy as individuals. We must have the right to decide who we share our information with, and for what purpose." Neither Facebook is immune to competition authorities: while the Bundeskartellamt was moving to start a proceeding against the company[78], Mark Zuckerberg said that "privacy is disappearing as a social norm"[79]. During the rise and the transition from MySpace to

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[73] Joaquín Almunia, "Competition and personal data protection", Speech/12/860 (Nov. 26, 2012)

[74] General Data Protection Regulation

[75] According to Chirita, Anca D., The Rise of Big Data and the Loss of Privacy (Jun. 15, 2016)

[76] Source: Biography of Margrethe Vestager on the official site of the Europen Union

[77] During the Committee of Economic and Monetary Affairs (2014), 4-056

[78] Bundeskartellamt, Press Release: "Bundeskartellamt initiates proceeding against Facebook on suspicion of having abused its market power by infringing data protection rules (Mar. 2, 2016)

[79] The Guardian, "Privacy no longer a social norm, says Facebook founder" (Jan. 10, 2010)

Facebook, Zuckerberg indeed promised[80] that his company was not using and would have never use cookies to collect private information from any user, but today "accepting Facebook's policies in order to use its service means accepting broad-scale commercial surveillance"[81]. By 2014, indeed, Facebook's monopoly was in the making: all the rivals had left the market[82] and very high entry barriers rose naturally. From that moment Facebook started to track users, leverage consumer identity for stronger surveillance and prevent customers from opt-out. Consumers' explicit requests in privacy settings not to be tracked were ignored and the company was also able to circumvent users' installed ad blockers[83], making them useless. An interesting fact: between 2016 and 2017, Facebook cashed in $709 million only from circumventing ad blockers. The true question now is: should Europe impose limits on the means used to collect and retain personal data? From an antitrust standpoint, in fact, the two issues arising here are a possible anticompetitive conduct and a harm to competition. The anticompetitive conduct is about the acquisition of data through anticompetitive means, while the harm is related to the attempt to prevent competitors from acquiring data, always through anticompetitive means. In this case, the antitrust authorities have to ascertain whether there exists any exclusivity agreement or distribution agreement. The problem is that such agreements would help the incumbent firm to gather even larger volumes of data and to acquire scale and prevent other firms to take the lead in the sector. Google, for example, is the search engine proposed by default in Apple Safari and in Mozilla Firefox and this guarantees Google a dominant position in this market. Such power would be unsustainable for smaller firms to face. The charge here is exclusion of rivals from the game and would have to be analyzed under Articles 101 and 102 of the TFEU. Another factor to be considered is the data portability, the possibility to "transfer data from one electronic processing system to and into another, without being prevented from doing so by the controller"[84].

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[80] Content of the Facebook privacy policy of 2004

[81] Srinivasan, Dina, The Antitrust Case Against Facebook (September 10, 2018). Berkeley Business Law Journal Vol. 16, Issue 1, Forthcoming

[82] Many left the social networking sector where they had to be direct competitors of Facebook, but some decided to focus on niches of social media segments (short tweets, disappearing messaging, professional networks, …)

[83] An ad blocker is a piece of software designed to prevent advertisements from appearing on a web page

[84] GDPR, COM/2012/011 Final

A simple example of data portability is the switching from one phone operator to another one: in this occasion customers want to keep their telephone and cellular number even if they change the operator. "The data subject shall have the right, where personal data are processed by electronic means and in a structured and commonly used format, to obtain from the controller a copy of data undergoing processing in an electronic and structured format which is commonly used and allows for further use by the data subject". Otherwise, retention may act as a switching barrier. The European Commission is still deciding whether personal data can be considered as an essential facility. In the last twenty years the Commission has decided that a firm breaches Art. 102 of the TFEU whenever it refuses to grant access to an essential input, if it is a dominant firm, and this reasoning was applied in some cases of telecommunication and network infrastructures (Microsoft case[85] and Telecom case[86]). "A product is indispensable […] Whether it constitutes an alternative solution, even if less advantageous, or technical, legal, economic obstacle making impossible or unreasonably difficult to operate in the market to create alternative product or service –possibly in cooperation with other operators–."[87] The point is that with data the debate is very complex: some reckon that data give a competitive advantage over competitors, but they are not fundamental to be successful, while others firmly state that data represent barriers to entry and promote market power of big data rich firms.

[85] Microsoft refused to provide competitors with the access to specific information on interfaces and to protocols necessary to ensure a full interoperability with the Windows operating system. The Commission decided that this refusal was abusive, because the complementarity of interfaces, protocols and the operating system ensured Microsoft a competitive advantage and there was the risk of limitating the technological development of its competitors

[86] The access to Telecom Italia's network has always been highly regulated: Telecom has to grant access to the network to all the competitors and to impose the same price to all the retailers without discriminating. At a certain point, there was a "constructive" refusal to grant access (a different treatment of the internal and the external requests for access services) and competition was restricted

[87] IMS, §28, Case T-301/04, Clearstream Banking AG & Clearstream International SA v Commission, ECR II-3155 §147 (2009)

4.4 Antitrust and privacy matters: EU law references

As said previously, it is widely accepted that data are the implicit price of online services, but is it true that low privacy levels result in a high level of market power? Firstly, if a multi-sided platform holds market power, it is able to extract more data than the amount it would have access to under perfect competition, and this represents a supra-competitive advantage. Secondly, the other way round, when a platform holds big data there is a basis to conclude that it may hold market power, because it enjoys an advantageous position in the sector. Many uncertainties arise at this point: it is difficult to evaluate the quantity of consumer data under the competitive environment, then the analogy with currency is unfounded, given that money has a standard nominal value equal for everyone, while data value depends on the type and has no nominal nature. Furthermore, other factors may help a company to gain market power, such as the quality of the service, the advertising space price, the amount of users' attention required. Today privacy could be arguably seen as an ingredient of the offer, and when it is not protected or enhanced, the value of the service decreases. As a matter of fact, the Canadian Competition Bureau endorsed a proposition[88] about this: a practice rendering a product or service less privacy-friendly is anticompetitive if and only if it is true that less privacy causes a quality reduction and so a harm to customer welfare. In any case, there is no guarantee that people would stop using social networks instead of giving away their personal data, or that they would agree to pay a fee to protect their privacy rights. Privacy-friendliness has started to become a goal of antitrust law[89]: the French Autorité de la Concurrence and the German Bundeskartellamt state that "Even if data protection and competition laws serve different goals, privacy issues cannot be excluded from consideration under competition law simply by virtue of their nature […] There may be a close link between the dominance of the company, its data collection processes and competition on the relevant markets, which could justify the consideration of privacy policies and regulation in competition proceedings."[90]

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[88] Canadian Competition Bureau, "Big data and innovation: implications for competition policy in Canada", discussion paper (2017)

[89] According to Colangelo Giuseppe and Maggiolino Mariateresa, Data Accumulation and the Privacy-Antitrust Interface: Insights from the Facebook Case for the EU and the U.S. (Feb. 17, 2018)

[90] Autorité de la Concurrence, Bundeskartellamt, "Competition law and data", report (2016)

Given the technological evolution and the infinite possibilities in our hands, can this undefined system be considered ethical and sustainable? It cannot, in my opinion. Data protection regulations should be updated and should keep up with the digital development, and with new economic and social standards. Even if consumers are not worried by the data-opolies or the data collection and exploitation, it is fundamental that the authorities protect them, especially because they do not feel any harm while their personal information is at stake. This would be ethical, to have a clear and effective legislation that describes rights and duties of social media users and providers. In the end, as said in the beginning, the consumer welfare is one of the most important things to be looked at when it comes to antitrust analysis. Moreover, legal procedures about personal data and privacy matters can have a positive impact on consumers' well-being: this is then a dimension to be considered in the competitive analysis framework, because a more careful safeguard of users counts as a quality increase in the service offered. It would also be a way to make the competition analysis more elastic, more accurate and defined in the examination of similar cases, where social media companies act in an arguable manner and threaten the fair competitive process.

Talking about competition law, it is not possible to go on permitting big companies to do whatever they want in order to establish themselves on the market and to gain by misleading consumers. Data are effectively a barrier to entry and represent an unquestionable edge on the social media market, since everything is based on cookies, targeted advertising and algorithms, which mainly use data to work. It is undeniable that Facebook has become so powerful also thanks to the acquisition of other popular online platforms and thanks to the mergers of all the data collected by each of them. It is also understandable that these investments, carried out with the precise intention to merge consequently, represent an unfair business practice. Antitrust and competition regulation should obstruct and punish such intentions, especially because this behaviour is not only wrong from a competitive standpoint, but goes beyond and represents a true consumer harm. The European Union has laws for the protection of privacy and the promotion of a fair treatment of personal data, but these matters have become a reading key for the digital reality and for the social media functioning. It is complex to add another factor to an hypothetical antitrust analysis, but nowadays this issue cannot be put aside, especially because it may help international authorities to take harmless and informed decisions regarding these new business models.

The central piece of legislation about data protection is the Directive 95/46/EC[91], which is in force in the whole European Economic Area: it aims at protecting individuals in the processing and free movement of personal data. This European Directive reflects the content of Articles 7 and 8 of the European Charter of Fundamental Rights about the protection of the individual and his right to privacy and information. Article 7 states: "Everyone has the right to respect for his or her private private and family life, home and communications". Article 8, on the other hand: "1. Everyone has the right to the protection of personal data concerning him or her. 2. Such data must be processed fairly for specified purposes and on the basis of the consent of the person concerned or some other legitimate basis laid down by law. Everyone has the right of access to data which has been collected concerning him or her, and the right to have it rectified. 3. Compliance with these rules shall be subject to control by an independent authority."

In particular, the constitutional privacy dimension, according to Art. 8, is made of the fairness and the lawfulness of the processing of data for specified purposes, the transparency and the right to access data. About transparency, the EDPS, European Data Protection Supervisor[92], establishes that the mere silence or inaction in case of default settings of online social networks or web browsers is not a valid consent[93]. A prior consent is always required and the notice must be in a clear and understandable language. Article 29 of this Directive imposed a control exercised by the so called Article 29 Working Party: it was an independent European advisory entity garantor of data protection and privacy[94]. Its members were national data protection authorities – one representative per member state–, a representative of the European Data Protection Supervisor and a representative of the European Commission. In 2018 it was substituted by the EDPB, the European Data Protection Board[95], according to the EU GDPR 2016/679. Another piece of legislation is the Directive 2002/58/EC about traffic

[91] Data protection Directive, 1995

[92] European independent data protection authority

[93] EDPS, para. 3.1.4 (2014)

[94] Concerning data processing legal basis, the obligation to provide clear information to data subjects, to delete or anonymise personal data once no longer necessary, the right to access, rectify and delete data for subjects

[95] It is composed of representatives of the national data protection authorities and the EDPS

data, spam[96] and cookies. The HTTP cookies (or web cookies) are small pieces of data that the web browser stores on the users' computers when they browse a website. They represent a reliable way for websites to remember information about users or their past activities. A very useful, but at the same time dangerous tool. Potential privacy issue may arise: that is why European law requires the "informed consent" to be accepted by every user before cookies start tracking the activity on his device.

[96] Unwanted e-mails (in majority of cases), generally with advertising content

Chapter 5: Bundeskartellamt v Facebook case

5.1 Introduction to the case

The more data are acquired, the better are the products offered, the more users are attracted, and the more data are acquired, and so on. That is why Facebook is what it is today. In 2016 Facebook was accused[97] of alleged abuse of dominant position in the market for social networks. The abuse, according to the antitrust authorities, consisted of the imposition of unfair terms and conditions aimed at accumulating ever-increasing quantity of user data[98]. Andreas Mundt, the president of the German antitrust authority –the Bundeskartellamt– commented: "Dominant companies are subject to special obligations. These include the use of adeguate terms of service as far as these are relevant to the market. For advertising-financed Internet services such as Facebook, user data are hugely important. For this reason it is essential to […] examine [also with reference to] the aspect of abuse of market power whether consumers are sufficiently informed [regarding] the type and the extent of data collected". Facebook has been offered in Germany since 2008 with its integrated chatting service Facebook Messanger. Furthermore, it provides the most popular photo-blogging social network (Instagram), an instant messagging application (WhatsApp), Oculus and Masquerade[99]. In its evaluation, the Bundeskartellamt identified different segments among social media platforms: professional networks (such as LinkedIn), messaging platforms (such as WhatsApp and Snapchat), and other types of entertainment platforms (YouTube, Twitter). All of these were considered active in a different relevant product market from the one in which Facebook is active.

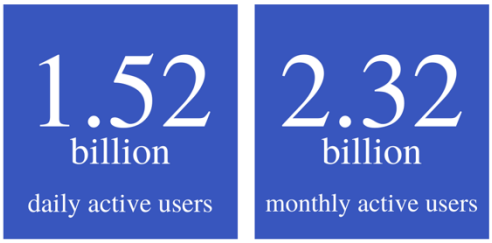
[97] Bundeskartellamt, Press Release: "Bundeskartellamt initiates proceeding against Facebook on suspicion of having abused its market power by infringing data protection rules (Mar. 2, 2016)

[98] Source: Colangelo, Giuseppe and Maggiolino, Mariateresa, Data Accumulation and the Privacy-Antitrust Interface: Insights from the Facebook Case for the EU and the U.S. (Feb. 17, 2018)

[99] An application where it is possible to edit and share pictures with filters and masks

According to Section 18 (3a)[100] of GWB[101], Facebook is a combination of network and multi-sided platform. Only a few companies such as Google+ and other smaller german social networks were included in the same relevant market of social networks. It has to be added, moreover, that in spring 2018 Google+ was announced to be leaving the sector and to be converted into a payable service for internal business ccommunications. The geographic relevant market taken into analysis was Germany. To sum up, Facebook was assumed to have a quasi-monopoly in the german social network market, due to the huge number of users and to the limited substitutability with rivals' products.

The worldwide usage data of December 2018[102] were the following:



Specifically in Germany, the data[103] at the time of the investigation were these:

[100] §18 GWB – Market Dominance; (3a) In particular in the case of multi-sided markets and networks, in assessing the market position of an undertaking account shall also be taken of: 1. direct and indirect network effects; 2. the parallel use of services from different providers and the switching costs for users; 3. the undertaking's economies of scale arising in connection with network effects; 4. the undertaking's access to data relevant for competition; 5. innovation-driven competitive pressure

[101] German Competition Act

[102] Source: Bundeskartellamt.de official website

[103] Source: Bundeskartellamt.de

And this is not the end: Facebook, indeed, guaranteed an extended network, where everyone was able to find other people they wanted to associate with, and the network effects had been excessively increasing, day after day. All these aspects resulted in natural high barriers to entry and a following lock-in of users. Moreover, German users seemed attached and bound to this single platform and were not interested in multi-homing, which would have possibly represented a getaway for them from being locked-in there. The Bundeskartellamt believed that Facebook gave access to the service to users only on the conditional they granted an extensive permission to collect their personal data. This is called *"the Facebook package"*: the allowance to amass without any limit any kind of data generated by users when using third party websites and to merge these data with users' accounts. For third party websites it is meant WhatsApp, Instagram, and other websites and apps with embedded Facebook application programming interfaces (API[104]).

Summing up, Facebook can count on "on Facebook" (direct) and on "off Facebook" (indirect) data. The "off Facebook" data collection skates on thin ice: Facebook uses it to optimize the offer, but at the same time targets advertising and ties users to its network, to the detriment of competitors and competition itself. In conclusion, according to the Bundeskartellamt, Facebook users needed to be protected from exploitation, because they had lost control on their personal data. The most interesting aspect of this investigation is that, starting from an antitrust issue, the analysis winked at data protection and privacy principles. The Bundeskartellamt, indeed, closely cooperated with the main data protection authorities in clarifying the privacy issues involved and this proceeding represents a pioneering work.

[104] An API is an intermediary software that allows two applications to talk to each other. Every time an app like Facebook is used, an instant message is sent, or the weather forecast is checked on the phone, an API is used

5.2 The analysis and the results

Bundeskartellamt emblem

The suspicion was that Facebook was collecting user data from third party websites without the users' consent. This represented an antitrust issue because the accumulation of data had consolidated the already strong dominant position of the company. From Article 102(b) of the TFEU[105] it can be gathered that a dominant firm's unilateral practice violates competition law if the above practice excludes rivals from competition and if it is liable to reduce the consumer welfare. The Bundeskartellamt president Andreas Mundt said: "Today data are a decisive factor in competition. In the case of Facebook they are the essential factor for establishing the company's dominant position. On the one hand there is a service provided to users free of charge. On the other hand, the attractiveness and value of the advertising spaces increase with the amount and detail of user data. It is therefore precisely in the area of data collection and data use where Facebook, as a dominant company, must comply with the rules and laws applicable in Germany and Europe."[106] It has been already discussed that data may or may not constitute an exclusionary factor, it depends on the perspective. It is undeniable, anyway, that whenever there exists a pre-emptive strategy to exclude rivals, and third parties play a role in this strategy, this represents an anticompetitive conduct. The dominant firm, in this case, would prevent other firms from gathering alternative personal data, while it is increasing its own volume of data. Afterwards, if there has been a debasement of quality of the service offered by third parties, this would suggest a reduction of the consumer welfare: this may happen when privacy diminishes in return for more data, so the quality of the service is not the same. Another possibility to suggest this reduction may be an increase in the implicit price of the Internet services, but this is more difficult to substiantiate than the previous one. Anyway, it is also possible that customers are still willing to enjoy the service, even if the platform collects personal data, but this does not have to stop the authority from intervening to

[105] "Any abuse by one or more undertakings of a dominant position within the internal market or in a substantial part of it shall be prohibited as incompatible with the internal market in so far as it may affect trade between Member States. Such abuse may, in particular, consist in: (b) limiting production, markets or technical development to the prejudice of consumers"

[106] Source: Bundeskartellamt.de official website

protect the competitiveness of the market. Another thing that worried the Bundeskartellamt was the request for a single catch-all grant of consent from users: according to the authority, it could be unfair according to Article 102(a) of the TFEU[107]. The European Commission and the Court of Justice rarely had the opportunity to deal with "unfairness". In the past its definition was linked to the idea of injustice, for example when the clauses of a contract were not functional to the purpose of the agreement or when the clauses were unjustifiably restricting any party's freedom. More recently[108], it has captured the meaning of the absence of functional relationship between the contractual clauses and the purpose of the contract. Finally, the "unfairness" concept was incorporated in Art. 102(a): unfair are "clauses unjustifiably unrelated to contract purpose, unnecessarily limiting parties' freedom, disproportionate, unilaterally imposed or seriously opaque."[109] Having said so, asking for more data than necessary is unfair and creates an imbalance in the relationship between the users and the firm managing the online platform. Now, what can be a remedy and how this remedy would solve the problem?

"Where access to the personal data of users is essential for the market position of a company, the question of how that company handles the personal data of its users is no longer only relevant for data protection authorities. It becomes a relevant question for the competition authorities, too."[110] However, the EU Commission and EU courts never made use of competition law to defend individuals' control over their personal data and digital identities: this is a new direction that authorities may take to rescue antitrust law. Facebook, according to the Bundeskartellamt, was a dominant player taking advantage of its superior access to the essential factor in data-driven markets, *data*, and that was trying to enhance this advantage through the imposition of the "whole Facebook package"[111]. On February 6th 2019 the authority proclaimed that

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[107] " […] Such abuse may, in particular, consist in: (a) directly or indirectly imposing unfair purchase or selling prices or other unfair trading conditions […]"

[108] In cases such as Tetra Pak II, Duales System Deutschland (DSD)

[109] Colangelo, Giuseppe and Maggiolino, Mariateresa, Data Accumulation and the Privacy-Antitrust Interface: Insights from the Facebook Case for the EU and the U.S. (February 17, 2018)

[110] The Bundeskartellamt, about the Facebook case

[111] This expression is taken from Colangelo, Giuseppe and Maggiolino, Mariateresa, Data Accumulation and the Privacy-Antitrust Interface: Insights from the Facebook Case for the EU and the U.S. (Feb. 17, 2018)

Facebook abused its dominant position on the social network market in Germany, because its use was conditional on the allowance to collect users' personal and navigational data from Facebook-owned services and third party mobile apps. Consequently, the Bundeskartellamt prohibited Facebook's data processing policy imposed on users and its implementation, according to Section 19 (1)[112] and 32[113] of GWB, and ordered the termination of such conduct. Andreas Mundt commented: "As a dominant company Facebook is subject to special obligations under competition law. In the operation of its business model the company must take into account that Facebook users practically cannot switch to other social networks. In view of Facebook's superior market power, an obligatory tick on the box to agree to the company's terms of use is not an adequate basis for such intensive data processing. The only choice the user has is either to accept the comprehensive combination of data or to refrain from using the social network. In such a difficult situation the user's choice cannot be referred to as voluntary consent."[114] In conclusion, Facebok was requested to give users a real choice about to what extent their data are collected and merged into their user account.

[112] §19 GWB - Prohibited Conduct of Dominant Undertakings; (1) The abuse of a dominant position by one or several undertakings is prohibited

[113] §32 GWB - Termination and Subsequent Declaration of Infringements; (1) The competition authority may oblige undertakings or associations of undertakings to terminate an infringement of a provision of this Part or of Articles 101 or 102 of the Treaty on the Functioning of the European Union; (2) For this purpose, it may require them to take all necessary behavioural or structural remedies that are proportionate to the infringement identified and necessary to bring the infringement effectively to an end. Structural remedies may only be imposed if there is no behavioural remedy which would be equally effective, or if the behavioural remedy would entail a greater burden for the undertakings concerned than the structural remedies; (2a) In its order to terminate the infringement, the competition authority may order reimbursement of the benefits generated through the infringement. The amount of interest that is included in these benefits may be estimated. After expiry of the time limit for reimbursement of the benefits set in the order to terminate the infringement, the benefits generated up to such date shall bear interest in accordance with § 288(1) sentence 2 and § 289 sentence 1 of the German Civil Code; (3) To the extent that a legitimate interest exists, the competition authority may also declare that an infringement has been committed after the infringement has been terminated

[114] Source: Bundeskartellamt.de official website

5.3 "The second round"

Bundesgerichtshof emblem

After the end of the analysis carried out by the Bundeskartellamt, Facebook filed an appeal against it to the Düsseldorf Higher Regional Court[115]. On August 26th 2019 the Court suspended[116] the application of the Bundeskartellamt's decision according to §65 (3)[117]of GWB. The *Oberlandesgericht* stated that the antitrust authority had applied GDPR principles, while it only had the right to apply competition law ones, since the two regulations pursue different objectives. The prohibition could not be enforced, because, according to the Court, the Bundeskartellamt's analysis did not demonstrate how Facebook's excessive data collection and violation of the GDPR had a negative impact on competition.[118]

The Higher Regional Court, though, had some doubts about the legality of the Bundeskartellamt's order: in its opinion, the authority did not demonstrate the causal link between Facebook's dominant position and the violation of data protection principles. The Court considered that users actually had control over their personal data, because they were aware of and allowed data processing, so there was not any kind of user exploitation: any ignorance about the terms of use had indeed nothing to do with the market power of Facebook, but with the convenience or the indifference of the users. Recital 42 of GDPR states that: "[...] It should only be assumed that he [the data subject] has given his/her consent voluntarily if he/she has a real or free choice and is thus able to refuse or withdraw consent without suffering any disadvantage".

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[115] Called *Oberlandesgericht* in German

[116] OLG Düsseldorf - decision of August 26, 2019 - VI-Kart 1/19 (V), WRP 2019, 1333

[117] §65 (3) GWB - Order of Immediate Enforcement; (1) The appellate court may, upon application, entirely or partly restore the suspensive effect of the appeal, if 1. the conditions for issuing an order under paragraph 1 were not satisfied or are no longer satisfied, or 2. there are serious doubts as to the legality of the appealed decision, or 3. the enforcement would result for the party concerned in undue hardship not justified by prevailing public interests. (2) In cases where the appeal has no suspensive effect, the competition authority may suspend the enforcement; such suspension should be made if the conditions of sentence 1 nr. 3 are satisfied. (3) The appellate court may, upon application, order the suspensive effect in full or in part if the conditions of sentence 1 number 2 or 3 are satisfied

[118] Source: "Facebook: German Supreme Court reopens the way for data regulation under competition law", Winston Maxwell, Telecom Paris, Institut Polytechnique de Paris (Sep. 10, 2020)

Moreover, it was not possible to prove an excessive data disclosure: Facebook's business model is based on data processing, and this activity is legal until it deals with the European GDPR, in particular with Article 6[119] and Article 9[120]. On June 23rd 2020, the Federal Court of Justice[121], the highest German court, decided about the enforcement proposed by the Bundeskartellamt.[122] According to §74 (1) of GWB about "Admission, absolute grounds for appeal", "The appeal on points of law against the decisions of the higher regional courts takes place at the Federal Court of Justice if the higher regional court has admitted the legal complaint", and this is what happened in this case. The Federal Court decided that the ban ordered by Bundeskartellamt could instead be enforced, and so rejected the Facebook request to order the suspension of the enforcement. On November 30th 2020, Facebook again asked to the appeal court[123] to suspend the effect of the appeal. With a "hanging order", the Court intervened against the Bundeskartellamt decision and allowed suspend it until a further judgement. In response to the Bundeskartellamt's non-admission complaint, the BGH approved the appeal against the decision of the appellate court.

This case could be described as "a grey zone between competition and privacy."[124]

According to the Bundesgerichtshof, the access to data was an essential factor both in the advertising market and in the social networking one. Facebook's terms and conditions actually impeded competition, since it was hard for competitors to create

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[119] Art. 6, GDPR – "Lawfulness of the processing": (1) The processing is only lawful if at least one of the following conditions is met: a) The data subject has given their consent to the processing of their personal data for one or more specific purposes; b) The processing is necessary for the performance of a contract to which the data subject is a party or for the implementation of pre-contractual measures that are carried out at the request of the data subject; c) the processing is necessary to fulfill a legal obligation to which the controller is subject

[120] Art. 9, GDPR – "Processing of special categories of personal data": (1) The processing of personal data from which the racial and ethnic origin, political opinions, religious or ideological convictions or trade union membership emerge, as well as the processing of genetic data, biometric data for the unique identification of a natural person, health data or data on sexual life or the sexual orientation of a natural person is prohibited. (2) Paragraph 1 does not apply in the following cases: a) The data subject has expressly consented to the processing of the personal data mentioned for one or more specified purposes

[121] Called *Bundesgerichtshof* (BGH) in German

[122] (KVR 69/19, WuW 2020, 525 - Facebook)

[123] OLG Düsseldorf - decision of November 30, 2020 - VI-Kart 13/20 (V)

[124] This quote is taken from Aoife White and Francine Lacqua, "Facebook probe is in antitrust, privacy grey zone, EU says", Bloomberg (Sep. 14, 2016)

similar individualized offers and compete on the advertising market. This behaviour heightened the already high barriers to entry of this sector. Therefore, Facebook was undoubtedly a dominant firm in the German social networking market and was abusing its position. The abusive behaviour was related to the terms and conditions of use, which deprived users of any choice, as analyzed by the Bundeskartellamt. Its role as network operator came indeed with the responsibility to maintain the existing competitive environment in the social networking market and to guarantee to the constitutional right of self-determination and protection of personal data promoted by the GDPR, which in this case had been breached by the company. "The freedom of choice of economic actors is an essential principle of competition and the proper functioning of markets. Consumers are economic actors like any other, and when a company in a dominant position puts consumers in front of a "take-it-or-leave-it"[125] choice, the consumers' freedom is reduced thus creating a distortion of competition."[126] Even if the GDPR was not directly mentioned here, a link between personal data practices and competition law exists and is strong: the BGH recognized that data processing for targeted advertising was normal and perfectly lawful, until it happened only within the platform itself and left the freedom of choice to its users. In this case, the Federal Court considered that these conditions were not fulfilled. Moreover, such terms of use incentivized to hinder competition: personal data, indeed, were an advantageous factor for Facebook, which was dominant not only in its sector, but also in the online advertising market.

The Facebook case has been opened for five years and a final resolution has not been given. The German government is considering to amend its competition law to give the possibility to the antitrust authorities to investigate and take faster decisions in the case of large online platforms. This seems the right direction to take: the Facebook case is a model to take into consideration, especially because of the huge effort of the Bundeskartellamt in showing that antitrust and data protection should converge, better sooner than later. The Düsseldorf Court tried to suspend the order of the competition authority because it considered the two legislations as divergent, while the Federal

[125] It means to accept the whole "Facebook package" and all the terms of use regarding personal data collection and processing, or to refrain from using the platform and its third party apps

[126] "Facebook: German Supreme Court reopens the way for data regulation under competition law", Winston Maxwell, Telecom Paris, Institut Polytechnique de Paris (Sep. 10, 2020)

Court examined the situation from different perspectives and confirmed the Bundeskartellamt's decision. Facebook is a dominant, very powerful company active in the social networking sector: it collects and processes users' personal data, making them to accept unfair and unclear terms of use, and it exploits and locks its customers in. The data collection also helps the company to exclude more and more competitors from the market for social networks, because data are effectively a fundamental resource to have success in a two-sided business model. Such advantage reduces the threat of new entrants, of substitutes and the bargaining power of end users, bringing the competitive level to almost zero. The company has also been increasing its profits thanks to advertising companies, which are aware of the unlimited amount of data in the hands of Facebook. This has consequently crowned it as a dominant firm also in the online advertising market.

Chapter 6: What will happen?

6.1 The future relationship of the EU and the data-empires

"We can only imagine how technology will change our lives tomorrow. The details we do not know yet. That is why the new regulatory environment has to be future-proof, be technology-neutral. That's why "privacy by design" has to become standard. It is necessary to eliminate the current barriers in our digital market to allow inventors to move forward with ideas and seize the opportunities. We have to restore the trust of citizens and businesses in the new Internet developments."[127] These words said by Viviane Reding, Vice President of the European Commission from 2010 to 2014, describe pretty well the situation of uncertainty and frustration that European authorities have to bear nowadays. The issues expressed are about the regulatory environment and the restore of trust. The regulations indeed should be "future-proof", flexible and as dynamic as the business of firms active in the high-tech sector, otherwise it would be very hard for the antitrust authorities to adapt the concepts of monopolization, abuse of dominant position, exploitation and predation to this kind of situations. Trust is another very important factor to consider, especially online where most times there is no guarantee of safety, and the familiarity sometimes lacks. Internet is boundless, is full of people from everywhere and offers unlimited opportunities, but being fooled there is unfortunately a commonplace. People do not always have the knowledge and the slyness to understand the working principles of such a complex and wide system, so it is duty of the highest authorities to protect consumers and to regulate as better as possible this new digital market. "The European Commission is working on a digital transformation that will benefit everyone."[128] The Commission indeed would like to offer new business opportunities, promote a fair and sustainable economy, encourage the creation of technology to trust, enhance a democratic, open and free society, also keeping an eye on the climate change fight and the eco-transition.

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[127] Reding, Viviane , "The EU protection reform 2012: making Europe the standard setter for modern data protection rules in the digital age – innovation conference digital, life, design", Munich, Speech/12/26 (Jan. 22, 2012)

[128] European Commission, "Shaping Europe's Digital Future", European Commission official website

"The world's most valuable resource is no longer oil, but data. The data economy demands a new approach to antitrust rules."[129]

Two lawyers experts of IT, Vito Petretti and Oliver Bell, wrote an article on "Concurrences – Antitrust Publications & Events" about two important drafts that are now being discussed by the Commission and eventually will be applicable throughout the European Union. The DMA (Digital Markets Act) and the DSA (Digital Services Act) aim at modernizing the legal framework of digital services in the European Union, according to the "Shaping Europe's Digital Future" initiative. The European Commission's goals are to create a safer digital world, where the fundamental rights of users are protected, and to establish a level playing field to enhance growth, competitiveness and innovation, both in Europe and globally.

The DMA, on the one hand, establishes the objective criteria to define a large online platform a "gatekeeper", since its aim is to fight large online platforms in particular. Such company should 1. have a strong economic position, 2. have a significant impact, 3. work in many European countries, 4. be well-established and stable over time and 5. link a large customer base with a large business system. This draft will be beneficial to business users, that depend on gatekeepers to offer their services, to start-ups, which will have fairer terms of competition and a higher possibility to enter new market and become successful, and to consumers, who will have a wider opportunity to choose among better services and to switch them if they want to, they will have an easier access to services and fairer prices. In order for the authorities to keep up with the pace of the digital reality, market investigations will be conducted: this way, authorities will be able to define companies as gatekeepers, impose new obligations when necessary and design *ad hoc* remedies to obstacle infringements of the DMA. In case of such infringements, the remedies[130] that the Commission applies are "fines of up to 10% of the company's total worldwide annual turnover" and "periodic penalty payments of up to 5% of the average daily turnover". There can also be additional remedies, financial or non-financial, that need to be proportionate to the violation committed.

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[129] "The world's most valuable resource is no longer oil, but data", The Economist (May 6, 2017)

[130] European Commission, "The Digital Markets Act: ensuring fair and open digital markets", European Commission official website

This is a list[131] of the *do*'s and *don't*s that gatekeepers are supposed to follow:

- ✓ Allow third parties to inter-operate with the gatekeeper's own services in certain specific situations
- ✓ Allow their business users to access the data that they generate in their use of the gatekeeper's platform
- ✓ Provide companies advertising on their platform with the tools and information necessary for advertisers and publishers to carry out their own independent verification of their advertisements hosted by the gatekeeper
- ✓ Allow their business users to promote their offer and conclude contracts with their customers outside the gatekeeper's platform
- ✗ Treat services and products offered by the gatekeeper itself more favourably in ranking than similar services or products offered by third parties on the gatekeeper's platform
- ✗ Prevent consumers from linking up to businesses outside their platforms
- ✗ Prevent users from un-installing any pre-installed software or app if they wish so

The DSA, on the other hand, is a reform of the E-Commerce Directive (2000) and pledges to "ensure the proper functioning of the internal market, in particular in relation to the provision of cross-border digital services."[132] Digital services include many online services, such as maketplaces and app stores, social networks, accommodation, travel and content-sharing platforms. Among the provisions of the draft, the most relevant are §3 and §4: the first one is about the obligations applicable to all online platforms, excluding the "micro or small enterprises", while the second one relates to the additional obligations for "very large platforms" –defined as "online platforms which provide their services to a number of average mothly active recipients of the

[131] Source: European Commission official website

[132] Petretti, Vito and Bell, Oliver, The EU Commission publishes the digital services act intended to modernize the legal framework for digital services in the European Union, e-Competitions Preview, Art. N° 98592 (Dec. 15 2020)

service in the Union equal to or higher than 45 million"–. The Member States are expected to be responsible for the enforcement of these provisions, except in the case of "very large platforms" which will still be in the hands of the Commission. Furthermore, the DSA provides the creation of an advisory group of national authorities, the European Board for Digital Services.

Maybe these regulations will force the change of gatekeepers' business model, in particular the data-opolies' one: some scholars have defined the personal data extraction practice as "data colonialism"[133]. This colonialism negatively promotes the consumer exploitation through data collection and processing, the same way the historic colonialism brought to the natural and human resources appropriation and utilization for profit. "Data colonialism paves the way for a new stage of capitalism whose outlines we only glimpse: the capitalization of life without limit."[134] The question arising is, what will be the future of data-empires? If the Bundeskartellamt V Facebook case highlights something, it is that data are a factor to take into consideration in antitrust examinations and are a player to be worried about in competition matters, especially because the online advertising and the social media markets strongly depend on owning such information.

6.2 Is Facebook a "too big to fail" company?

This is a part of the speech made by Mark Zuckerberg at the the Crunchies Award in January 2010: "It's interesting looking back, right? When we got started –just a night in my dorm room at Harvard– the question a lot of people asked is: 'Why would I want any information on the Internet at all? Like, why would I want to have a website?'. And then, in the last five or six years, blogging has taken off in a huge way, and all these different services that have people sharing more information. And people have really got comfortable not only sharing more information –and different kinds– but more openly with more people. And that social norm is just something that has evolved

[133] Smith, Kelly Anne, "What you need to know about the Facebook antitrust lawsuit", Forbes Advisor (Jan. 28, 2021)

[134] Couldry, Nick and Mejias, Ulises A., "Data Colonialism: Rethinking Big Data's Relation to the Contemporary Subject", Sage Journals (Sep. 2, 2018)

over time. And we view it as our role in the system to constantly be innovating and updating what our system is, to reflect what the current social norms are […] 'What would we do if we were starting about the company now, and the site now?' We decided that these would be the social norms now and we just went for it."[135] Facebook's CEO and founder perfectly embodies the idea of dynamism and technological innovation that Viviane Reding and the European Commission hope to keep up with. He created Facemash and Facebook because he had understood what people exactly wanted: he was able to answer to a necessity by offering something needed before others, or in a better way. Demand and supply, the basis of economics: it always works, but for how long? Nowadays Zuckerberg is one of the richest men alive and he is a brilliant and successful entrepreneur, and he continues asking himself where people want to go and how he can help them to reach that "where" with its services.

"Facebook has become the de facto social network in the last ten to fifteen years, but recent upgrades in the regulatory and user landscapes may now challenge its dominant position, making its future demise if not plausible, then at least less implausible over the long term."[136]

It is not by chance that Zuckerberg is one of the most successful business owners nowadays. He is the CEO of what today is called a "too big to fail" company. The meaning of this epithet is not "so important that it has to be there forever", but more "too big to go down in a tumultuous and disorganised manner"[137]. Said so, the demise of such a colossal platform as Facebook could have "catastrophic social and economic consequences for innumerable communities that rely on the platform on a daily basis, as well as the users whose personal data Facebook collects and stores."[138] The collapse of Facebook would immediately affect developing countries, where it is the main platform through which people communicate. Developing countries are indeed the

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[135] "Mark Zuckerberg has been talking about privacy for 15 years - here's almost everything he's said", AnitaBalakrishnan, Sara Salinas, Matt Hunter, CNBC (Apr. 9, 2018)

[136] Öhman, Carl and Aggarwal, Nikita, What if Facebook Goes Down? Ethical and Legal Considerations for the Demise of Big Tech (November 27, 2019). Internet Policy Review, 9(3). DOI: 10.14763/2020.3.1488

[137] Carl Öhman, doctoral candidate at the Oxford Internet Institute

[138] Source: Carl Öhman

areas in which Facebook is expected to expand in the next years and so where the highest number of users will be. Another issue arising would be, where do users' personal data go? They would be probably sold off in a bankruptcy procedure or simply be deleted and lost. From a perspective, this would not only mark the end of the biggest data-empire era, but also "the loss of a vast amout of historical material, which future generations would value in ways society cannot yet predict."[139] Facebook indeed acts as a digital archive of global heritage: memories, events, thoughts, opinions are impressed there. Nick Srnicek, author of "Platform capitalism"[140] and professor of digital economy, argued that digital platforms can rely on network effects, and Facebook is the most popular social network because of this: it is consequently very powerful, because of the huge amount of data collected. He added that, in contrast to this, from a legal point of view, the platform could be wiped out easily: obliged by regulations, Facebook would have to find a new method to monetize, since data would not be allowed to be used to target advertising. Maybe at that point Facebook would decide to offer its services for a monthly or annual fee and some users would leave to get their free network service from another supplier. This would result in a decrease of network effects and a consequent reduction in revenues from advertisers. Any social networking platform would be able to outdo Facebook if its users started to leave and switched to other platforms.

"Although Facebook is arguably more resilient to the kind of user flight that brought down […] MySpace, it is not immune to it. These precedents are important for understanding Facebook's possible decline."[141]

The problem is that, until national laws are not put in place to regulate the data collection and usage, the platform with the most valuable information for advertisers will be the dominant and most powerful one in the market for online advertising. Similarly, some researchers from the University of Oxford stated: "It is unlikely that Facebook would shut down anytime soon, but the growing pressures from regulators

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[139] Alex Hern, "Facebook and other tech giants 'too big to fail' ", The Guardian (Aug. 11, 2020)

[140] Nick Srnicek, "Platform Capitalism", Cambridge: Polity Press (2017)

[141] Öhman, Carl and Aggarwal, Nikita, What if Facebook Goes Down? Ethical and Legal Considerations for the Demise of Big Tech (November 27, 2019). Internet Policy Review, 9(3). DOI: 10.14763/2020.3.1488

and public critics could lead to a reversal in its […] fortunes over the long term, potentially sending Facebook to the same fate as MySpace."[142]

It has indeed been registered[143] among the American people an increasing dissatisfaction with Facebook: 57% believes that Facebook represents "primarily a harm to society" and 69% that Facebook has too much power.

In conclusion, the two leading threats to Zuckerberg's dominance are the pressures from regulators all over the world (see Germany as an example) and the shifting social media trends. As a matter of fact, it is possible that users' tastes change: in the last few years, for example, Instagram has been exploding, maybe because a social media where posts are mainly photos and short videos is likely to receive more engagement than text-based, long posts. This preference may be the reason why Instagram will outperform Facebook in some years, who knows. These regulatory and socio-technical factors may force Facebook (or at least giving it a suggestion) to shift from being a public platform provider to a company focused on private messaging, and from monetizing user data through advertising to doing so through commerce and payment transactions. "I believe the future of communication will increasingly shift to private, encrypted services where people can be confident what they say to each other stays secure, and their messages and content won't stick around forever. This is the future I hope we will help bring about. We plan to build this the way we have developed WhatsApp: focus on the most fundamental and private use case –messaging– make it as secure as possible, and then build more ways for people to interact on top of that."[144]

The United States have recently been investigating on some high-tech "too big to fail" companies, such as Apple, Amazon, Google and Facebook. "In 2019 the US put Silicon Valley in its crosshairs."[145] It is opinion of many that they have essentially become too big throughout the years and, given their dominance on the market, are able to seriously restrict competition. The Congress believes that this situation represents a harm to

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[142] Alison Durkee, "Facebook faces shrinking popularity, but researchers warn it may be 'too big to fail' ", Forbes (Aug. 11, 2020)

[143] According to a Accountable Tech / GQR Research survey

[144] A quote by Mark Zuckerberg (2019)

[145] Wall Street Journal, "What Facebook, Google and others can learn from Microsoft's antitrust case | WSJ", YouTube (Sep. 10, 2019)

consumers, workers and business partners: it is not lawful that big companies exploit their position to monitor and keep an eye on their competitors, also because this way the distance between them and the smaller businesses increase excessively. The United States are trying to regulate the high-tech sectors to go back to the origins of antitrust, when the Sherman Act was enacted and prohibited any monopoly or attempt to monopolize.

Representative David Cicilline[146], who led an investigation into this tech companies, stated: "This marks a major step in our ongoing work to bring the tech industry's monopoly moment to an end." Jacques Fontanel, professor emeritus at the University of Grenoble-Alpes, stated that GAFAM are both "progress and danger for civilization"[147]: they are "at the heart of the new digital economy", and their combined financial value adds up to more than $4 trillion. On the other hand, they have become quasi-monopolies in their market and have enough political and social influence to manipulate the public opinion, to avoid antitrust regulations and to strategically skip out on corporate taxes. In December 2020 the Federal Trade Commission and more than 40 States accused Facebook of buying up its rivals to illegally reduce competition: "Facebook has coupled its acquisition strategy with exclusionary tactics that snuffed out competitive threats and sent the message to technology firms that, in the words of one participant, if you stepped into Facebook's turf or resisted pressure to sell, Zuckerberg would go into 'destroy mode', subjecting your business to the 'wrath of Mark'."[148] After the filing of the antitrust lawsuits in, Facebook's stock dropped 2%, even if some financial analysts underlined that the company had a diversified portfolio and was well-positioned, since it was active in more than one tech sector. Anyway, the States are pushing for the deals to be unwound, so that authorities could really start the battle against these giants and revolutionize the industry, especially because "Antitrust enforcement based on the size of companies has been dormant for the last 40 years."[149]

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[146] A Rhode Island Democrat

[147] Smith, Kelly Anne, "What you need to know about the Facebook antitrust lawsuit", Forbes Advisor (Jan. 28, 2021)

[148] Kang, Cecilia and Isaac, Mike, "U.S. and States say Facebook illegally crushed competition", The New York Times (Dec. 9, 2020)

[149] CNBC, "Google, Facebook, Amazon And The Future Of Antitrust Laws", YouTube (Aug. 16, 2019)

Conclusion

In the end, nothing or very little of these arguments really matters. There is no doubt that thanks to Facebook, its third party applications and the other social media platforms people are able to connect and feel closer. The digital reality is something new that never happened in history before, and is the main feature of our century. Online services make it possible to be in many places at the same time, to have an unlimited knowledge at our fingertips, to get to know the most disparate people, and to enjoy all the instruments available. Especially during the Covid19 outbreak, Internet and technological devices have represented the only way to communicate almost directly with everyone, and this has obviously caused an increase in the revenues of high-tech, social media and advertising companies. On the other hand, what could have we done? As it has been said before, since this is a new market, it takes some time to understand its true potentiality and extremes, but we already know something. The truth indeed is that "we have created tools that are ripping apart the social fabric of how society works" (Chamath Palihapitiya) and that "today, data colonialism is changing society by transforming human life into a new abstracted social form that is also ripe for commodification: data" (Couldry, Nick and Mejias, Ulises A.). This is undeniable.

Things are not just black or white, but rather there exist thousands of shades in-between, and every of them is still arguable. My opinion is that Facebook and the other social media platforms will not disappear nor overturn their business model: big data are an uncontrollable phenomenon, and will continue to be collected and exploited. The best thing that international authorities can do is to regulate the use of such tools and monitor *how* and *how much* they are used, in order to protect consumers and guarantee a fair competition on every segment of the digital market.

"Rejecting data colonialism does not mean rejecting data collection and use in all its forms. But it does mean rejecting the forms of resource appropriation and accompanying social order that most contemporary data practice represents. A useful first step is to name such practice as the colonial process that is surely is."

(Couldry, Nick and Mejias, Ulises A.)

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