Communities, Utopias and Tools. A Cultural, Multimodal and Technological Exploration of Facebook.

Ilaria Moschini

Thesis submitted to the University College of London for the degree of Doctor of Philosophy 2020

University College London - Institute of Education Culture, Communication and Media
DECLARATION

'I, Ilaria Moschini, confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.'

Signature

________________________________________
ABSTRACT

This thesis is concerned with the study of the digital social media platform Facebook by means of a critical multimodal approach. The study presents an analytical framework which seeks to add a more nuanced cultural dimension to the field of Critical Multimodal Discourse Analysis (CDMA), while also incorporating within it an analytical layer that takes into account the technological structure of digital artifacts. The thesis begins from the Foucauldian and Cultural Theory conceptualization of criticality as “discursive mapping” and envisions the combination of Critical Multimodal Discourse Analysis with (American) Cultural Studies and Platform Studies for the analysis of digital discourse. It then provides a demonstration across three empirical chapters of the suggested analytical model through an investigation of Facebook. The first empirical chapter examines the worldview which is multimodally encoded in Facebook’s public narration. The second empirical chapter investigates the ideational context that frames Facebook’s worldview. This chapter selects and studies a diachronic corpus of texts that represent significant milestones in the creation of the cultural construct that seems to be the core of Facebook’s self-narration and its critique in relation to the development of social media and to the “platformization” of the web. The critical analysis of the social media is further expanded in the third empirical chapter which explores the self-representation that Facebook gives to a global generalist audience as regards the description of its business model and compares such a narration to the study of the architecture of the social media as a platform in technical documentation in order to reveal any discrepancies, deliberate omissions or inaccuracies present in it. The thesis concludes by reviewing the findings, the implications and limitations of the study and offers a set of recommendations for future developments of the line of research.
IMPACT STATEMENT

The benefits that my research can bring lie in the connection of areas that are usually distant for the analysis of the complex socio-cultural and technical phenomenon of social media. Indeed, the framework that I have envisioned combines insights from Critical Discourse Analysis, Multimodality from a Socio-semiotic perspective, American Cultural Studies and Platform Studies. I maintain that it can have an impact on Critical Multimodal Discourse Analysis as it adds to it a more material/technological perspective, and as it puts the concept of culture back in focus in Discourse Analysis, which is crucial considering contemporary global cultural flows and the acceleration of cultural change in the social media age. At the same time, the framework can enrich, Cultural Studies by offering a textual metalanguage for the study of cultural artifacts. In addition, it can enrich Platform Studies by offering a valid methodology to be exploited in this area. Inside academia, this impact may be brought about through dissemination activities such as publishing in scholarly journals or in participating in conferences at national and international levels. Outside academia, my research output may also contribute to implementing educational curricula regarding digital literacies competences by developing the critical awareness of users in terms of how to make meaning across social practices and how various social media environments contribute to the structuring of knowledge and discourse(s) through their design and use. Such an impact may also be brought about by collaborating with academics and non-academics and by engaging with public policy makers and influencing them in order to reflect on the necessity to connect technical skills in information technology with a more nuanced cultural and socio-semiotic awareness.
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CHAPTER ONE
INTRODUCTION AND CONTEXTUALIZATION

1.1. The Purpose of the Thesis
The purpose of the present thesis is to investigate the role of social media as socio-political actors by adopting a critical multimodal stance towards the semiotic operation of such media (Machin 2013; van Leeuwen 2013; Machin and van Leeuwen 2016). In particular, the aim of my research is to explore social media starting from the worldview that they present at the level of their institutional communication and to delve into the cultural sources of their narrations with special reference to the cultural context out of which they originate. The “context of culture” (Halliday 1978) is an under explored area in Systemic Linguistics and in Multimodal Studies even if a focus on the cultural context aligns strongly with Hallidayan ideas. I maintain that the returning to the Whorfian conception of Linguistics (here in its multimodal evolution) as a “heuristic instrument for the study of culture” (Hodge and Kress 1993 [1979], 14) can be crucial to the study of contemporary scenarios that are characterized by interrelated yet disjunctive global cultural flows that need to be taken into account when discussing “ideoscapes”, “mediascapes” and “technoscapes” (Appadurai 1996). The goal of exploring the context of culture, which is highlighted in the very title of the thesis, is realized by integrating the multimodal analysis of Facebook with a strand in (American) Cultural Studies which is informed by Media Studies and Cultural Anthropology. Such a combination places my analysis at the intersection between the diachronic analysis of historical facts and the study of digital artifacts and of the meanings making processes that they feature.

The critical analysis of the social media as socio-political actors is enriched by the focus on their materiality as platforms. One of the steps of the methodology that I envision of ‘multimodal ideational mapping’ is given by a ‘technological layering’ that takes into account the material nature of social media platforms through the analysis of their digital architecture that lies below the surface of front-end texts. It is a vertical dimension of analysis which
integrates Social Semiotics with the technical-material perspective of Platform Studies theorized by Bogost and Montfort (2007) in the area of Digital Media Studies. The contribution of Platform Studies lies in the focus on the material construction of hardware and software, in order to learn more about the ways in which the meaning making processes occur in semiotic artifacts that are technically mediated by social media platforms.

1.2. Background
The ideas and questions that inform this thesis stem out of my own research on the digital remediation of US political discourse (Moschini 2010, 2015, 2016a), where I have underlined how the exploration of the ideological load of the context of use (which is never neutral) is crucial to fully ‘unpack’ the realization of meaning in “webridized” discourses (2014b). In particular, I have come to notice that, when a discourse becomes hybridized with the language and the formats of the Web, it is not only influenced by the discursive practices favored by the digital platforms or by the communities of use, but also shaped by the values encoded in such platforms. Those values are not only the ones related to the globalization of markets (Fairclough 1995, 2011), but also the ones related to the aesthetics and worldviews of the people who designed them (Coleman 2013). Personal computers, the Internet and social media are highly connoted mediational means: more specifically, they are cultural artifacts that originate out of a peculiar historical blending of Cold War industrial research, US counterculture, DIY ethos and Sci-Fi Fan Culture (Isaacson 2014; Turner 2006). I maintain that shedding light on the weltanschauung, or ‘worldview’, which is semiotically encoded in the digital platforms that are used every day by billions of people is crucial to understanding contemporary globalizing processes. In the words of Tim Berners-Lee, “the Web is more a social creation than a technical one. [It was] designed […] for a social effect – to help people work together – and not as a technical toy” (2000, 123). This is the reason why I have chosen to investigate social media as socio-political actors, the idea of society they express in their communication and how they realize it through their digital tools offering. In particular, I have chosen to study Facebook as it is one of the earliest social networking sites that was founded following the formation of the Internet, the
first one to have structured itself as a platform and, still today, the most used social media at a global level.

Facebook has become integral in the lives of people, and the tools that the company offers are ingrained in our societies in ways that were unimaginable 10 years ago. As outlined in the Opening Remarks to the US House of Representatives Energy and Commerce Committee hearing on “Facebook: Transparency and Use of Consumer Data” (Pallone 2018), people don’t just share pictures of their families, they use social media platforms to connect for school, to organize events, and to reach their political and institutional representatives. In my own life, I have been living for the past two years in the Lego Company town in Denmark where the community of expatriates that I belong to has come to organize itself at business, recreational and communal level through Facebook groups and, by leveraging many Facebook tools, has become interwoven with institutions at a local, national and international level.

Above all, I have chosen to study Facebook as it is a social media platform which presents a highly articulated socio-political vision of the world from a socio-political perspective as a global community which has to be infrastructurally enabled in its coming together by digital platforms and their associated tools. To achieve this goal, tools are explicitly dedicated to the strengthening of civic participation, for example, to manage groups or to keep citizens informed during electoral periods. It is a digital community the narration of which seems to be at the conjunction of two long established discursive traditions: namely, American political discourse and US technological determinism as these have been shaped by the Bay area from the Second World War on. I maintain that, to understand the kind of society that Facebook envisions and the way such a model is realized in its tools and is sustained by its business model, it is fundamental to investigate the semantic load of key terms and expressions such as, for instance, “community building” and “access to tools”, and to explore the semantic shift that occurs between “affordable” and “free (of charge)” and from “free of charge” to “freedom”. It is the framing of such expressions in their discursive traditions that make them seem ‘natural’. Moreover, it is important to connect such an investigation with the understanding of the business model and its sustainability, especially after the recent scandals relating to the exploitation
of users’ data and because it is crucial to understand the role of the different actors (such as users, third-party developers, advertisers …) in the process of the digital mediation of civic participation.

In order to investigate such a complex ideational bundle and its relationship with the technological tools that are supposed to realize it, I have found that the instruments that are offered by Critical Multimodal Analysis – that is the Critical Discourse Analysis of Discourse adopting a multimodal perspective (Machin 2013; van Leeuwen 2013) – need to be enriched, on the one hand, with the addition of a more fine grained cultural analytical lens and, on the other hand, with a more material/technological perspective. This is the reason why, in the present thesis, the analysis of Facebook as a social media platform incorporates three different analytical spheres: the Critical Multimodal Analysis of Facebook's worldview, the diachronic and synchronic study of the related socio-cultural contexts, and the analysis of software architectures where the socio-cultural logic is encoded (Manovich 2013). This thesis contributes to the Critical Multimodal study of social media platforms by connecting different areas of studies such as Critical Discourse Analysis, Socio-semiotic Multimodality, American Cultural Studies and Platform Studies, and by combining them in a horizontal dimension of analysis in order to discursively map the worldview that is communicated by Facebook in its cultural and semiotic components. In addition to this, the analysis of the main conceptual pillars is deepened by means of the exploration of their origin, their developments and their semiotic realizations. The critical analysis of Facebook is complemented by an investigation of its digital architecture as this is related to its business model and realized in one of its foundational tools, the so-called Facebook login, which is one of the key semiotic entry points in its social media infrastructure. Having sketched the aims of the thesis and outlined the interests from which it has emerged, in the next section the research questions that inform this thesis are presented.

1.3. Research Questions
The meta research question of the present work revolves around the possibility to ideate a critical multimodal framework for analyzing social media as sociopolitical actors which includes the cultural and the technological
dimensions of mediational means. The theoretical basis of such a framework is illustrated in Chapter 2, while the methodological steps are described in Chapter 3. The framework – which I have labelled ‘multimodal ideational mapping’ – is here applied to the study of Facebook for several reasons. First of all, as has been mentioned in the previous section, Facebook is the most important social media platform at a global level with 2.45 billion monthly active users as per the company’s Third Quarter Report in 2019. Moreover, Facebook was the first social networking site to launch a service for developers in 2006 and this choice – which is explained in detail in Chapter 6 – turned the social networking site into a platform and enabled the software company to become the core component of an ecosystem of artifacts and relationships dependent on its products and services. It is exactly Facebook’s digital architecture, which is deeply intertwined with its business model, that was exploited for the collection of users’ data in the context of the Cambridge Analytica Scandal. The research questions that are directly related to this case study are the following:

1) What are the discursive strategies and the main conceptual pillars around which the official communication of Facebook is structured since the presentation of the new company mission in February 2017?

2) What is the origin of the main epistemic formations¹ that emerge from and, at the same time, underpin Facebook’s worldview? How have they changed in terms of their semantic extension, multimodal realizations and evolution?

3) How can the Critical Multimodal Analysis of Facebook as a socio-political actor be enriched by the analysis of the architecture and of the digital tools which are offered by this social media?

¹ I here intend by epistemic formations the conceptual bundles which form an ideology. I had originally thought of calling them ‘discursive formations’, but this label could have been misleading because it can create a confusion with the Foucauldian use of the same term (1989 [1969]).
These research questions are returned to and further discussed in Chapter 3. As I explain in more detail there, the first empirical chapter (Chapter 4) is dedicated to answering the first research question through the investigation of Facebook’s worldview as it emerges from the analysis of the company mission in a qualitatively selected corpus of texts. The new company mission was selected as it is the first time that the platform is described as a global social infrastructure. Chapter 5 is dedicated to the investigation of the evolution of the main epistemic formations that underpin Facebook’s worldview through the multimodal study of their diachronic entextualizations. As noted (see Footnote 1), by epistemic formations I intend the conceptual bundles which form an ideological system, so as to distinguish them from Foucault’s use of “discursive formation” to signify large scale discursive regularities and structures (Foucault 1989 [1969]). Finally, Chapter 6 aims at integrating the critical analysis of the platform with the study of its architecture and its digital tools by investigating the technical documentation. This has been selected as it is a type of documentation which is not a usual object of analysis for linguistic or multimodal discourse analysts.

1.4. The Contribution of the Thesis
This thesis contributes to the area of Critical Multimodal Discourse Analysis by enriching it, on the one hand, with a more nuanced cultural stance and, on the other, with a sharper technological perspective by creating bridges with American (Cultural) Studies and Platform Studies. As per the cultural stance, building on a conceptualization of “discourse as knowledge” (Foucault 1989 [1969]), and of criticality as “discursive mapping” (Pennycook 2001; O’Regan 2006), this thesis focuses on the analysis of worldviews as they are realized in multimodal texts and investigates the “mapping” of the way(s) in which meanings are encoded in texts and how these texts contribute to the discursive mediation of society and culture. I argue that Multimodal Studies offer a powerful tool for the analysis of artifacts that should be more deeply used to explore not only the realization of meaning in artifacts, but also to study culture, which is here intended as “discourse” (Scollon, Wong Scollon and Jones 2012 [1995]) and a “semiotic system” (Geertz 1973). Indeed, alongside Poynton and Lee (2000) and Threagold (2003), I argue that Linguistics and, more broadly,
Multimodal Studies can offer a textual metalanguage for cultural studies, including American Cultural Studies, even if Cultural Studies have never truly engaged with Discourse Analysis despite their emphasis on texts. This is the reason why the process of “mapping” that I have envisioned in the present thesis features the merging of the multimodal study of texts in order to highlight the main conceptual paradigms that emerge from them with the investigation of the diachronical evolution of such epistemic formations through the multimodal study of their entextualizations. I argue that the conceptualizations of culture as a “semiotic system” (Geerz 1973) creates a strong connection with the strand in (American) Cultural Studies that has been influenced by Media Studies, Cultural Anthropology and the German academic tradition of Kulturwissenschaft (Klepper 2016, 64), the aim of which is to study the cultural representations which serve to generate and maintain (ever evolving) meaning and that provide the narration of our worldviews as this is mediated by semiotic artifacts. Moreover, I argue that my framework can be used to study not only social media platforms that come from the US, but also cultural artifacts that have a different origin, because the technique of “textual criticism” that I borrow from American Cultural Studies is functional to investigate the complex nexus of communication, culture and historical perspective the artifacts are immersed in. At the same time, I argue that this thesis partially answers William Uricchio’s call who declares new media “significant texts” (2014, 370) that need to be studied in order to understand contemporary American culture.

As per the technological component, my thesis is in line with the perspectives in Multimodal Studies which focuses on how materiality should inform empirical research (e.g. Jewitt 2006; Bateman, Wildfeuer, and Hiippala 2017; Djonov and van Leeuwen 2017; Ledin and Machin 2018; Poulsen, Kvåle and van Leeuwen 2018) and enriches them by providing a technological layering model to Discourse Analysis which integrates social semiotic multimodal analyses of front-end texts (such as posts or comments) and of social media communicative properties, with the exploration of an underlying layer constituted by the network of relationships created within an application ecosystem and developed using web services and the related APIs. I maintain that the integration of Social Semiotics/ Multimodal Studies with the technical-material perspective of Platform Studies, which have been theorized by Bogost
and Montfort (2007) in the area of Digital Media Studies and which is concerned with the algorithms and protocols of social media, may help us better understanding the technological mediation of discourse.

1.5. The Organization of the Thesis
The thesis features seven chapters, the earlier chapters (Chapters 2 and 3) deal with the theoretical and methodological components of the research work, while Chapters 4, 5 and 6 are the empirical parts of the thesis. The concluding Chapter 7 presents the discussion of the results, the implications and the limitations of my work and suggests some of its potential future developments and applications. In Chapter 2, I introduce in detail my analytical approach and its main conceptual components in the context of the relevant literature in the areas which inform it, namely, Critical Discourse Analysis, Multimodality from a Socio-semiotic perspective, American Cultural Studies and Platform Studies. The cornerstone of the entire approach is a critical approach to the analysis of discourse in its more poststructuralist aspect and the notion of criticality as a process of “mapping” the ways in which meanings are encoded in texts and how these texts contribute to the discursive mediation of society and culture (Pennycook 2001; O’Regan 2006). In Chapter 3, I illustrate the methodological perspective of this thesis in relation to both its theoretical and its empirical content. The connecting element between the general theories and concepts illustrated in the Chapter 2 and the empirical analyses is the process of ‘ideational and technological multimodal mapping’. Such a process aims at putting the concept of culture back in focus in Discourse Analysis and in adding to Critical Discourse Analysis a more material, in this case, technological perspective. Indeed, the theoretical and methodological framework that I envision for the study of social media platforms as socio-political entities features a combination of the study of the worldviews and their main conceptual pillars as they emerge from the multimodal analysis of their public communication as companies with the diachronic exploration of the roots of the main epistemic formations that constitute the ideational core of their institutional communication and the critical analysis of the tools and of the architecture of the digital platforms.
Chapters 4, 5 and 6, these are the empirical parts of the thesis. Here I provide an example of the use of the analytical model of this thesis through the investigation of the social media platform Facebook. The first empirical chapter (Chapter 4) examines the worldview which is encoded in Facebook’s public narration as it has been shaped since the presentation of the new company mission in February 2017. In the next chapter (Chapter 5), I investigate the ideational context that frames Facebook’s worldview through the selection and analysis of a diachronic corpus of texts that represent relevant milestones in the creation of the cultural construct that seems to be the core of Facebook’s self-narration and its critique in relation to the development of social media and to the “platformization” of the Web. The critical analysis is further expanded in the last empirical chapter (Chapter 6) which explores the self-representation that Facebook gives to a global generalist audience as regards the description of its business model following the scandals that involved the gathering and exploitation of users’ data. It also compares such a narration to the study of the architecture of social media as a platform in technical documentation in order to reveal possible discrepancies, deliberate omissions or inaccuracies present in it. The thesis concludes by reviewing the findings, the implications and limitations of the study, and offers a set of recommendations for future developments of the line of research.
CHAPTER TWO
THEORETICAL FRAMEWORK

2.1. Introduction
The aim of the present chapter is to review the literature related to the theoretical model proposed for the study of social media. As it has been explained in the first chapter, the approach features the combination of Critical Discourse Analysis with Multimodal Studies, (American) Cultural Studies and Platform Studies. The chapter starts from the disambiguation of the concept of criticality that is adopted in the analysis part of this thesis: it is a conceptualization of criticality as knowledge and discourse mapping (Pennycook 2001; O'Regan 2006) the aim of which is to investigate the worldviews originating in texts, which are understood as written, oral and multimodal. The chapter continues introducing Multimodal Studies and the main concepts for multimodal analysis, with a special focus both on the social semiotic strand that is used and on the merging of Multimodality with Critical Discourse Analysis as it has been envisioned by van Leeuwen (2013, 2014) and Machin (2013) in their studies of global cultural industries.

The chapter concentrates then on the notion of culture since the proposed theoretical model advocates for the return to the Whorfian conception of Linguistics (though in its multimodal evolution) as a “heuristic instrument for the study of culture” (Hodge and Kress 1993 [1979], 14). In detail, it is explained how, following Scollon, Wong Scollon and Jones (2012 [1995]) and Geertz (1973), the notion of culture is intended as a discursive system which can be investigated through the multimodal analysis of its textual components. In addition to that, as a crucial step in the exploration of the cultural discursive systems which underpin social media, the chapter discusses the integration of Critical Multimodal Discourse Analysis with American Studies and, more specifically, with American Cultural Studies. Indeed, digital technologies are usually represented through frames that are perceived as universal but are actually (at least most of them) US cultural products (Moschini 2013).

The chapter ends with a discussion of social media as cultural and technological mediational means (Jones and Hafner 2012) and reviews the
literature associated with the study of digitally mediated textuality from sociolinguistics to a raising strand in Social Semiotics, that is the conceptualization of software as semiotic technology (Djonov and van Leeuwen 2017). Finally, I advocate for the socio-semiotic study of the technological components of social media and its merging with Platform Studies (Bogost and Montfort 2007), since platforms themselves, as well as software, can be considered texts and are deeply involved in the active process of meaning making.

2.2. Criticality as Discursive “Mapping”

The label “Critical Discourse Analysis” (CDA) refers to diverse even if partially overlapping approaches in critically oriented Discourse Analysis (e.g. Blommaert 2005; Fairclough 1992; Kress and van Leeuwen 2000; Pennycook 2001; Wodak and Chilton 2005; van Dijk 1993). These approaches, from the socio-cognitive to the discourse-historical and the multimodal, draw upon a varied range of perspectives in critical social theory offered by authors such as Marx and Engels (1998 [1845]), Gramsci (1971 [1948-1951]), Althusser (1971), Habermas (1984), Foucault (1980, 1989 [1969]) and Bhaskar (1998 [1979], 2008). CDA developed its linguistic approach starting from the works of Roger Fowler, Tony Trew, Robert Hodge and Gunther Kress (e.g. Fowler et al. 1979; Fowler 1991; Hodge and Kress 1993 [1978]), where linguistic theory was applied to the analysis of concrete examples of discourse. In what was labeled “Critical Linguistics”, the focus of attention shifted from the abstract Foucauldian sense of discourse as the general domain of all statements to a more linguistic sense of discourse as language in use. The first language theory to be adopted was Chomsky’s formal transformational grammar that was later replaced with Halliday’s Systemic Functional Linguistics (SFL), which was considered by critical linguists a more suitable choice. Indeed, according to Fowler (1991, 5), “Chomsky [was] not interested in the role of language in real use (and indeed will not allow such matters to be a valid concern of Linguistics)”, while in SFL, language is shaped by its social structure, thus it is “specifically geared to relating structure to communicative function” (ibidem).

My interest in Critical Discourse Analysis is motivated, as I said above, by the necessity to deal with the “ideology” that seems to underpin social media.
As O'Regan and Betzel (2016, 282-283) clearly explain, “ideology” is a critical concept that “owes its articulation to the Marxist philosophical thinking of Gramsci (1971 [1948-1951]) and Althusser (1971), in addition to Marx himself (Marx and Engels 1998 [1845]).” However, as they highlight, nowadays “critical analysts of discourse who take a more poststructuralist stance will often prefer to use the term discourse […] in its place”. Drawing on Foucault, they note that when the term ideology is used, it often ‘stands in virtual opposition to something else that is supposed to count as truth’ (Foucault 1980, 118, cited in O'Regan and Betzel 2016, 283). This is to say that ideology is presented as being a form of concealment or obfuscation of truth. But in poststructuralist thinking “veridical truth is denied” (O’Regan and Betzel 2016, 283). This makes it difficult for poststructuralists such as Foucault – although he would have rejected the term – to use the term ideology readily because of its association with the notion of truth. It follows from this that ideologies and discourses emphasize different things depending on one’s perspective, but when utilized to refer to beliefs or world views they can also be synonymous. In this thesis I have decided to take a more Foucauldian stance, i.e. one that is more oriented to discourse as being an aspect of social practices and a means for the articulation of beliefs about the world, and much less about the ideological obfuscation of reality or truths. Following Foucault then, discourses are understood in this thesis as responsible for systematically and hierarchically articulating the beliefs and values of a given society into regularized discursive practices, and of instantiating these practices within texts. Consequently, “texts” are seen as both the concrete representation of discourses and the result of social processes, since texts have the potentiality to store complex social and cultural meanings produced in a particular historical situation (Fairclough 2003, 2006, 2010). More specifically, the term “discourse” is used as an abstract noun […] to refer to what might be called ‘the semiotic’ (language and other semiotic forms) as one part or facet of the ‘social’. [It is] also used as a concrete noun […] in the sense of particular ways of representing aspects of the world (Fairclough 2006, 10).
In its abstract form, the term represents the mediating mechanism for knowledge dissemination, which is made up of discursive and non-discursive dimensions, a “meaning ensemble” through which the material and the immaterial enter into a system of signification (Kress 2010, 58). Indeed, discourse is “the means by which the existence of the real is acknowledged – in signs – and brought within the realm of human experience and interpretation’ (O’Regan 2014, 546). In such an ideational context, the role of analysts is to investigate the process of textual meaning-making in order to shed light on the connections between discourse, reality and culture. As regards the work of Foucault (1980, 1989 [1969]), my emphasis is focused also on the conceptualization of “power as knowledge”, which is a ‘positive’/ ‘generative’ view of power, distant from the idea of the manipulation of discourse and ideology for dominant ends. In Foucault’s words,

What makes power hold good, what makes it accepted, is the fact that […] it traverses and produces things, it induces pleasure, forms knowledge, produces discourse. It needs to be considered as a productive network, which runs through the whole society, much more than a negative instance whose function is repression (1980, 119).

According to Foucault, power and knowledge are both part of discourse and they are articulated by social practices, among which we find textual practices. Indeed, in his The Archaeology of Knowledge (1989 [1969]), he theorizes a view of discourse, where discourses are composed by “systems of formation” which are articulated into varied sets of statements, that broadly comprise the meaning potential of semiotic signs. According to Foucault, discourse can shape reality since it can classify it into different realms of knowledge or “discursive formations” that can be described as the discursive practices which encode the conceptual frameworks of a specific socio-cultural context/domain. As Pennycook (2001, 83) highlights, in Foucault’s view, “discourses are indelibly tied to power and knowledge and truth, but they do not either represent or obfuscate truth and knowledge in the interests of pregiven powers […]; rather, they produce knowledge and truth (they have knowledge and truth effects)”. Such a conceptualization constitutes a central element of Foucault’s theoretical work and seems to be more apt – given also its de-spacialized net-
like structure – to describe the socio-cultural processes that take place and shape contemporary knowledge societies, rather than the idea of power as inequality and oppression adopted by Marxist critical theory and by what might be defined as a ‘classical’ CDA. Indeed, a Marxist-oriented CDA features a view of criticality as a political commitment; in the words of Fairclough and Wodak, “CDA sees itself not as a dispassionate and objective social science, but as engaged and committed; it is a form of intervention in social practice and social relationships” (1997, 258). The focus on the struggle against the discursive construal of dominant and unequal relations of power is a socio-political stance (van Dijk 1994) that can be ascribed to the Marxist philosophical roots of critical social theory. This is a perspective on criticality which is quite distant from my own. My view of criticality, as I have noted above, is based on the Foucauldian assumption that knowledge in society is a structural part of a system of meanings, which are discursively realized and codified into multi-semiotic texts.

The practice of criticality is understood in this thesis, following Pennycook (2001) and O'Regan (2006), as the process of “mapping” the way(s) in which meanings are encoded into texts and how these texts contribute to the discursive mediation of society and culture. Indeed, according to O'Regan, the critical interpretation of texts is “a process of ‘discursive mapping’ which explores our enmeshment in the textual construction of social life” and that “examine[s] the discursive ways in which human beings construct the world in the way they do” (2006, 194). As Pennycook explains, critical approaches to texts search for “the political/discursive (subtextual), social/historical (pretextual), and local/contingent (contextual) ways in which texts and readers produce (intertextual) meanings in relation across texts” (2001, 112). It is a vision of the use of Applied Linguistics that overcomes its structuralist scope that “has had major limiting effects by narrowing the scope of Linguistics largely to the internal workings of language” (Pennycook 2001, 104). Indeed, “Linguistics […] has been seduced by its standing as senior technicist discipline […] to fail to register the linguistic turn [that] was asking different kinds of questions about language as a social phenomenon” (Poynton 1993, 3-4 quoted in Pennycook 2001, 106). It is an attempt to connect Linguistics and social practice in the wake of the tradition inaugurated by the book
Language and Ideology (Hodge and Kress 1979) that I quoted above which constitutes the first account of conceptualizing Linguistics as “the theoretical and methodological framework for the analysis of materials studied by all kinds of intellectual and cultural historian, indeed, by everyone concerned with culture and thought” (Hodge and Kress 1993 [1979], vii).

My own perspective on the relationship between discourse/semiosis, texts and social reality is based on the aforementioned Foucault’s notion of power as knowledge and the concept that texts are multi-semiotic, as well as on the dialectical-relational approach of Norman Fairclough, one of the authors with whom CDA is most associated (e.g. 1989, 1992, 1995, 2003, 2006, 2010; Chouliaraki and Fairclough 1999) which has been greatly influenced by critical realism (Bhaskar 1998 [1979], 2008) and by realist social ontology (Sayer 1992 [1984], 2000). Indeed, I do reject the epistemic poststructuralist reductive view according to which there is not a reality outside representation and, in critical realism, concrete social events and abstract social structures are part of social reality and can be “conceived of as potentialities which are selectively actualized in social events – what is possible in contrast with what is actual” (Fairclough 2010, 74). Moreover, in critical realism, reality is distinct from the knowledge we have of the world and, at the same time, our knowledge doesn’t exhaust reality (Fairclough 2013). In Fairclough’s dialectical-relational approach discourse is the mechanism which mediates between reality and our knowledge of it; it helps us conceptualize the world and, in this sense, discourse, or better still “semiosis”, mediates reality. Indeed, Fairclough seems to prefer this latter term in order to avoid potential misunderstandings related to the use of the term “discourse” both as countable and as an uncountable noun. Reality, thus, is made up of ‘concrete’ non-discursive dimensions and semiotic/discursive ones, which possess causal effects.

The dialectical-relational approach is characterized by the interplay between three levels of social reality that are “social structures, practices and events” (Chouliaraki and Fairclough 1999) and three are the ways in which discourse/semiosis relates to social practices and social events: in actions, in the representation of the world and in the creation of identities. The three corresponding discourse categories are: genre, discourse and style. According to Fairclough,
genres are semiotic ways of acting and interacting, such as news or job interviews, reports or editorials in newspapers, or advertisements on TV or the Internet. [...] Discourses are semiotic ways of construing aspects of the world (physical, social or mental), which can generally be identified with different positions or perspectives of different groups of social actors. [...] Styles are identities, or ways of being, in their semiotic aspect (2013, 232).

Particular configurations of genres, discourses and styles give origin to “orders of discourse” (or “discursive formations”), which is a concept that Fairclough (1992) derives from Foucault. On the model of Critical Linguistics, Fairclough has broadened the importance of the linguistic component of Foucauldian Discourse Analysis and has included the analysis of real texts drawn from a wide range of salient social contexts such as politics, media and commerce. The dialectical-relational approach presents a theoretical complex regarding discourse, which structures it into “an interplay between three levels of social reality: social structures, practices and events” (Fairclough 2013, 232). These three dimensions correspond to three semiotic levels: semiotic systems (language and other semiotic modes), orders of discourse (as already noted, a specific configuration of genres, discourses and styles) and (monomodal or multimodal) texts. The dialectical-relation of discourses, genres and styles is referred to by Fairclough (2013, 238) as “interdiscursivity” and represents “a mediating ‘interlevel’ between the micro-level linguistic analysis of the text (in conjunction with relevant social analysis) and the analysis of social structures. [...] relations of interdiscursivity via orders of discourse are what connect the analysis of the text with an analysis of social structures” (O’Regan and Betzel 2016, 285 – emphasis in the original). The diagram below (ivi: 285) illustrates the relations among the different social levels and their semiotic dimensions:
2.3 Social Semiotics and Multimodality

As mentioned in the previous section, CDA has broadened the importance of the linguistic component of Foucauldian Discourse Analysis and, based on the model derived from Critical Linguistics (Fowler et al. 1979, Hodge and Kress 1988), has included the analysis of real texts from relevant social contexts such as politics, media and economy. In the present thesis, which is a study on global media discourse and its ideational roots, the methodology that is adopted to investigate the corpora of texts features the integration of Systemic Functional Linguistics (SFL) – the procedural model mostly used to carry on textual analyses in CDA – with methodological tools derived from Multimodality. Such a choice is motivated by the fact that the analysis of the sole verbal code would not be sufficient to understand the processes of meaning making in such complex texts, especially those from the digital domain (Adami and Kress 2014), where several resources (such as layout, videos or images) and “modes” – that is the result of socio-cultural shaping of these semiotic resources (Kress 2009) – concur to the creation of meaning. As Jewitt, Bezemer and O’Halloran have pointed out, “‘multimodality’ is a term that is now widely used in the academic world [but] how the concept is articulated and ‘operationalized’ varies widely both across and within […] research traditions” (2016, 1). It is important for researchers, thus, to declare what theoretical and methodological stance is adopted in their studies.

As I have indicated, in this thesis, the theoretical strand that has been chosen is the socio-semiotic one. Indeed, the main scope of Social Semiotics is to understand meaning making in its social dimensions both in terms of the social relations and processes involved in any act of communication and of the immediate interactive conditions of such an act. According to this approach, signs and messages – which are the key objects of Semiotics – have to be always “situated” (Hodge and Kress 1988), since “meanings derive from social action and interaction using semiotic resources as tools” (Jewitt, Bezemer, O’Halloran 2016, 58). The key impetus for the development of Social Semiotics was Halliday’s social semiotic view of language: back in the 1980s, “much of the work in Linguistics [could] be safely ignored by anyone interested in language or Social Semiotics. One major exception [was] Michael Halliday” (Hodge and Kress 1988, 270). Indeed, it was Halliday who, in the late 1970s,
formulated the expression “language as a form of social semiotic” (2007 [1975], 170) in order to emphasize the connections between a verbal sign-system and the social purposes for which it is used. According to Halliday, every linguistic act involves a choice and, as a consequence, language presents a system of “meaning potentials”, that are sets of options that speakers can use in different social contexts.

In their book Social Semiotics (1988), Hodge and Kress expanded Halliday’s notion of language as a system of choices that are both semiotic and semantic to other sign systems, such as images. In addition, Social Semiotics presented a theory of language and signs which was based on social contexts and the focus on agents, thus departing from the tradition of Structuralist Semiotics, which was based on the Saussurean division between “langue” and “parole”, that is, between language as an abstract sign-system and language in use. Indeed, according to Hodge and Kress, language is an evolving system in context, not a fixed one which has to be decoded with “reference to a coding system that is impersonal and neutral, and universal (1988, 12). Social Semiotics introduces a “social theory of meaning making and communication in which modes or sign-systems (e.g. language, or image) are intertwined with their user and social context of use” (Jewitt, Bezemer, O’Halloran 2016, p. 60). Specifically, Social Semiotics highlights the role of human agents and of social contexts in the creation of meaning through the concept of the “motivated sign”, according to which signs are “motivated” by the historical, cultural and social context experiences of the sign maker. As Kress explains,

signs are always newly made in social interaction; signs are motivated, not arbitrary relations of meaning and form […]; the forms/signifiers which are used in the making of signs are made in social interaction and become part of the semiotic resources of a culture. The relation of form and meaning is one of aptness, of a best ‘fit’ […]. Aptness means that the form has the requisite features to be the carrier of the meaning (2010, 54-55, emphasis in the original).

In the last part of the 1980s and the early 1990s, Social Semiotics was elaborated by the Sydney Semiotics Circle; apart from Gunther Kress and Theo van Leeuwen, the circle included (among others), “Jim Martin, Terry
Threadgold, Paul Thibault, Radan Martinec [and], from a distance, Bob Hodge and Jay Lemke" (van Leeuwen 2005, xi). In the course of the 90s, research in Social Semiotics started to focus more deeply on the fine-grained analysis of written and visual texts, with the publication of the seminal volume, *Reading Images: The Grammar of Visual Design* (Kress and van Leeuwen, 1996), which founded the school of Multimodal Studies. In the book, the two scholars drew upon Michael Halliday’s functional theories of meaning and socio-semiotic approach to language to write their “grammar of contemporary visual design in ‘Western’ cultures” (3). Kress and van Leeuwen define multimodality as “the use of several semiotic modes in the design of a semiotic product or event, together with the particular way in which these modes are combined” (2001, 20) and, in sketching an outline of a multimodal approach to social discourse, they define communication as “a process in which a semiotic product or event is both articulated or produced and interpreted or used” (*ibidem*, emphasis in the original).

Starting from the publication of Kress and van Leeuwen’s pioneering work (1996), the interest in this research approach has progressively increased across many disciplines, since, “as speech and writing no longer appear adequate in understanding representation and communication in a variety of fields, […] the need to understand the complex ways in which speech and writing interact with ‘non-verbal’ modes can no longer be avoided” (Jewitt 2009a, 3). More specifically, from the mid-2000s approaches other than the socio-semiotic one have flourished (O’Halloran and Smith 2011; Jewitt 2009b) such as, for instance: a systemic functional approach inspired by the descriptive work of O’Toole (1994) and associated with O’Halloran (2004), Baldry and Thibault (2006); a Multimodal Conversational Analysis tradition as expressed, among the others, by the works of Goodwin (2000, 2001), Mondada (2014) and Bezemer (2014); a Multimodal Interactional Analysis developed by Ron Scollon and Suzanne Wong Scollon (Scollon and Wong Scollon, 2003) and continued by Norris (2004, 2011) which lies its foundations in intercultural communication and sociolinguistics; a Cognitive approach based on the work of Lakoff and Johnson (1980) and theorized by Forceville (2006, Forceville and Urios-Aparisi 2009); Critical Discourse approaches developed by van Leeuwen and Machin (Machin and van Leeuwen 2007;
Machin 2013; van Leeuwen 2013; Machin and van Leeuwen 2016) in their studies on global cultural industries based on Social Semiotics and Media Studies.

2.3.1. Metafunctions, Modes and Modal Affordances

Halliday’s (1978, 2007 [1975]) social semiotic theory of language represented a shift from the study of the structure of linguistic codes to the focus on their social use. More precisely, it was a departure from the sole formal study of language, that is, from how a language is shaped to an integrated formal and functional study of language, that is how the resources of a linguistic system are used to make meaning in society. According to Halliday (2007 [1975]), there had been functional theories of language before, in areas such as anthropology (e.g. Malinowski 1923, 1935), psychology (e.g. Bühler 1934), ethology (e.g. Morris 1967) or education (e.g. Britton 1970). The feature that they had in common feature was their “extrinsic” orientation since they were not “concerned with language as object but with language in the explanation of other phenomena” (Halliday 2007 [1975],173). Moreover, all these theories incorporated – even if in different forms – the “basic distinction between two primary semiotic roles that language serves: an ideational role, that of being about something, and an interpersonal role, that of doing something” (ibidem, emphasis in the original). In his socio-semiotic theory of language, Halliday combined the above-mentioned semiotic roles (“ideational” and “interpersonal”) with a third component, which was mutuated from the Prague School. Such a component was called “functional sentence perspective” (Dane’s ed. 1974) and was intrinsic to language since it aimed at identifying the role of language in forming texts.

The three semiotic roles were to be intended not as functions in the use of language, but as “functional components of the semantic system” (Halliday 2007 [1975], 183) and were defined “metafunctions [that is] modes of meaning that are present in every use of language in every social context” (ibidem). According to Halliday, a text is a product of all the three functions, where the ideational metafunction represents the content function of language; the interpersonal metafunction encodes the role relationships associated with the context of situation and the textual metafunction expresses the speaker’s text-
forming potential. In details, the ideational metafunction is the component through which “the language encodes the cultural experience, and the speaker encodes [her] own individual experience as a member of the culture” (184); the interpersonal metafunction is the component through which “the speaker intrudes himself into the context of situation, both expressing [her] own attitudes and judgements and seeking to influence the attitudes and behavior of others” *(ibidem)* and the textual metafunction is the component which “provides the texture [and] makes the difference between language that is suspended in vacuo and language that is operational in a context of situation” *(ibidem)*. All these components are reflected in the lexicogrammatical system in the forms of networks of options that a sign maker can choose from when encoding meaning. While Halliday’s social semiotic theory focuses primarily on the semiotic verbal resources of language such as speech and writing (e.g. 1994 [1985]), Social Semiotics and Multimodality expand the analysis to (potentially) all communicational and representational modes beyond language and offer conceptual tools for a broader analysis of the processes of making meaning. In doing so, Multimodality extends also Hallidayan metafunctions to communicative modes beyond spoken and written language, such as for instance visual communication (O'Toole 1994; Kress and van Leeuwen, 1996) or aural communication (van Leeuwen 1999). Lemke (1989) proposes an alternative set of labels to describe the three metafunctions when multimodal meaning making, such as “representation”, “orientation” and “organization”. In the present thesis, I adopt Halliday’s nomenclature even if my analysis is a multimodal one since the type of objects that are under scrutiny feature a high percentage of linguistic components.

In Social Semiotics, the production and the realization of meaning in communicative acts can be described as the process of interaction between the interest of the sign makers – which is always socially and culturally situated – and the meaning potential, that is what is possible to mean, using the resources that are available. Indeed, semiotic resources feature a semantic component, the “meaning potential” that identifies what can be meant and the material realization of meaning. Both the representational and the communicational affordances of modes are the result of complex diachronic and synchronic processes that shape the social usage of resources as well as
intersemiotic relationships, that are the relationships among the different resources (Kress and van Leeuwen 2001). To identify these “socially and culturally shaped resources for meaning making”, Kress adopted the term “mode” (2009, 54). Indeed, “a mode, its organizing principles and resources, is understood as the cultural shaping of the material” and is central to the social semiotic multimodal perspective (Jewitt 2009a, 21). According to Kress (2009, 54), “modes offer different potentials for making meaning” and to describe such potentialities Kress mutuated the term “affordance” from the American psychology James Gibson (2014 [1979]), who, in his work on visual perception, originally describe affordances as the qualities of the environment or the environment that allow an individual to perform an action. The term “modal affordance” (Kress 2010) describes what is possible to communicate through the resources offered by a mode and refers to “the materially, culturally, socially and historically developed ways in which meaning is made with particular semiotic resources” (MODE 2012).

2.3.2. Multimodality, Discourse Analysis and the Context of Culture

As my present work is a study on global media discourse and its ideational roots, I wish to place this thesis in line with the strand in Multimodal Studies which has been labeled “Multimodal Critical Discourse Analysis (MCDA)” (Machin 2013; van Leeuwen 2013; Djonov and Zhao 2014; Machin and van Leeuwen 2016). The origins of “Multimodal Critical Discourse Analysis” – although some multimodalists may disagree with this term – lie in the progressive “merging of two distinct fields of Applied Linguistics: Critical Discourse Analysis and Multimodality” (van Leeuwen 2013). These two strands of Discourse Studies “share fundamental understandings about human communication” – even if with different primary foci, since they both argue that “human communication is always multimodal” and that “human communication is always social” (Djonov and Zhao 2014, 1). As far as the association of the term “critical” to Multimodality is concerned, even if both CDA and Social Semiotics originate from the foundational work of the Critical Linguists, I maintain it is important to mark the reference to Critical Social Theory since it remains an open question the extent to which it is still encapsulated by current studies in Multimodality. In addition, the term “critical”
as I wish to use it, views “interpretation as a process of ‘discursive mapping’, which explores our enmeshment in the textual construction of social life” (O’Regan 2006, 194). It is a process of mapping which is both discursive and ideational, as noted in the previous chapter. More specifically, going back to the roots of Halliday’s theorization of a socio-semiotic concept of language, my aim is to focus on the context of culture, which – from the beginning – features a position which is of ‘equal’ importance to the context of situation. Indeed, as Halliday states,

A text is ‘what is meant’ selected from the total set of options that constitute what can be meant. In other words, text can be defined as actualized meaning potential. The meaning potential, which is the paradigmatic range of semantic choice that is present in the system, and which the members of a culture have access to in their language, can be characterized in two ways, corresponding to Malinowski’s distinction between the “context of situation” and the “context of culture” (2007 [1975], 179-180).

Indeed, in this thesis, the analysis of social media and their relationship with both hacker culture and American liberal values is fundamental in order to outline crucial elements that affect the semiotic realization of digital discourse. More specifically, as said above, my analysis aims at returning to the Whorfian conception of Linguistics (here in its multimodal evolution) as a “heuristic instrument for the study of culture” (Hodge and Kress 1993 [1979], 14). A focus on the cultural context aligns strongly with Hallidayan ideas, but it appears to have been ‘sidelined’ by the more sociological notion of the “context of situation” (Martin 2010) since, as van Leeuwen states, “very few people either in Systemic Linguistics or in Multimodality actually do something with it” (cited in Moschini 2014a, 209). What I envision is a form of ‘multimodal ideational mapping’, where culture has to be intended, according to Clifford Geertz, as a “semiotic system” (1973), as “a historically transmitted pattern of meanings embodied in symbols […] by means of which people communicate, perpetuate and develop their knowledge about and attitudes toward life” (1979, 89). It is a concept of culture, which is similar to the one adopted by Scollon, Wong Scollon and Jones (2012 [1995], 9) that sees “culture” as a “discourse system”: a system of meanings transmitted through natural language and other symbols.
that members of communities participate. It is a complex anthropological and sociological frame of reference that consists in traditions, beliefs, values, norms, symbols, and meanings that are mediated by texts and tools and shared.

In this ‘multimodal ideational mapping’ process, criticality has to be intended, as we have already seen, as the process of ‘mapping’ the way(s) in which meanings are realized in texts and how these texts contribute to the discursive mediation of society and culture. It is a process that might also be defined as a Midrashic cartography of discourse conceptualized as knowledge, realized by multimodal texts, and then investigated by means of a social-semiotic approach. As regards the ideational element, it can be described as the metafunction directly related to the context of culture since, in Halliday’s words, it “is the component through which the language encodes the cultural experience, and the speaker encodes his own individual experience as a member of the culture (Halliday 2007 [1975], 183-184). Indeed, there exists an indissoluble connection between society, culture and language, since culture can be defined as a “set of semiotic systems, a set of systems of meaning, all of which interrelate” (Halliday and Hasan 1985, 4), while semiotic systems are “system[s] of meanings that constitute the ‘reality’ of the culture, [...] the higher level stratum to which language is related” (Halliday 1978, 123). The “context of culture” is a concept that Halliday derived – via Firth’s linguistic approach (1957) – from the anthropologist Malinowski, who provided a new relationship between language and meaning. According to Malinowski,

the concept of context must be widened; [it] must burst the bonds of mere linguistics and be carried over into the analysis of the general conditions under which a language is spoken. [...] The study of any language must be carried out in conjunction with the study of their culture and of their environment (1994 [1923], 6).

Fifty years later, following Malinowski’s footsteps, Dell Hymes affirmed that:

[in] a theory of language (not just a theory of grammar) [...] one cannot take linguistic form, a given code, or even a speech as a limited frame of reference. One must take as context a community, or network of persons, investigating its
communicative activities as a whole, so that any use of channel and code takes its place as part of the resources upon which the members draw (1994 [1977], 11).

Seen in this light and going back to the anthropological roots of the concept of the “context of culture”, the epistemological model that I envision is a post-ideological encounter between European cultural history as adopted by Critical Discourse Analysis (e.g. the works of Roland Barthes, Pierre Bourdieu, Michel Foucault) with American Studies, and, in particular, with the branch of American Cultural Studies (Oppermann 2016) which seem to have updated the classical methodological form of the myth-and-symbol approach deriving from Literary Studies (Atteberry 1996). The main point of contact is the textual nature of the analysis of both the investigations. Indeed, “in their sensitivity to language as a metaphorical construct with ideological implications, the myth and symbols scholars anticipated many of the concerns of contemporary cultural theory” (Lipsitz 1990, 622). Such a theoretical encounter is favored by the Hallidayan social-semiotic view of language (that has been adopted as above stated by both CDA and Multimodal Studies) and it constitutes one of the components of the interpretative framework that I have selected for the analysis of the social media recontextualization of discourse. It is also a basic step in the mapping of what Halliday would define as the “ideational environment” (2007 [1975], 184) that appears to lie at the very heart of the semiotic architecture of social media.

2.4. American (Cultural) Studies and Social Media

American Studies is an interdisciplinary field of study which finds in the United States the core element of its discipline ontology (Izzo 2012) and which examines American history, society and culture. It generally encompasses the study of literature, history and critical theory, but welcomes research methods from a variety of other disciplines. American Studies as a discipline started at the beginning of the Twentieth century and, since then, it has featured three main phases: the foundational Myth and Symbol School which accompanied the development of the research area from the 1920s to the upheaval of the countercultural movement in the 1970s and that was focused on the “meaning of America”; the Revisionist movement that was “in line with the post-modern
critique of metanarratives as forms of representation [and that] accused the Myth and Symbol school of suppressing the true cultural diversity of the United States in terms of race, class and gender” (Fluck and Claviez 2003, IX); a Transnational phase that, since the beginning of the 2000s, is reflecting on the role of the United States in a globalized world. In this section I briefly explain the main features of these three main phases to concentrate then on the so-called American Cultural Studies, the roots of which trace back to the Myth and Symbol school and to “Kulturwissenschaft”, the German science of culture (Atteberry 1996, Wald 2016). Moreover, I argue how the present thesis aims at answering the call by William Uricchio who, in his essay Things to Come in the American Studies – Media Studies Relationship (2014), declares new media such as social media platforms “significant texts” (370) that need to be studied in order to investigate and understand contemporary American culture.

2.4.1. The Three Main Phases of American Studies
The beginning of American Studies as an academic field is usually traced back to the 1920s when – in the United States – professors of English literature began to propose courses combining the study of US history and US literature (Opperman 2016). At that time, the literature of the United States was not an established subject in academia as it was usually conceived only a sub-category of English literature (see Renker 2007). It was only with World War I that the departments of English started to put emphasis on the Americanness of the literature produced in the United States. This coincided with the difficulties for scholars to reach Europe for research and led to a progressive focus on themes and subjects that were considered typically American. Before academia, American civilization and its ‘unique’ character have been the object of investigation of a vast cohort of writers – usually white men – who were interested in this unusual society and its culture such as, for instance, Alexis de Tocqueville, Charles Dickens, the Trollopes, D. H. Lawrence, W. E. B. DuBois, Lewis Mumford, William Carlos Williams, Edmund Wilson and so on. A tradition that was inaugurated by the famous question “What then is the American, this new man?” asked by Hector St. John de Crevecoeur (1782) in his famous Letters where he described the embryos of a multicultural society (Moschini 2006). The economic turmoil of the Great Depression, Franklin
Delano Roosevelt’s New Deal regulations, together with the domestic increase in the creative production of fiction, poetry and drama gave rise to curricular innovation and to the introduction of courses that combined the study of history with the study of American Literature at a regional level (Flanagan 1940).

The newly developed courses and programs in American Civilization “moved beyond purely philological approaches to literature and offered students instruction in history, sociology and fine arts to arrive at a mode understanding of American culture” (Oppermann 2016, 14). In particular, it was Harvard’s doctoral program in the History of American Civilization that inaugurated in 1936 these experiments in teaching and researching which were based on an interdisciplinary approach and aimed at going against what was considered a rigid and sterile separation of knowledge into compartments (Marx 2005, 119). The 1940s and the 1950s featured a huge increase in the spreading of American Civilization programs and, shortly before the United States entered World War II, knowledge of the “universal principles of democracy” and of the cultural past of the nation started to gain an ideological connotation (Gleason 1984, 348). Indeed, as highlighted by Oppermann quoting Spiller (1942, 295), subjects such as American Literature and American History were considered fundamental in “defining the American way, telling its history” and in differentiating it from “the way of dictatorship” (2016, 14).

The development of American Studies until the 1970s is “closely linked to the work of the so-called Myth and Symbol School” (Boesenberg et al 2016, 15) which borrowed its terminology from literary criticism in order to study the culture of the United States and its development. The works commonly associated with this approach are Henry Nash Smith’s *Virgin Land: The American West as Symbol and Myth* (1950), Richard Warrington Baldwin Lewis’ *The American Adam: Innocence, Tragedy and Tradition in the Nineteenth Century* (1955), John William Ward’s *Andrew Jackson: Symbol for an Age* (1955), Leo Marx’s *The Machine in the Garden: Technology and Pastoral Idea in America* (1964), Alan Trachtenberg’s *Brooklyn Bridge: Fact and Symbol* (1965). Specifically, it is the volume written by Smith which is considered the foundational text in the study of the relationship between
cultural myths and symbols and American national identity (Oppermann 2016, 15).

As regards methodology, after the launching of American Civilization programs, a long debate began on whether interdisciplinarity could develop an autonomous theoretical and methodological approach. In a famous essay published in 1957, entitled “Can ‘American Studies’ Develop a Method?”, Smith concluded that a clear interdisciplinary method was not feasible but, at the same time, he formulated what has become the definition of the intrinsically interdisciplinary object of American Studies, “the investigation of American society and culture, past and present, as a whole” (197).

In his “Defence of an Unscientific Method” (1969), Marx replied to Henry Nash Smith’s essay (1957) and illustrated the main features of a framework scholars could use to crack the most compelling cultural codes. Features an intersection between “historical facts, culture and particular works [that can be] works of art, music, engineering, political theory, philosophy, literature – in other words, any creations of man” (77-78). The techniques of “textual criticism” are used to investigate such a complex nexus. In detail, a combined diachronic/synchronic perspective is adopted to identify the corpus of texts that can be relevant to the communities under scrutiny and to do this, scholars in American Studies refer “to sociological models” and “rely upon the general historian” (84). Indeed, Marx himself characterizes American Studies as “an essentially historical enterprises [that] describe[s] and understand[s] a state of mind of a group (or groups) of people at some moment in the past” (76). Going back to the framework, once the corpus is identified, scholars will look for the recurring “images”, that are defined the “verbal recordings of a simple sense perception” (84) that become “symbols to the degree that [they are] made to carry a burden of implication (value, association, feeling, or in a word, meaning) beyond that which is required for a mere reference” (ibidem). They will also look for “myths”, that are “combinations of symbols held together by a narrative which embodies the virtually all-encompassing conception of reality – the worldview – of a group” (86). In this kind of inquiry, the most interesting problems faced by cultural historians arise “in establishing connections between particular works and the general culture” (85). As above said, thus, to investigate US-American national culture, the Myth and Symbol scholars
focused on the symbols that could be found both in literary texts and, more generally, in cultural artifacts, and related them to a broader national cultural discourse.

The considerable financial support after World War II, the political and cultural environment of the Cold War and the fact that American Studies courses were substantially dedicated to a consensus culture which was quite homogenous inside the domestic borders, favored criticism of them being only another example of the so-called American exceptionalism, of forgetting racial, gender and class categories and of being very weak in methodological terms. Famous examples of such a criticism are the work of the social historian Bruce Kuklick (1972) who argued against the theoretical connections between literary symbols and social reality; that of Annette Kolodny (1984), who signaled the lack of gender as an analytical category, especially because – according to her – the pastoral representation of America featured a prominent male bias and the essay by Nina Baym, “Melodramas of Beset Manhood” (1981) where she specifically criticizes the theoretical presumptions by which the traditional canon of foundational “American” literary texts had been constructed based on a gendered way of thinking about the American experience. The paradigm that emerged out of this criticism was called the Revisionist movement (what Marx has defined “The Great Divide”, 2005) and was strictly linked to the aftermath of the political upheaval of 1965-1975. In those years, a dissident movement appeared as an answer to a series of disruptive events such as the assassination of President Kennedy, Robert Kennedy and Martin Luther King, Jr.; the fights for civil rights and the Vietnam War, the opposition to which marked the organizing principle around which “all the disillusionments coalesced […] in one great rebellion” (Hodgson 1976, 275).

If the founding scholars of American Studies were left-liberals who had combined their appreciation of the founding egalitarian American ideals and values with sharp criticism of American capitalism, but could still be relatively sympathetic to the American socio-political project because of their hopes for New Deal reformism, American Studies scholars in the age of Reformism challenged these national metanarratives and highlighted the tension and the conflicts between this ‘hegemonic’ narration and those of the sub-communities which were different in terms of race, gender, class from wealthy white Anglo-
Saxon Protestant males. The Reformist movement adopted postmodern critical theories of European origin and, with the help of these critical theories, many scholars of the Reformism movement pointed out the sharp differences that divided Americans into virtually separate groups. In particular, literary scholars started to “shift their attention to texts seen as representative of the unacknowledged voices of American culture” (Luccarelli 2004, 20) and social historians turned their attention to close-up, empirical analyses carrying out “ethnographic studies of particular shared identity groups” (*ibidem*). Examples of this Reformist movement are the already mentioned works of Kucklick (1972), Baym (1981) and Kolodny (1984) and those of Merideth (1969), Tate (1973) and Sklootkin (1973). As a result of the Reformist movement, starting from the late 1970s, sub-field programs and curricula such as African-American Studies, Asian-American Studies, Chicano and Chicana Studies, Ethnic Studies, Queer Studies, Post-colonial Studies or Women’s Studies emerged in many universities and “practitioners in American Studies [were invited] to take a much more politically committed political stance towards the dominant structure in their teaching and scholarship” (Oppermann 2016, 17).

If, on the one side, the works of Reformist scholars contributed to new understandings of diversity in American society and culture, focusing on sexist or racial representations and societal structures, “that ‘diversity’ was expressed almost entirely in terms of race and gender as opposed to the diversity of idea” (Luccarelli 2004, 22). Moreover, they seem to have carried “the anti-foundationalist assumptions of poststructuralism to the point of absurdity: defining away the object of their scorn” as Luccarelli (2004, 17) highlights commenting upon Alan Wolfe’s essay “The Difference between Hatred and Criticism” (2003). Indeed, as Jane Radway – among others – suggested in her 1998 Presidential Address to the American Studies Association, the label “American Studies” itself could and should be questioned as the best option to “promote work that would further re-conceptualize the American as always relationally defined” and make the American Studies Association “an institution devoted to a different form of knowledge production, to alternative epistemologies, to the investigation of a different object” (59). And, as John Carlos Rowe proposed, American Studies
could be even ‘re-dimensional’ and redefined as “U.S. Studies” or “North American Studies” (1998, 13).

One of the consequences of the foregrounding of border discourses, contact zones and the call for comparative US cultures courses (see Rowe 1998), is the fact that American culture does no longer “gravitate around a stable set of representative literary texts, but focus on the way in which different cultures interact and are transformed by contact with each other” (Oppermann 2016, 18). Moreover, as Rowe (2002) and Lauter (1999, 23) point out, since the contact zones are not exclusively realized in literary texts, it is necessary to expand the traditional concept of textuality that still dominates much of American Studies scholarship to include “nonliterary modes of social and cultural expression” (Rowe 2002, 12). Such a sensibility helped fostering, at the turn of the new millennium, the emergence of a “Transnational turn” in American Studies (Gross 2000) aimed at examining the place of the United States in the international realm and to understand “the multiple meanings of America and American culture in all their complexity” (Fishkin 2005, 20).

According to Greg Robinson (2015), “the roots of the transnational turn in American Studies are multiple” and can be identified in the “continuing contributions of borderland scholars, led by Gloria Anzaldua, [who] have dissected transborder relations and influences, starting in their own complex cultural heritage as Hispanic Americans […] and its mark on the totality of American society”. Other sources are the “exponential growth since the 1990s of American studies programs in other countries, notably China and the former Soviet bloc”, as well as the “increasing dissatisfaction of Americanists with a historical narrative that remained resolutely based in the nation-state” (Robinson 2015) – see for instance the volume edited by Thomas Bender in 2002 – and the so called “post-national studies” that are focused on “global connections, and especially the cultural implications of American power in the world” (Robinson 2015), as in the works by Pease and Kaplan (1993) and Rowe (2000). As Pfister has highlighted, the “ongoing transnationalization” of American Studies is important to the understanding of the culture of the nation since “America’s impact and significance have never been confined solely to the space within its porous borders” (2008, 16-17). This is especially true if we think of the “cultural work of multinational ‘American’ companies like Facebook
or Google” (Oppermann 2016, 18). However, it is quite remarkable, that “the
innovative research, which has emerged from New Americanist circles since
the early 1990s, has completely neglected the cultural and political work of
digital media [and] remains dominated by the paradigm of print text”
(Oppermann 2016, 19).

Despite the heterogeneity of American Studies and the non-continuousness
that has characterized its development since the 1930s, there seems that
some main pillars can be outlined: the firm belief in an interdisciplinary
approach (Bronnen 2008); a constant debate since Smith’s essay (1957) on
how such an approach should be managed from a methodological point of
view; the centrality of the concept of culture “in all its generative definitional
varieties” (Oppermann 2016, 19) and an affective dimension in its practitioners
from the episode quoted by Marx (2005, 120) of a young Fulbright scholar that,
when asked in 1957 by Richard Hoggart about American Studies, he affirmed
that he “believe[d] in America” to the more recent DeWitt Douglas Kilgore’s
declaration that “foregrounding the very personal nature of a project has
become a necessary strategy” for cultural criticism in American Studies (1997,
35). According to Walter Hölbing (2014, 17), one important branch of research
in contemporary American Studies, might be looking at “issues of ‘globalization’
and ‘Americanization’ and investigating in depth whether – and if so, in which
instances – these two terms are synonymous or show different structural
affinities in different cultures”. Moreover, when studying the “flood of [American]
simulacra [we] receive via today’s mass media and the World Wide Web”
(Hölbing 2014, 19), we should “pursue (again) the original goal of American
Studies [that is], the analysis of the cultural sources of American Power”
(Hölbing 2014, 11). In the words of Winfried Fluck, to study, “the historically
unique constellations that have been developed by the United States, an
empire that bases its power […] on unique, often hardly visible forms of
international dominance” (2007, 29).

As has been noted, in this thesis, the understanding of US-American culture
is fundamental in order to deepen the study of the worldviews that are
associated with social media and, as I explain in the next sections, my focus
is on American Cultural Studies. More precisely, my focus is on the strand in
American Cultural Studies that could be considered the contemporary heir of
the Myth and Symbols school since it investigates the ever-evolving forms of reproduction of the ‘imagined’ community in semiotic artifacts and the evolution of the worldviews of which they are carriers. Indeed, in my exploration of social media and their relationship with American liberal values, I adopt the methodological combination of the synchronic analyses of texts in order to highlight their main epistemic formations and of the diachronic exploration of the roots of such formations in order to investigate the cultural and political work of the one of the digital multinational American companies mentioned above.

2.4.2. American Cultural Studies

In his editorial, Norman Yetman focuses on the “paradigm shift” that seems to have occurred “in the study of American life and culture” from the concept of culture to Cultural Studies (1997), that is from the initial Myth and Symbol School to Cultural Studies relying on theoretical perspective drawn from scholars such as, for instance, Michel Foucault, Raymond Williams, Stuart Hall, Roland Barthes, Julia Kristeva. At the same time, the editorial highlights the fact that “culture” has always been a key element in all the scientific examinations in American Studies since the above-mentioned Smith’s definition of the main purpose of this interdisciplinary scientific area that is “the investigation of American society and culture, past and present, as a whole” (1957, 197). As Martin Klepper argues, American Studies could be considered as “a specific version of Cultural Studies” given the close relationship between “cultures and the institution of the nation” (2016, 58). Indeed, in the late eighteen and throughout the nineteenth century, Western nations started to reflect on the notions of “culture”, “history” and “nation”. Such a complex self-reflecting turn was stimulated by the progressive functional differentiation of labor and by the disintegration of urban communities due to both urbanization and colonialism. According to Klepper (2016, 59), the idea of nation was “a partial answer” to the sense of “discontinuity, disunity and displacement” generated by the disruptive changes occurred in society. Societies “increasingly began to define themselves internally through a sense of belonging to a national whole and externally through the difference to other nations and the exclusion of those who did not ‘belong’” (ibidem). In his
Imagined Communities (1991 [1983]), the American political scientist Benedict Anderson maintains that the “nation” is a collective imagination supported and created by “culture” in terms of shared symbolic and material practices such as traditions, art, morals, law, customs and so on. The idea of “culture” seems thus to complement the idea of “nation” as an “answer to the problems of modernity [that] compensates for a lost sense of rootedness” and could potentially be the “stuff that keeps a society together, rather than a territory, kinship or political allegiance” (Kleppe 2016, 59). This appears to be particularly relevant to the United States where culture has played a key role in cementing the socio-political experiment since its beginning, especially popular culture. Indeed, as cultural scholar Berndt Osterdorf has highlighted, mass culture has been associated to “republican self-government and popular government” and has thus acquired a “post-revolutionary American meaning and legitimacy” (2000, 3-4) since the 1828 edition the American Dictionary of the English Language where Noah Webster stated that the term “popular” celebrates “the achievements of popular sovereignty and hence refers to the will and wisdom of the common man” (ibidem). According to Osterdorf, in contrast to Europe, an egalitarian sense was made popular by anthropologists like Franz Boas and spread out in Kroeber and Kluckhohn’s notorious compendium (1952). Culture defined within the “semantic space of a populist and progressive political culture, constituted a ‘pragmatic charter of behavior’” (2000, 4-5). Because of such a “tradition of anti-elitism and anti-intellectualism, of common sense as a normative attitude, and of a special valorization of instrumental reason”, popular culture has always been taken “more seriously in North America than in Europe” (Kleppe 2016, 63).

Going back to Cultural Studies and to the shift highlighted in Norman Yetman’s editorial, American Studies have always included exploration of culture and, specifically, American Studies as Cultural Studies investigate “the traditions, structures, politics, cleavages and conflicts negotiated between highbrow and lowbrow culture, between culture as industry and culture as participatory space […], between culture as empowering/unifying and as a colonial/violent force” (Kleppe2016, 64). In American Studies, culture has been interpreted as a set of “shared conceptual maps” (Hall 1997, 18) and in line with Tylor’s idea of “complex knowledge” (1958 [1871, 1]). According to
Klepper (2016, 64), practitioners in American Studies as Cultural Studies today may find themselves “torn between approaches more interested in the unlikely coherence and structural processes at work in the perpetual reproduction of the ‘imagined community’” and approaches that are more interested in “asymmetries, inequalities and mechanisms of dominance and coercion that characterize these reproductions”, that is on the co-relation between power and culture. This latter strand focuses on how agency and social identities and their parameters of social differentiations (such as, for instance, class, gender and race) are produced/reproduced by the network of cultural representations. It is the strand that has been fueled by the Frankfurt School, by the Birmingham School of British Cultural Studies, by Queer and Gender Studies, which is identified by Yetman in his editorial as the paradigm shift that has occurred in the 1980s and that may coincide with the second wave in American Studies that has been discussed in the previous section. On the other side, the first strand examines how “symbolic patterns, narrative devices, and material practices evolve to continually redefine what American culture might be” (Klepper 2016, 64). Specifically, it investigates how literary texts and mass media texts originate “webs of significance” (Geertz 1973, 5): it is a “semiotic concept of culture” according to which and in line with Max Weber, an individual is suspended in a series of cultural representations which serve to generate and maintain (ever evolving) meaning and that provide the narration of our worldviews as it is mediated by semiotic artifacts. Such a strand is fueled by Media Studies, Cultural Anthropology and the German academic tradition of Kulturwissenschaft (Klepper 2016, 64). According to Wald (2016), several decades earlier to their rise in Great Britain and in the US academia, German scholars had developed an approach to the study of culture that has been labeled “Kulturwissenschaft”, the science of culture. The focus of the work of these German scholars – among which we find Georg Simmel, Karl Lamprect, Aby Warburg, Walter Benjamin and Ernst Cassirer – was “the historical context in which particular cultural products were produced, distributed and consumed” (Wald 2016, 38). The objects of their cultural analysis included not only literary or visual texts, but also social, ethnic, religious rituals and material objects which were not artistic. Moreover, they recognized the role of the media in shaping socio-cultural practices through mediation and aimed at reforming the
discipline of literary studies (Böhme 2000). Kulturwissenschaft scholars were predominantly Jewish and their “work was suppressed by the Nazi regime in the 1930s and 1940s and re-emerged later in the century” (Wald 2016, 38). Indeed, in the 1980s, Friedrich Kittler – a literary and media scholar – edited an essay collection in which he advocates that the humanities should concentrate more on social, economic and media structures in which cultural products are produced and shared, more than on the artist and her creative process, thus sharing post-structuralist discursive construction of reality.

As stated in the previous sections, the notion of culture that I have adopted is in line with Clifford Geertz’s idea of culture as a semiotic system, in which an individual is immersed in a historically transmitted pattern of meanings vehicled by narrations that are mediated by semiotic artifacts and that is similar to the one adopted by Scollon, Wong Scollon and Jones (2012 [1995], 9) who see “culture as discourse”, that is a system of meanings transmitted through natural language and other symbols that members of communities participate. In addition, given the approach to criticality as discursive mapping that I have adopted as well as my adherence to the conceptualization of power as knowledge theorized by Foucault, the analysis on social media that I conduct in the next chapters is more in line with the second strand in American Studies that is focused on the cultural representations which serve to generate and maintain (ever-evolving) narrations of worldviews and that acknowledges the significance of technology in delivering and shaping contents as well as the importance of mass media texts.

2.4.3. American Cultural Studies and (Digital) Media Studies
As we have seen so far, American Studies in all its branches and strands can be defined as a “joint, interdisciplinary academic endeavor to gain systematic knowledge about American society and culture” (Fluck and Claviez 2003, IX). In his close scrutiny of the evolution of American Studies from its emergence to transnational American Studies, Oppermann (2016, 19) concludes that it is “quite remarkable that the innovative research that has emerged from New Americanist circles since the early 1990s, has almost completely neglected the cultural and political work of digital media [and that] New Americanist scholarship remains dominated by the paradigm of print text”. Indeed, he
continues, “digital media are clearly high relevant to the categories of representation and their potential for social and political change that have informed the New Americanist project”, and he concludes by advocating the call to scholars “to engage in transformative methods of cultural critique with new tools and across a broad range of media types” (Oppermann 2016, 19). Indeed, according to Uricchio (2014, 377) digital technologies and social media in particular are fine-grained sites of cultural expression and enable a vastly diversified register of voices to be heard as well as the emergence of bands of kinships and community ties. Indeed, these networks “serve as repositories of cultural perceptions – and cultural productions – in ways that lack significant precedent” and they provide “a hitherto unachievable level of insight into the lives of ‘ordinary (if demographically distinctive) people’. As representation of America can be investigated through literary texts, as well as through movies or television artifacts, Uricchio sees in the study of social media, “a new opportunity to explore how media forms are associated – or not – with American cultural norms [and] have implications for the study of American culture at both textual and relational levels” (2014, 378).

In this thesis, the socio-semiotic study of social media aims at investigating – as above said – the “cultural work of multinational ‘American’ companies like Facebook” (Oppermann 2016, 18), through the representation of clusters of concepts, or to say it with Geertz, of “webs of significance” that are realized both in the multimodal messages which constitute Facebook’s public narration and in its very software architecture of social media platforms which, as we shall see in the next sections, is an important constituent of the meaning making process. Indeed, more specifically, I investigate which worldviews are encoded and semiotically realized in the narration of Facebook in the messages posted by its founder and current CEO, Mark Zuckerberg, in his personal profile (https://www.facebook.com/zuck); in the messages posted in the profile (https://www.facebook.com/facebook/?brand_redir=156149777783739) and in the web services offered to programmers in order to embed the social media platform in their software artifacts which are communicated via the Facebook for developers profile (https://www.facebook.com/FacebookforDevelopers) and through the website (https://developers.facebook.com/). I also investigate
if the worldviews that emerge can be considered an example of globalization as Americanization that is, of American cultural language traveling and of other people acquiring that language and using pieces of it to create their semiotic artifacts, among which we find software artifacts such as apps developed leveraging the resources offered by Facebook as a platform.

2.5. Social Media Platforms as Texts

Social media can be considered tools that people use to take action in the world, “cultural tools that mediate our actions in the world, the ability to use [which] is the hallmark of human consciousness” (Jones and Hafner 2012, 2). In detail, they can be referred to as “symbolic tools” that, like language, are the “carriers of social structures, histories and ideologies inasmuch as they manifest certain patterns of affordances and constraints” (Jones and Norris 2005, 49-50) in the meanings they can help realize and the actions that can be taken through their use. Indeed, these tools may “enable us to express new kinds of meanings, establish new kinds of relationships” but, at the same time, can “prevent us from doing other things” or expressing in other ways (Jones and Hafner 2012, 3).

In the post-print communicative scenario of contemporary knowledge society (Kress and van Leeuwen, 2006 [1996]), these tools represent the tiles of what Kramsch has defined “symbolic competence”, that is the “ability to produce and exchange symbolic goods in the complex global context in which we live today” (2006, 251). By the term, Kramsch means to refer to the rather “sophisticated competence in the manipulation of symbolic systems” in their diverse discursive modalities (e.g. spoken, written, visual, aural…) and in relation to the different sets of contemporary hybridized genres, styles and registers. It is a competence that appears to be crucial in the path to fully active citizenship, where people need to be able to “interpret meanings from discourse features” and to “understand the practice of meaning making itself”, including the “semiotic choices” (2006, 251).

In order to understand how social media as symbolic tools contribute to the discursive mediation of society and culture, in this thesis, basic notions of Information Theory are functional to the exploration of the architecture of social media platforms, which helps shape the meanings carried by such artifacts.
Indeed, I argue that – in order to study social media from a multimodal and socio-semiotic point of view – it is important to complement the analysis of social media interfaces and of the communicative/textual practices they favor, with that of their architecture since social media provide a second level of service to users who can develop applications using the libraries of API (application programming interfaces) they offer. It is a postmodern compositional process of interactive texts that exploits social media tools thus enriching the set of semiotic affordances provided by social media platforms and, potentially, the interaction with other digital products. In the next sections, I start from an overview of the studies of Digital Discourse from socio linguistic perspectives to the raising strand in Social Semiotics labelled Semiotic Technology (Djonov and van Leeuwen 2017). I outline then the importance to add a ‘vertical’ dimension of analysis of digital discourse which includes the study of the architecture of social media platforms and to do so, I advocate the integration of Social Semiotics with the technical-material perspective of Platform Studies theorized by Bogost and Montfort (2007) in the area of Digital Media Studies.

2.5.1. Digital Discourse: from Sociolinguistics to Semiotic Technology

The study of digital discourse has involved, from the beginning, the analysis of its formal characteristics and of its sociolinguistic and pragmatic functions (e.g. Baron 2000; Crystal 2001; Paolillo 2001; Georgakopoulou 2003; Herring, Stein and Virtanen 2013; Tannen and Trester 2013). Such approaches have been sidelined by the investigation of digital textual genres (e.g. Askehave and Ellerup Nielsen 2005; Puschman 2013) and of the multimodal composition of digital texts, including the analysis of software interfaces and the identification of the resources codified in the software which is used to create meaning (e.g. Lemke 2002; Baldry, Thibault 2006; Adami and Kress 2010; Eisenlauer 2013; Jewitt, Domingo and Kress 2015). Studying software from a socio-semiotic multimodal perspective implies, on the one hand, understanding the ‘grammatical’ resources that are used to create meaning at ideational, interpersonal and textual levels; on the other hand, it means to analyze the ways in which a digital product has been used, the cultural contexts it comes from, and the social needs it fulfills. More recently, there has been an emerging
focus on the study of software as semiotic technology, the aim of which is to investigate both the technological resources for meaning making provided by digital products and the social norms which are encoded into them. Examples of this type of approach to the study of digital discourse are the works of Djonov and van Leeuwen (2012, 2013, 2017), Price, Jewitt and Crescenzi (2015) and that of Kvåle (2016).

I maintain that to study social media from a multimodal and socio-semiotic point of view, it is important to integrate the analysis of social media interfaces and of the communicative/textual practices they favor, with that of their architecture. It is a ‘vertical’ dimension of analysis that aims at investigating the connections among user generated social media messages, software front-end and the level of web-services, which are “software systems designed to support interoperable machine-to-machine interaction over a network” (Haas 2004) that largely implement these user interfaces. If we consider Facebook – the social media platform par excellence – we may observe not only how users can create their posts, but also how they can implement the product building apps and add them to the platform (https://developers.facebook.com/apps). Seen in this light, Facebook provides a second level of service to users who can develop applications using the libraries of API (application programming interfaces) offered by the social media platform. It is a postmodern compositional process of interactive texts that exploits Facebook tools thus enriching the set of semiotic affordances provided by the platform and, potentially, the interaction with other digital products. From a socio-semiotic point of view, this scenario has given rise to a situational context in which the semiotic system of software architecture favors the signifying practice of creating “new applications by combining existing web resources utilizing data and web APIs” (Benslimane, Dusta and Sheth 2008, 13). In order to investigate the possibilities and the constraints offered by such a software architecture, there seems to arise the necessity to integrate the analyses of front-end texts (such as posts or comments) and of social media communicative properties with the exploration of an underlying layer constituted by the network of relationships created within an application ecosystem and developed using web services and the related APIs. In such a digital context, I maintain that the integration of Social Semiotics/ Multimodal
Studies with the technical-material perspective of Platform Studies, which have been theorized by Bogost and Montfort (2007) in the area of Digital Media Studies and which is concerned with the algorithms and protocols of social media, may help us better understand the technological mediation of discourse (Moschini 2018).

2.5.2. Social Semiotics and Platform Studies

Platform Studies were first introduced in a paper given by Bogost and Monfort at the Digital Arts and Cultures Conference (2007) with the aim of providing a framework for the analysis of the relationship between culture and platforms, taking into account their material, technical development together with socio-cultural aspects. A book series was subsequently inaugurated by their book entitled *Racing the Beam: The Atari Video Computer System* (2009), where they analyzed the history and the technical challenges of programming for the Atari 2600 video game console. In the introduction to the volume, they framed the book series as a call for “the humanities to seriously consider the lowest level of computing systems and how these systems relate to culture and creativity” (2009, vii). Indeed, Platform Studies mark what has been defined a ‘material turn’ in Digital Media Studies where scholars are increasingly “prepared to tackle what goes on inside the machine” (Parikka 2012, 89).

The study of platforms is recent and, according to Plantin et al, it is quite a “cacophonous endeavor” (2016, 4). Indeed, the interest of media scholars in digital platforms coincides with the above-mentioned rise of Web 2.0 and, since then, the concept of platforms has been applied to game design (Montfort and Bogost 2009), content-sharing websites (Gillespie 2010; Helmond 2015) and social media applications (Langlois and Elmer 2013; van Dijck 2013). All the studies have highlighted and discussed issues like “programmability, affordances and constraints, connection of heterogeneous actors, and accessibility of data and logic through application programming interfaces” (Plantin et al 2016, 4). In some of these studies, the analysis of platform architecture and design is accompanied by the analysis of the power relations typical of commercial platforms through a focus on users’ agency as expressed in the economic and legal features of platforms, while other studies have recently questioned the assumed stability of platforms (e.g. Dyer-
José van Dijck’s study outlines, for example, the continual friction between users’ goals of expression and platforms’ profit-seeking aims (2013); while Langlois and Elmer (2013) take into account the economic interest that affect the design of corporate social media interfaces such as the integrated systems for displaying targeted on-line ads on Facebook. According to them, social media pre-defined set of actions (e.g. “share”, “retweet”, “like”) on the one side, provide users with communicative tools while, on the other side, facilitate data gathering and data analytics.

Platform Studies are not without their critics. Leorke (2012), for instance, considers the approach only as a “brand” for the franchise created by Montfort and Bogost without a deep theoretical framing. The substantial criticism moved to Platform Studies was addressed by the two scholars in a detailed paper (Bogost and Monfort 2009) where they explained how their perspective forms a continuum that ranges from media and Cultural Studies to information theory and is open to different theoretical approaches. In detail, they remarked upon six misunderstandings, explaining how Platform Studies do not entail technological determinism, but rather invite scholars to “open the black box of technology in productive ways” in order to study “how our technologies, our computer platforms, embody particular cultural concepts and ideals, how they too are created in a cultural context” (3). This statement seems to feature a structuralist component, however, it should be noted that the conceptualization of computer programming as a linguistic activity (which still appears to be the main frame of interpretation) dates back to the 50s and 60s of the last century and is modelled on the formal languages of Logic and Linguistics as part of the so-called cybernetic discourse which I discuss in the next chapters (see Nofre et al. 2014, 41). They also clarify that Platform Studies are not only about hardware, but include software platforms as well, since “a platform is a computing system of any sort upon which further computing development can be done. It can be implemented entirely in hardware, entirely in software […], or in some combination of the two” (3). Similarly, they highlight how Platform Studies are not only about video games but extends to all computing platforms where creative work has been done since the aim of Platform Studies is to “investigate the relationships between the hardware and software design of computing systems and the creative works produced on those systems” (5).
The most interesting answers, those on which a connection with Social Semiotics is worth establishing, are the answers to misconception #4 “Everything these days is a platform” (3) and #5 “Platform Studies are about technical details, not culture” (4). Indeed, Bogost and Monfort identify the object of their analyses in computational platforms – “the (so far very neglected) specific basis for digital media work” (3) and, to describe such platforms, they adopt the definition given by Marc Andreessen (2007a), according to which a platform is a “system that can be reprogrammed and therefore customized by outside developers – users – and in that way, adapted to countless needs and niches that the platform’s original developers could not have possibly contemplated, much less had time to accommodate”. However, they make clear how Platform Studies are not only about technical details but aim at connecting “technical details to culture” (3). It doesn’t mean that “#6, everyone in digital media will have to get computer science training or leave the field” (4), but it is about “how technical understanding can lead to new sorts of insights” (4). According to the two scholars, Platform Studies “allow the investigation of how particular aspects of a platform’s design influenced the work done on that platform” (4) and look at how “social, economic, cultural, and other factors led platform designers to put together systems in particular ways” (5). Indeed, their approach recognizes that “not only the user’s experience, but also interface, form and function, code, and platform, are fully embedded in culture” (5) and that technical details are important “to shed light on the relationships between technology and culture” (5).

Platform Studies do not indicate a precise methodology to be followed, they only manifest interest in the history of the analyzed platforms which, on the one side, put them near to media archaeology (Apperley and Parikka 2015) and, on the other side, to Social Semiotics in its “collect[ing], document[ing] and systematically catalog[ing] semiotic resources – including their history” (van Leeuwen 2005, 3). The methodology of Platform Studies was deliberately left open to invite contributions from different fields, and Social Semiotics with its focus on the process of the creation of meaning and social norms through semiotic resources may offer a valid methodology to be exploited in this area of studies. In particular, the emerging subfield of Semiotic Technology might offer a third line of investigation to Platform Studies, focusing as it does on the
analysis of how social media technologies enable people to make meaning across social practices and how various social media environments contribute to the structuring of knowledge and discourses through their design and their use. As a matter of fact, the key scientific focus of the framework developed by Djonov, van Leeuwen and Zhao (e.g. Djonov and van Leeuwen 2012, 2013; Zhao, Djonov and van Leeuwen 2014; Zhao and van Leeuwen 2014) is the intersection and interdependence between the use of social media and their design. As Djonov and van Leeuwen highlight, Semiotic Technology is “positioned at the cutting edge of research in Digital Humanities, Multimodal and Critical Discourse Analysis, and grounded in Social Semiotic theory” (2017, 570) and acknowledges the power of software “as a resource for meaning making in society” that, like languages, through their lexicons and grammatical systems, “structure the experiences and values of the societies they belong to, and thus shape the way members of these societies understand the world they live in” (2017, 571). Based on the social semiotic study of other semiotic resources, the approach aims at explaining the nature of software through the study of its patterning and internal organization in terms of its functional purposes in society.

What Social Semiotics can bring to Platform Studies is the above-mentioned methodology based on fine-grained and systematic analyses which combine the semiotic, social and technological dimensions of social media. What Platform Studies can bring to Social Semiotics is the technical investigation, that is the focus on the material construction of hardware and software, on essential aspects of computing systems like “logic gates, computer architecture, assembler, or high-level languages” in order to “learn more about the ways computer hardware and software are designed and programmed” (Bogost and Monfort 2009, 5). Indeed, as David Berry affirms, “looking at computer code is difficult, due to its ephemeral nature [and] the high technical skills required of the researcher” (2011, 5), however, he adds that “we need to become more adept at reading and writing computer code in order to fully understand […] the translation involved in the technical mediation provided by software (2011, 9 – emphasis in the original). In the next chapter, a multi-layered methodological approach to the study of social media platforms is proposed in order to integrate the socio semiotic analyses of front-end texts
and of social media communicative properties with the investigation of the underlying layer constituted by the software architecture of these platforms.

2.6. **Summary**

In the present chapter, I have reviewed the literature related to the theoretical model that is applied to the study of social media and that features the integration of Critical Discourse Analysis with Multimodal Studies, American Cultural Studies and Platform Studies. Moreover, I have disambiguated the main concepts, starting from that of “criticality” which is here intended as the process of mapping the ways in which meanings are encoded into texts and how these texts contribute to the discursive mediation of society and culture. It is a conceptualization of criticality which originates out of Foucault’s vision of “power as knowledge” according to which power is a structural component of a system of meanings that are discursively realized and codified in multi-semiotic texts. The term “discourse” has been adopted following Fairclough (2006), as an abstract noun when it refers to the semiotic, that is language and other semiotic forms as part of the social, and as a concrete noun, when referring to particular ways of representing the world. As per the relationship of discourse, texts and social reality, it is here based on Fairclough’s dialectical-relational approach, according to which discourse is the mechanism that mediates between reality and our knowledge of it and that represents an “interlevel” between the analysis of social structures and the micro-level analysis of texts (O’ Regan and Betzel 2016).

The above-mentioned micro-level analysis of texts is conducted integrating Systemic Functional Linguistics (SFL) – which is the procedural model mostly used to carry on textual analysis in CDA – with Multimodality since the investigation of the verbal code would not be sufficient to decode the processes of meaning making in texts belonging to the digital domain. Regarding Multimodality, the theoretical stance adopted in this thesis is the Social Semiotics that features, as its main scope, the analysis of meaning making in its socio-cultural dimension. According to this approach, the production of meaning in communicative acts is described as the process of interaction between the interest of the sign makers, that is always socially and culturally situated, and the meaning potential, that is what is possible to mean
using the resources ("modes") that are available (Jewitt 2009b). More in details, since this thesis is a study on global media discourse and its ideational roots, my work is more in line with the merging of Critical Discourse Analysis and Multimodality as it has been envisioned by van Leeuwen and Machin (e.g. Machin 2013, van Leeuwen 2014) starting from their study on global cultural industries (Machin and van Leeuwen 2007). Moreover, as in this thesis the analysis of social media and their relationship with both hacker culture and American liberal values is fundamental in order to understand the semiotic realization of digital discourse, I advocate for a focus on the cultural context which seems to have been sidelined by the more sociological notion of the context of situation. Specifically, what I envision is Multimodality as an instrument that can be used to study cultural formations, thus extending to Multimodality Hodge and Kress’ original Whorfian conceptualization of Linguistics (1993 [1979]). The concept of culture here adopted is in line with both Clifford Geertz (1973) and Scollon, Wong Scollon and Jones (2012 [1995]) that see culture as a system of meanings transmitted through natural language and other semiotic systems that members of community participate and that are mediated by texts and tools. What I propose is a Critical Multimodal Ideational process of mapping discourse, which is conceptualized as knowledge, realized by multimodal digital texts and investigated by means of a socio-semiotic approach to making meaning. The term “ideational” has been chosen since it can be described as the metafunction through which language/modes “encode the cultural experience” of people (Halliday 2007 [1995], 183). In addition, as the cultural formations I explore when dealing with the analysis of social media are predominantly US-American cultural formations, I argue that the multimodal ideational mapping of discourse should be integrated with American Studies, the interdisciplinary fields of study funded in the 1930s with the purpose of investigating American society and culture. More in details, it should be combined with the strand in US Cultural Studies that has emerged out of the New Americanist circles since the early 1990s and that is fueled by Media Studies, Cultural Anthropology and the German academic tradition of Kulturwissenschaft (Opperman 2016). In such a context, this thesis aims specifically at answering William Uricchio’s call (2014) to the
study of social media as significant texts for the understanding of contemporary US culture.

Finally, given that the software architecture of social media platforms is an important component of the meaning making process, basic notions of Information Theory is used to explore the possibilities and the constraints offered by these digital mediational means. Indeed, I maintain that to study social media platforms from a multimodal and social-semiotic point of view, it is important to integrate the analysis of social media interfaces and of the communicative/textual practices they favor, with that of their architecture. Platform Studies (Bogost and Montford 2007) have been here proposed as a potential integration with Social Semiotics as they provide a framework for the analysis of the relationship between culture and platforms, that takes into account their material, technical development together with socio-cultural aspects. What Social Semiotics can bring to Platform Studies is the methodology based on fine-grained and systematic analyses of social media as texts, while Platform Studies can bring to Social Semiotics the technical investigation, that is the focus on the material construction of hardware and software. I argue that this additional layer of analysis might help to shed light on the nature of social media platforms, on the interactions favored between participants (even across platforms), as well as on the social/communicative practices and on the valorial frames promoted by such digital products. In the next chapter, I discuss how the concepts and the theoretical strands here described are analytically operationalized.
CHAPTER THREE

METHODOLOGY

3.1. Introduction
The aim of the present chapter is to discuss how the concepts and the theoretical strands described in the second chapter shape the empirical analyses carried out in the next three empirical chapters. I start by explaining how the concepts that inform my theoretical approach are analytically operationalized and then describe how I proceed with my analysis. Then, I illustrate the criteria that have guided the creation of the three main corpora in relation with my research questions, comment on ethical issues and list what the texts in my three data sets are.

3.2. The Process of Multimodal Ideational and Technological Mapping
As I have explained in the first chapter, the object of my work is the study of social media platforms as socio-political entities. The main scope is to investigate the worldviews that are discursively and multimodally encoded in Facebook’s public communication as a company as well as in its digital architecture and tools and I do this through a Critical Multimodal framework that highlights the cultural and the technological dimensions of mediational means. In more detail, my research aims at critically investigating the discursive strategies and the main conceptual pillars around which the official communication of Facebook develops and the cultural frames of reference in which Facebook’s communication fits in. In addition to that, my research aims to explore if and to which extent the study of the digital architecture of the social media platform and its digital tools enriches the critical analysis of Facebook. I maintain that the originality of my research approach is twofold as it lies in putting the concept of culture back in focus in discourse analysis and in adding to CDA a more material, in this case, technological perspective. Indeed, the concept of culture has been sidelined by the more sociological context of situation especially in systemic functional linguistic studies probably because, before the advent of globalization, the social contexts were more
homogeneous in cultural terms, while contemporary scenarios are characterized by interrelated yet disjunctive global cultural flows that need to be taken into account when discussing about “ideoscapes”, “mediascapes” and “technoscapes” (Appaduraj 1996). As concerns the technological component, I argue that the critical analysis of digitally mediated discourse would benefit from the study of the systems (both software and hardware) that lie behind front-end interfaces and of the related technical documentation as these systems concur in shaping the realization of discourse and the actual relationships among the different participants in communicative acts.

The theoretical framework that I have adopted and that I define a multimodal ideational and technological process of mapping features a combination of insights from Critical Discourse Analysis, Multimodality from a Socio-semiotic perspective, American Cultural Studies and Platform Studies. A critical approach to the analysis of discourse, especially in its more poststructuralist aspect (e.g. Pennycook 2001, O’Regan 2006), is functional to my discursive and conceptual mapping of both Facebook’s self-representation and its ideational roots. Indeed, as I have outlined in the previous chapter, criticality as discourse mapping is a process which is both discursive and ideational and its scope is to analyze the world views originating in the discursive practices or regularities which – according to Foucault – encode the conceptual frameworks of a specific socio-cultural context/domain. It is a stance that is more oriented to discourse as being an aspect of social practices and a means for the articulation of beliefs about the world, and much less about the ideological obfuscation of reality or truths. On the other side, Multimodality offers both the resources for the analysis of texts where different modes concur to the process of meaning making and help understand the role of multimodal discourse in society. Multimodality is here used as a “heuristic instrument for the study of culture” (Hodge and Kress 1993 [1979], 14), or better, for the cultural study of digitally mediated multimodal discourse. Indeed, as outlined in the previous chapter, the study of the ways in which language instantiates culture dates back to Firth (1935) and his advocating the use of Linguistics to shed light on meanings shared by communities. More in details, the analysis that has been carried out features a three-stepped iterative circular process as illustrated in figure 1. The first step is given by the analysis of the “texture” of
texts, where agentive sign makers encode meanings; the second step is given by the critical reading of texts that aims at deconstructing their systems of meaning starting from what appears to be the preferred or dominant ‘reading’ of the text, and then proceeds to an exegetic analysis in order to show up any potential contradictions and dissonances in the producer’s apparent intent (O’Regan 2006); the final one is given by the analysis of the significance of these texts in a broader socio-cultural context, where texts can be seen as the semiotic entry points to the semantic mapping of specific cultures/subcultures.

As stated in the previous chapter, the notion of culture that I have adopted is in line with Geertz's idea of culture as a semiotic system (1973), in which an individual is immersed in a historically transmitted pattern of meanings vehicled by narrations that are mediated by semiotic artifacts and that is similar to the one adopted by Scollon, Wong Scollon and Jones (2012 [1995], 9) who see “culture as discourse”, that is a system of meanings transmitted through natural language and other symbols that members of communities participate. I argue that these conceptualizations align with Hallidayan ideas since, according to Halliday and Hasan (1985, 4), there exists an indissoluble connection between society, culture and semiotic systems as culture can be defined as a “set of semiotic systems, a set of systems of meaning, all of which interrelate”. The metafunction that can be directly related to the context of culture is the ideational metafunction which is, in Halliday’s words, “the component through which the language encodes the cultural experience, and the speaker encodes his own individual experience as a member of the culture (Halliday 2007 [1975], 183-184). As Thompson highlights, Geertz’s notion of

![Figure 1 – Iterative Circular Analytical Process](image-url)
culture features an “abstraction from the social-historical circumstances in which actions, utterances and texts are produced, transmitted and received” (1990, kindle version). In the framework here adopted, I have addressed this criticism by strongly focusing on the contextualization of the documents and by adopting a socio-semiotic stance since social semiotic multimodal analysis views meaning making as a motivated social process and focuses on modal resources that are available to sign-makers in specific socio-cultural and situational contexts.

In addition, my theoretical framework has been integrated by a special focus on the strand in American Cultural Studies fueled by Media Studies and Cultural Anthropology the roots of which trace back to the German science of culture, “Kulturwissenschaft” (Klepper 2016). Indeed, the analyses of social media that I conduct in the empirical chapters aim at cracking cultural codes and feature an intersection between historical facts, culture and artifacts. From American Cultural Studies, my framework borrows the techniques of “textual criticism” that are used to investigate such a complex nexus. As I explain later on in the section, I adopt the methodological combination of the synchronic analyses of texts and of the diachronic exploration of the roots of such texts in order to investigate the cultural and political work of the social media as artifacts and socio-political actors. Finally, my study of social media from a multimodal and socio-semiotic point of view is integrated with basic concepts of Information Theory, which are necessary for the analysis of the architecture of the digital platform and its tools. Indeed, I maintain that for a critical investigation of social media it is important to complement the analysis of the front-end interfaces and of the communicative/textual practices they favor, with that of the platform’s architecture since social media provide a second level of service to users who can develop applications using the libraries of API (application programming interfaces) they offer. It is a ‘vertical’ dimension of analysis which includes the study of the architecture of social media platforms through the integration of Social Semiotics with the technical-material perspective of Platform Studies theorized by Bogost and Montfort (2007) in the area of Digital Media Studies that I explain from a methodological standpoint later on in the chapter. As I have already highlighted, what Social Semiotics can bring to Platform Studies is the methodology based on fine-grained and
systematic analyses which combine the semiotic, social and technological dimensions of social media, while Platform Studies can bring to Social Semiotics the technical investigation, that is the focus on the material construction of hardware and software, on essential aspects of computing systems.

The explanation of my scientific lenses responds, from a theoretical point of view, to my meta-research question where I wonder if a Critical Multimodal framework for analyzing social media, which includes the cultural and the technological dimension of mediational means can be devised. It is a framework whose effectiveness will be discussed in the last chapter of the present work after its application to the case study. From a methodological point of view, the process of the multimodal ideational and technological mapping of social media platforms that I envision is illustrated in figure 2. In detail, the process of “ideational mapping” features the combination of the multimodal study of a corpus of selected texts in order to highlight the main worldviews that are cued by such texts (the corpus that I call A and is analyzed in Chapter 4) with the investigation of the diachronical evolution of the epistemic formations that form such worldviews through the multimodal study of the entextualizations (the corpus B which is explored in Chapter 5). As already noted in Chapter 1, by epistemic formations I intend the conceptual bundles which compose an ideology, that is a Weltanschauung, the system of ideas which inform a conception of the world.

In line with Foucault, I conceive discursive change as a cultural and systemic change since every text or communicative event is unique but can also be seen as an instance of a recurrent pattern in a discursive community and partially derives its meaning from being seen as an instance of one or more formations in terms of codes, genres or registers. Discourses are, in Bourdieu’s terms, a symbolic capital of resources instantiated into artifacts, texts or communicative events and the heteroglossic relations that such instances have among themselves are not only semantic, they are also social and political. Thus, a semantic mapping aims at examining not only the construction of texts in terms of ideational meaning, but also the heteroglossic relationships between the discursive practices under scrutiny and other possible discourses which function as the broader cultural context they engage.
with and that help define the semantic extension of the objects of the analysis as well as their critical scrutiny.

The critical analysis is further expanded to take into account the technological nature of the social media platform through the analysis of the digital architecture that lies below the surface of front-end texts combining Platform Studies and Social Semiotics, in order to further deepen the critical analysis of Facebook’s self-description and self-declared worldview (the corpus C which is discussed in Chapter 6). Indeed, the first empirical chapter examines the worldview which is encoded in Facebook’s public narration as it has been shaped since the presentation of the new company mission in February 2017 and the identification of its main discursive/cultural formations (i.e. the notions of community/ies, hacker culture and digital tools as a global enfranchising infrastructure). The second empirical chapter investigates the ideational context that frames Facebook’s worldview. The chapter selects and studies a diachronic corpus of texts that represent the milestones in the creation of the cultural construct that seems to be the core of Facebook’s self-narration (i.e. digital tools as a liberating technology) and its critique in relation to the development of social media and to the “platformization” of the Web. The chosen texts are contextualized from a historical point of view and with reference to the evolution of digital technologies (e.g. the invention of personal computers, the creation of the Web and the rising of webservices). The third empirical chapter deals with Facebook’s business model and its relationship with the architecture of Facebook as a platform and a corpus of texts that comprise tools and technical documentation is explored in order to reveal any discrepancies, deliberate omissions or inaccuracies present in the representation that Facebook gives if its business model to the generalist audience. The three corpora are further illustrated later on in the chapter, while the next section enters into the details of the methodological vertical exploration of the technological layers of mediational means.
3.3. A Technological Layering Model

According to Djonov and van Leeuwen, “Discourse Analysis and related fields such as Applied Linguistics are well positioned to extend our knowledge of the ways software design and use reflect and shape social values and power relations across different semiotic practices and contexts” (2017, 570). Nevertheless, the study of digital discourse has been concerned predominantly with texts types and interactions, rather than directly with the mediational technologies themselves. Only recently, there has been an emerging focus on the study of software as semiotic technology, the aim of which is to investigate both the technological resources for meaning making provided by digital products and the socio-cultural norms that are encoded into them (e.g. Djonov and van Leeuwen 2012; Price, Jewitt and Crescenzi 2015; Kvåle 2016 and Poulsen 2018b). I maintain that to study social media from a multimodal and socio-semiotic point of view, it is important to integrate the analysis of social media interfaces and of the communicative/textual practices they favor, with that of their architecture. It is a dimension of analysis that aims at investigating the connections among user generated social media.
messages, software front-end and the level of web-services, which are “software systems designed to support interoperable machine-to-machine interaction over a network” (Haas 2004) that largely implement these user interfaces. The model for technological layering in multimodal analysis of digital discourse here proposed integrates the analysis of social media interfaces and of the communicative/textual practices they favor, with that of their architecture. As previously stated, the use of basic notions of information theory is functional to the exploration of the architecture of the platforms, which contributes to the meaning making process of semiotic artifacts that are technically mediated by social media platforms. It is a model that aims at investigating the connections among user generated social media messages, software front-end interfaces and the level of web-services that largely implement these user interfaces.

If we consider Facebook, users can create their posts, but they can also implement the product building apps and adding them to the platform (https://developers.facebook.com/apps). Seen in this light, Facebook provides a second level of service to users who can develop applications using the libraries of API offered by the social media platform. It is a compositional process that exploits Facebook tools thus enriching the set of semiotic affordances provided by the platform and, potentially, the interaction with other digital products, as in the case of the “login with Facebook” service (https://developers.facebook.com/docs/tvos#login), that will be taken into account in the empirical analysis. According to Andreessen (2007a, 2007b), Facebook is a Plug-In API online software platform that enables outside web developers to inject new features and content into the Facebook environment. The platform provides “a full suite of APIs - including a network protocol, a database query language, and a text markup language - that allow third party applications to integrate tightly with the Facebook user experience and database of user and activity information” (2007a). After creating a developer account on Facebook, the programmer can write a web application, from a piece of web content up to a fully-fledged application, register it with Facebook which will function as a viral distribution engine, since users get notified when their friends start using an application and they too can start using the same application with one click. These new functionalities and codes are layered on
top of the platform, the codes and functionalities of which remain transparent (that is invisible in IT jargon), to the users, since the Facebook system is proprietary and cannot be accessed.

Table 1 shows the model that I propose for the technological layering of social media platforms in a socio-semiotic perspective and that aims at combining the multimodal analyses of front-end texts and of social media communicative properties with the investigation of the above illustrated underlying layer constituted by the software architecture of social media platforms and, in particular, the network of relationships created within an application ecosystem using web services and APIs. The model identifies five basic levels that go from the analysis of the semantics and of the multimodal realization of the messages created on social media to the very system architecture of the social media platform which, in the case of Facebook or other corporate online software platforms such as YouTube, Twitter, Google+, is proprietary and no one can have access to it.

<table>
<thead>
<tr>
<th>N°</th>
<th>Layers</th>
<th>Elements to be analyzed</th>
<th>Main Tools for the Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The Message</td>
<td>The Content of the Messages and their Multimodal Realization</td>
<td>Applied Linguistics, Discourse Analysis, Multimodality, Computer Mediated Communication</td>
</tr>
<tr>
<td>2</td>
<td>The Front-End Interface</td>
<td>The Templates, the Social Plug-Ins</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>The Ecosystem Communication Flow</td>
<td>Information IN, Information OUT</td>
<td>UML Diagrams</td>
</tr>
<tr>
<td>4</td>
<td>The Organization of Information</td>
<td>API Documentation, Web Services Descriptors</td>
<td>Applied Linguistics, Multimodality and System Architecture</td>
</tr>
<tr>
<td>5</td>
<td>The Platform</td>
<td>System Architecture</td>
<td>Coding Analysis and Reverse Engineering</td>
</tr>
</tbody>
</table>

*Table 1 – A Technological Layering Model*
The first level of analysis deals with the content of the messages and their multimodal realizations that can be investigated with concepts and tools mutuated from Applied Linguistics, Discourse Analysis, Multimodality and Computer-mediated Communication, as in the tradition of the studies on the formal, sociolinguistic and pragmatic functions of digital discourse, on digital textual genres and on the multimodal composition of digital texts (e.g. Lemke 2002; Georgakopoulou 2003; Askehave and Ellerup Nielsen 2005; Androutsopoulos 2006; Herring, Stein, and Virtanen 2013; Tannen and Trester 2013; Jewitt, Domingo, and Kress 2015). At the second level, the exploration of the multimodal realization of the messages is integrated with the focus on the study of the potentialities and the constraints offered by the pre-set layout of the front-end interfaces of social media platforms, including the comments and the social plug-ins, here considered only with reference to their realization, as in some of the Multimodal Studies that take into account the analysis of software interfaces and the identification of the software resources used to create meaning (e.g. Djonov and van Leeuwen 2012, 2013, 2017; Price, Jewitt, and Crescenzi 2015; Poulsen, Kvåle and van Leeuwen 2018).

An analysis of the front-end interfaces may combine the first two levels as the example of a message posted to Facebook that I have chosen shows (figure 3). Indeed, if we wish to analyze the post, at the first level, the analysis would deal (at least) with the meaning making processes that occur in the multimodal ensemble, also in terms of coherence and cohesion (like, for instance, the semantic chain that connects the sad icon to the verb phrase of the verbal text and to the video). The second level would analyze how the pre-given formats of the Facebook templates or the social plug-ins such as the “add friend”, the “like” or the “share” button constrain or favor the communicative choices made by the encoder of the message. The example
selected features, for instance, a link to another social media platform (YouTube). The way such a link is semiotically realized in the post is a result of the choices made by the developers of the Facebook platform when selecting the options offered by YouTube’s APIs.

The third level of the framework aims at describing the communication flows which occur inside a social media platform or among the social media platform and other external digital resources, including other platforms. It outlines the communicative properties of the electronic environment, like the “technological, functional and relational affordances” and the “action possibilities” it offers to its users (Eisenlauer 2014), such as the text automation processes with their pre-set options of text composition and dispersions. It describes also the connections between the platform and the external digital resources highlighting the flow of inbound and outbound information and the involved software components. The description of these interactions might be realized using the UML (Unified Modeling Language), a general-purpose formal language widely adopted in the field of software engineering in order to represent the design of a system (Fowler 2004 [1997]). The UML formalism (which can be object of semiotic investigation itself as I better explain in Chapter 6) allows the expression of a complex system with different levels of details according to the need: it can be used to describe the general architecture as well as the details of a specific interaction among different services. With reference to the post shown in figure 3, UML could be used to represent the entities involved in the exchange (Facebook and YouTube) and/or the interactions among them, such as the sequence of actions aimed at rendering the YouTube video inside the post: the user inserts a url in the post/ Facebook understands the nature of the request and sends a query to the Web/ Facebook receives a feedback from YouTube/ Facebook recognizes it as a video and renders it according to the template standards.

Our example is very simple but, with the same approach, it is possible to represent bundle applications built mashing up different sets of APIs belonging to diverse platforms (see, for instance, https://www.programmableweb.com/category/all/mashups). The fourth level is – together with the third one – the key level in understanding the architecture of the so-called programmable Web envisioned by O’Reilly I discuss in
Chapter 5 and revolves around the details of the network of relationships created within an application ecosystem and developed using web services and APIs. The web services descriptors and the API Documentation are the components that can be analyzed to investigate the choices made by the software engineers when developing their applications. The tools envisioned to decode this layer of meaning is a combination of instruments drawn from the area of computer science, such as system architecture or even coding (in the case of detailed analyses of the lines of code) and instruments drawn from Applied Linguistic and, more generally, Multimodality. Indeed, the written specification and instructions accompanying the APIs often present a kind of language which lies in between the neutral/informative register typical of instructions and the promotional register of advertising. In the example quoted above, this level of analysis could be applied to the study of the solutions adopted by the Facebook programmers when calling a YouTube API in order to stream the video played into the embedded player and customize the playback experience (https://developers.google.com/youtube/player_parameters). We could investigate, for instance, if the semiotic choices of muting the videos, playing them in streaming or adding the superimposed texts are default options or deliberated choices among a range of options offered to developers in their process of meaning making through code. The final level deals with the source code designed by the platform programmers and the tools to investigate this level are coding analysis and reverse engineering which, in the case of open platforms, might help understanding their architecture. As above stated, the corporate social media platforms feature algorithms that are ‘transparent’ to computer users this is the reason why, in the example selected, this type of analysis could not be performed.

3.4. The Data
As I have stated previously, the process of the multimodal ideational and technological mapping of social media platforms (see figure 2) is an iterative tripartite process that is divided into the following steps:
1. the investigation of the worldview as it is self-declared by the entity under scrutiny in a corpus of texts that is qualitatively selected and the identification of the main epistemic formations that form such a worldview (corpus A);
2. the study of the evolution of the epistemic formations through the exploration of their entextualizations in a diachronic corpus of multimodal texts (corpus B);
3. the analysis of the architecture and of the digital tools offered by the social media using the technological layering model (corpus C).

The processes of semantic and technological layering can be descriptive or inform the critical analysis of discourse. In this case, the whole procedure is iterative as both the layerings further deepen the critical analysis of Facebook’s self-description and self-declared worldview. Moreover, as I illustrate in the next sections, in the present work the first corpus is a multimodal synchronic corpus of texts, while the third one is a diachronic corpus that investigates the evolution of the authentication tools offered by the social media.

As Mayr and Machin observe (2012, 207), a CDA analysis “often involves the analysis of only a small number of texts, even of just one or two”. The texts are presented as typical of a particular discourse or ideology and are chosen by the analysts as they may consider such texts as examples of ideology in operation and carry on a linguistic, or, more amply, a multimodal analysis in order to highlight the textual strategies used by the senders to communicate their worldviews in a persuasive way and that are not easily recognized by lay readers. The analytical process is functional to reveal discourses that are embedded into texts from a multimodal perspective and to discuss them critically. In my work, I investigate the discourses and the worldviews in the messages posted by Facebook’s founder and current CEO, Mark Zuckerberg, to his personal profile (https://www.facebook.com/zuck); in the messages posted in the very Facebook profile (https://www.facebook.com/facebook/?brand_redir=156149777783739) and in the web services documentation offered to programmers in order to embed the social media platform in their software artifacts which are communicated via the Facebook for developers profile.
(https://www.facebook.com/FacebookforDevelopers) and through the website (https://developers.facebook.com/). All the Facebook data have been collected until July 2019 and, as regards data ethics, all the texts that have been selected are already public since they are public speeches, publications or technical documentation published by Facebook on its website. To the criticism that may concern the representativity of the corpus, my answer is that the texts that have been selected are those in which the company explicitly declares that it is explaining its company mission or describing its business model or its tools. Moreover, even if I agree with Chouliaraki and Fairclough (1999, 62) that the Critical Analysis of Discourse could benefit from the combination with a social scientific method like ethnography as ethnography could “illuminate multiple aspects of a social practice both synchronically (at the time of the fieldwork) and historically [thus providing] an invaluable context for assessing the articulatory process in the practice and the specific function of discourse in it”, my methodology does not feature such an integration. However, for the exploration of hacker subculture and the diachronic investigation of the evolution of the epistemic formations that emerge from Facebook’s self-declared worldview, the work of cultural anthropologists that have extensively studied hacker culture through fieldwork such as Gabriella Coleman (2013) has been an invaluable source of information as it provides a fundamental insight into the practices and the beliefs of this subculture.

3.4.1. Corpus A
The first corpus was selected to answer the first research question that aims at exploring the discursive strategies and the main conceptual pillars around which the official communication of Facebook is structured since the presentation of the new company mission in February 2017 where the platform is described for the first time as a global social infrastructure. As I have stated above, the corpus is qualitative, multimodal and synchronous and features the following documents:

- the About Us section of Facebook’s Profile on Facebook (https://www.facebook.com/pg/facebook/about/?ref=page_internal) as it was at the time of my exploration, that is in October 2018;
- Facebook’s Mission Statement in the Company Info Section of the Newsroom Website (//newsroom.fb.com/company-info/) which was collected in October 2018;
- Facebook’s Culture Statement in the Company Info Section of the Newsroom Website (//newsroom.fb.com/company-info/), which was collected in October 2018;
- the message entitled *Building Global Community* posted by Mark, Zuckerberg to his Facebook personal profile on February 16, 2017 (https://www.facebook.com/notes/mark-zuckerberg/building-global-community/10154544292806634);

The About Us section was selected as the About Us page is the functional part of a webpage usually dedicated to present a company or an institution in terms of its organization, mission, history and values; a function that is here shared and amplified by Facebook’s Newsroom where news and information are given (and ‘crafted’) for the general public and for the media by the company about the company itself and its activities. In particular, I have chosen to analyze how the sections dedicated to the new mission and to Facebook’s culture are multimodally realized in order to further expand the investigation of the mission’s discursive strategies and conceptual pillars. The 6,000 words message *Building Global Community* (Zuckerberg 2017b, see the appendix) which was posted by Zuckerberg to his profile page in February 2017 was chosen as it is considered a sort of political manifesto where he envisions the strategic role of his platform as the “social infrastructure” for the world of tomorrow; while the speech *Bringing the World Closer Together* given by Mark Zuckerberg (2017a, see the appendix) at the first Facebook community summit in Chicago, was selected as it is the first speech in which the full mission statement of the new community mission was presented.
3.4.2. Corpus B
The aim of the second corpus is to answer the second research question by exploring the semantic extension and the evolution of the discursive paradigm which seems to be structuring Facebook’s worldview. Indeed, the second corpus aims at investigating what are the main discursive and conceptual components of the representation of digital technologies as liberating tools that lies at the basis of Facebook’s self-narration. The corpus is multimodal, qualitatively selected and diachronic as the texts that have been chosen are considered milestones in the creation of the cultural construct mentioned above in a process of diachronic heteroglossia. All the texts are contextualized from a historical point of view and with reference to the evolution of digital technologies in line with the American Cultural Studies approach that integrates my multimodal framework and which features an intersection between historical facts, semiotic artifacts, culture and the focus on media in shaping socio-cultural practices through mediation. In detail, the following specific texts were selected for analysis:

- the first number of *The Whole Earth Catalog* (1968);
- Apple’s television advertising entitled *1984* (1984);
- the *Declaration of the Independence of Cyberspace* (1996);
- *Time’s Person of the Year* cover (2006);
- the *Remarks before the International Conference of Data Protection & Privacy Commissioners* by Tim Cook (2018).

*The Whole Earth Catalog* was selected since the magazine is considered one of the founding documents of the very peculiar historical blending out of which personal computers and the Internet originate and that interweaves US technological utopianism with cybernetics and the pragmatic theorization of tools deriving from Buckminster Fuller with the politics of consciousness developed by US counterculture. The television advertising launched by Apple in 1984 was selected as it is the text that shapes the conceptual frame of liberation chosen by the company that invented personal computers to frame its tools; while John Perry-Barlow’s *Declaration of the Independence of Cyberspace* published on the website of the Electronic Frontier Foundation in
1996 and the renowned 2006 *Time Person of the Year* cover were chosen as they respectively represent the description of cyberspace according to the so-called “California ideology” (Barbrook and Cameron 1996), that features the merging of neoliberalism with US counterculture, and the first mainstream celebration of the Web 2.0 revolution. The final document is the keynote speech given by Apple’s CEO Tim Cook during the International Conference of Data Protection & Privacy Commissioners in Brussels in October 2018 (see the appendix) after the data scandals that involved social media and, more broadly, the internet, and which features a significant shift in the discursive paradigm that depicts digital technologies as liberating tools. Overall, these texts are representative of core digital technologies perspectives over a fifty-year period, in addition to being significant ideological markers in the historical evolution of this domain. This was an overarching rationale which also determined their selection for this study.

### 3.4.3. Corpus C

The third corpus was chosen to expand the critical analysis of the social media investigating a kind of documentation which is not a usual object of analysis for discourse analyst, that is the technical documentation which describes the architecture of the social media and its tools. Indeed, my third research question addresses the issue if and to which extent the study of the architecture of social media platforms enriches the critical analysis of social media as socio-political actors. The selected corpus is multimodal and diachronic and features the following documents:

- Facebook’s 2018 Annual Report;
- Facebook Login Overview dated June 10, 2019 (https://developers.facebook.com/docs/facebook-login/overview);
The critical analysis is first approached through the study of the article published by the Wall Street Journal in January 2019 where Mark Zuckerberg illustrates the principles that underpin the business model around which the social media is built with the aim of reassuring the users. The text was chosen as it explicitly addresses the general public after the scandals that have involved the gathering and exploitation of users’ data. The 2018 Annual Report
was selected as I maintain fundamental to highlight the main sources of revenues for the social media, the main participants which are involved in the process and to explore the relationship between the business model and the systemic architecture of the social media. All the other texts of the corpus are part of the technical documentation which is functional to the investigation of one of Facebook’s central tools, that is the Facebook Login service, the cross-platform authentication service offered by the social media to its active users (https://developers.facebook.com/docs/facebook-login). The service was chosen since it lies at the core of the digital architecture of the social media, it is deeply intertwined with its economic dimension and was the ‘Trojan horse’ that was exploited for the collection of users’ data in the context of the Cambridge Analytica Scandal.

As a matter of fact, a modified version of the Facebook Login service was released in the aftermath of the Cambridge Analytica data scandal and just a few days before Facebook CEO’s congressional hearings that took place on April 10-11, 2018. All the documents that I have selected refer to the two versions of the service, namely, the version before the Cambridge Analytica Scandal, which was active from April 2014 to March 2018 and the one inaugurated in March 2018 in order to highlight the main differences. In detail, the documents comprise examples of the front-end interfaces where users are asked to access the service and different extracts from the reference manual for developers which define the data model of Facebook and which specify the data that are accessible and the level of security required to get access to them such as, for instance, the permission references, the user experience design and the platform policy.

3.5. Summary
The chapter has started by illustrating how the concepts that inform my theoretical approach and that I have explained in the literary review section shape the empirical analyses which are carried out in the next three chapters. The main scope of my work is to investigate the worldviews that are discursively and multimodally encoded in Facebook’s public communication. The scientific lenses that I adopt feature a combination of Critical Discourse Analysis, multimodality from a socio-semiotic perspective, American Cultural
Studies and Platform Studies as I intend to highlight the focus on the cultural and the technological components of mediational means. From American Cultural Studies, my framework borrows the techniques of “textual criticism” and the methodological combination of the synchronic analyses of texts and of the diachronic exploration of the roots of such texts in order to investigate the cultural and political work of the social media as artifacts and socio-political actors. From Platforms Studies, I borrow the focus on the necessity to investigate the architecture of digital artifacts and methodologically, my critical and multimodal analysis of social media is integrated with basic concepts of Information Theory.

I have described my entire analytical approach as a process of ‘multimodal, ideational and technological mapping’, the founding tile of which is the conceptualization of criticality as knowledge and discourse mapping (Pennycook 2001; O’Regan 2006). From a methodological point of view, the process is an iterative tripartite process that starts from the multimodal study of a corpus of selected texts in order to highlight the main ideologies that are cued by such texts and the main conceptual bundles that emerge and, at the same time, underpin such ideologies (the corpus that I call A and is analyzed in Chapter 4). The second step features the investigation of the diachronical evolution of such conceptual bundles or epistemic formations through the multimodal study of the entextualizations (the corpus B which is explored in Chapter 5). These formations are here considered a bridge between texts and socio-cultural systems; thus, a mapping of discursive practices aims at examining not only their construction in terms of ideational meaning but also the heteroglossic relations with other possible discourses which function as the context, both cultural and situational, they engage with. The third step takes into account the technological nature of the social media platform through the analysis of the digital architecture that lies below the surface of frontend texts combining Platform Studies and Social Semiotics (the corpus C which is discussed in Chapter 6). The technological layering model that I envision is a ‘vertical’ dimension of analysis which presents five analytical layers: the first one deals with the content of the messages and their multimodal realizations while the second level is focused on the study of the potentialities and the constraints offered by the pre-set layout of the front-end
interfaces of social media platforms, including the comments and the social plug-ins. The third level of the framework aims at describing the communication flows which occur inside a social media platform or among the social media platform and other external digital resources, including other platforms. The fourth level revolves around the details of the network of relationships created within an application ecosystem and developed using web services and APIs. The final level deals with the source code designed by the platform programmers and the tools to investigate this level are coding analysis and reverse engineering which, in the case of open platforms, might help understanding their architecture.

The processes of semantic and technological layering can be descriptive or inform the Critical Analysis of Discourse. In my case study, the whole procedure is iterative as both the layerings further deepen the critical analysis of Facebook’s self-description and self-declared worldview. Indeed, the first empirical chapter examines the worldview which is encoded in Facebook’s public narration as it has been shaped since the presentation of the new company mission in February 2017. The second empirical chapter investigates the ideational context that frames Facebook’s worldview. The chapter selects and studies a diachronic corpus of texts that represent the milestones in the creation of the cultural construct that seems to be the core of Facebook’s self-narration and its critique in relation to the development of social media and to the “platformization” of the Web. The chosen texts are contextualized from a historical point of view and with reference to the evolution of digital technologies (e.g. the invention of personal computers, the creation of the Web and the rising of webservices). The third empirical chapter deals with Facebook’s business model and its relationship with the architecture of Facebook as a platform and a corpus of texts that comprise tools and technical documentation is explored in order to reveal any discrepancies, deliberate omissions or inaccuracies present in the representation that Facebook gives of its business model to the generalist audience.
4.1. Introduction

The scope of the present chapter is to explore the main discursive strategies and the main conceptual bundles (or epistemic formations) around which the official communication of Facebook is structured since the presentation of the new company mission in February 2017 where the platform is described as the social infrastructure for the (inescapable) global community of tomorrow. Indeed, Facebook’s self-definitions and self-conceptualizations have varied a lot since its founding in 2004 and have “shifted from directory, to social network to infrastructure” (Hoffmann, Proferes and Zimmer 2016, 205). In Facebook’s founder and CEO public language, Facebook has evolved from a small interactive college directory to global social network following three steps. The first definition dates back to the beginning of the project and sees the then “the Facebook” conceptualized as a “useful directory to quickly finding information about people” (ivi, 206); from this database-like self-conception, Facebook has been described as a social network the aim of which is to “connect and enable the sharing of information between people” (ibidem) until the recent imagined discursive construction of Facebook as a “critical social infrastructure for the Web” (ibidem) and, as we shall see, the entire world. This latter formulation foregrounds the ambitions of the company as it foresees for itself an infrastructural crucial role in the governance of global processes.

The chapter starts from the analysis of the company mission in the About Us of Facebook’s official profile on the social media platform and continues with the investigation of the contents of the Newsroom page – that is the official area where news is processed – particularly in the sections dedicated to the Company Info, its mission and its culture. The documents have been analyzed adopting a multimodal perspective and my aim is to understand the meaning making processes and the discursive strategies that are involved in the creation of the company’s public image. The chapter continues with the analysis of the two speeches where the new company mission of “bringing the
4.2. The World as a Global Community

The concept that discursively lies at the very heart of Facebook, is that of community indeed, as we can read in the About Us section of the official profile on the platform, the company mission states that the aim of the social media is to “give people the power to build community and bring the world closer together” (see figure 1). From a generic textual perspective, the company mission is a short sentence, the functional aim of which is to describe in a concise way the identity of an organization, its goals and objectives as well as its values. At linguistic level, the mission of Facebook features a transitive material process that transforms the status of the already existing Recipients (“the people”) who are portrayed as the beneficiaries of the ‘goods’ offered by the company. At interpersonal level, the text crafts the benefactive role for the Actor of the material process that is represented as the Possessor of the “power” at the beginning and then as the Initiator-Agent of a process of power transferral to the other participants. A more articulated version of the mission can be found in the company Info section of the Facebook Newsroom (see figure 2), that traces the mission back to very founding of the company and connects it to the social media functions it enables its users with. The entire message reads:
Founded in 2004, Facebook’s mission is to give people the power to build community and bring the world closer together. People use Facebook to stay connected with friends and family, to discover what's going on in the world, and to share and express what matters to them.

Here, the recipients of the first sentence become the Actors of the second sentence where a sequence of prepositional clauses with a high degree of modality enlarge the contextual setting of the represented action of connecting people from the close areas of personal private communities to the global public sphere and the act of networking is semantically interwoven with people’s freedom to express their opinions and interests. In the About Us section of the official profile (see figure 1), the mission is repeated in the cover photo that is the large image at the top of the profile page that can be seen by anyone visiting the profile and that, according to Facebook's help center, represents “who you are or what you care about” (https://www.facebook.com/help/work/416233365237939?helpref=hc_fnav). The image features a stylized version of the world map in the moderate blue cobalt color that is the official brand color, an identity marker and a cohesive element of Facebook as a platform, which seems to have been chosen by its creator since “he took an on-line test and realized that he was red-green color-blind”, while blue is “the richest color for him” (Vargas 2010). In Goethe’s work on colors and affection, whose ideas have influenced psychologists and, designers and professionals in the field of marketing (van Leeuwen 2011, 26), color is described as affective and the color blue is often associated with truth, tranquility, coolness and absence of emotion (van Leeuwen 2011, 25): Facebook’s color choice seems thus to be consistent with the scientific/technical picture of the world map the frontal angle and absence of perspective of which encode an objective attitude and the representation of ‘objective’ knowledge (Kress and van Leeuwen 1996, 149). However, the image also presents a narrative component which is given by the line that connects the continents encircling the entire globe and that appears to be the visual translation of the on-going activity of connecting the continents thus accomplishing the mission objective of “bringing the world closer together” through technology declared at a verbal level. The cover photo as a multimodal
communicative act seems to tell the story of the creation of a global networked community that, on the one side, is represented as *in fieri*\(^2\) as it is expressed by the non-finite verb and, on the other side, is realized as a fact through the selection of a declarative sentence.

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\(^2\) Coming into existence.
The objective of “bringing the world closer together” was presented by Zuckerberg in the course of the first Facebook Community Summit that took place in Chicago in June 2017 and described as the component that would integrate the original company’s mission of making the world “more open and more connected” (Zuckerberg 2017a). The objective marks a departure from the definition of the aims of social network sites which, according to boyd and Ellison, “enable users to articulate and make visible their social networks” (2008, 211) more than making connections between strangers. The connections between individual that would not otherwise be made “is often not the goal” and these meetings are frequently between “people who share some offline connection” (ibidem). The idea at the core of the new Facebook mission seems thus to create connections between people over common interests and values in the process of building communities that are digitally enabled.

In the same speech, Zuckerberg affirmed that he had thought “one day someone would connect the whole world, but I never thought it would be us” (2017a). Apart from the strategy of anti-rhetoric used to please the audience, the sentence resonates with the idea of connecting the entire world through technology or better, through tékhne and ingenuity, which is a fundamental tile in the rhetorical construction of the United States as a mythical nation and that is one of the debated yet key components of US public discourse even nowadays. A vivid example of this narrative is given by the words of Walt Whitman, one of the most influential poets in the American canon, who, in his poem Passage to India, written in 1869 to celebrate both the opening of the Suez Canal and the completion of the US First Transcontinental Railroad, links the discovery of the American continent by Cristoforo Colombo (“Thou, rondeur of the world, at last accomplish’d”) to the technological achievements of his country that “tying the Eastern to the Western sea” becomes “the road between Europe and Asia” and “verifies” Columbus’s dream. The dream Whitman refers to is the fact that Columbus interpreted the New World as if it were “literally, actually [the] Paradise”, as if he had reached the “promised land” described by the prophet Isaiah (Boitani 1992, 79, emphasis in the original, my translation).

The connection between the idea of the US as a country built on technology, and the American nation as being tightly linked to the fulfillment of a biblical
mission is a structural component of the so-called Manifest Destiny, the ideology that – starting from the famous editorial entitled “The Great Nation of Futurity” published by John O’Sullivan in 1839 – has accompanied the narration of the expansion and settlement of the West and the technological discoveries that have favored it, like the telegraph, the steamboat, the postal systems, the above mentioned railroads (Moschini 2007a). The metaphor of the frontier has become common to define cyberspace since the famous description of a hacker as a “console cowboy” in William Gibson’s novel *Neuromancer* (1984) and, as Turner highlights, “from the pages of Wired magazine to the halls of Congress, academics, industry leaders, politicians and journalists have metaphorically transformed the many forms of computer-mediated communication into an imaginary landscape and specifically, into an ‘electronic frontier’” (1999). In the last few years, the rhetoric of the American frontier in discussions of computer technologies and their social effects has featured the rise of the expression “Digital Manifest Destiny”, according to which “the self-defined sense of American exceptionalism built in the physical world, is now building in the digital one” and Mark Zuckerberg is portrayed as “the most recent example of how the new frontier has been cultivated, colonized and commanded by entrepreneurial Americans” (Anthony 2012).

Lee Rainie, the director of the Pew Research Center’s Internet and American Life project, when presenting the book he co-authored on social operating system created by social networks (Rainie and Barry 2012), described the digital space as the “projection of American values” as it disseminates “a cluster of ideas and architectures that are basic American cultural values [such as] freedom of the press, of information and of assembly; knowledge and scientific advancement; free-market mechanisms and entrepreneurialism” (quoted in Anthony 2012).

On the Facebook Newsroom profile (see figure 2), the mission is visually associated to the aerial picture of the new iconic company headquarters in Menlo Park, California that were inaugurated in 2015 in the former Sun Microsystems campus. On that occasion, the company had the address changed from 1, Network Drive into 1, Hacker Way (see figure 3), an address that “helps Facebook project the image that it is an engineering company where coders can experiment and find autonomy rather than bureaucracy”
(Constine 2011) through its direct reference to hacker culture, the subculture which has originated out of the Tech Model Railroad Club, a club founded by a group of engineering students at MIT in the 1940s (Isaacson 2014). The use of the first plural possessive adjective to refer to the mission (“our mission”) highlights a collective stance and creates a parallelism between the ‘community’ of the company and that of hackers, as it is confirmed in the third scroll of the same Company Info page in the Newsroom, that is dedicated to the culture of the company and where the message states that Facebook “is defined by hacker culture” as it is “an environment that rewards creative problem solving and rapid decision making” (see figure 4).

Figure 3 - Signboard in front of Facebook’s Headquarters in Menlo Park, California.

Figure 4 - Facebook’s Culture Statement in the Company Info Section of the Newsroom Website (//newsroom.fb.com/company-info/ – last accessed in October 2018)
4.3. Facebook as a Community of Hackers

The composition of the communicative act which is used to describe Facebook’s culture (see figure 4) features the prominence of the visual component, while the main part of the written message functions as a caption to the image. At visual level, the image is characterized by a warm color palette with an orange dominance which contrasts the coolness of the white and light blue Facebook color described above. The warm atmosphere is recalled by the sofas and the bean chair as well as by the smiling face of the girl who is in the front row or by the man eating on the right, even if the focus of the camera is on the three young males who are represented working with their laptops in isolation, with one of them also wearing a set of headphones. The entire scene is crowded, and people are engaged in different types of activities such as talking, listening, eating, working. Both the activities and the setting suggest a hybrid environment where it is possible to work or to carry on leisure activities. The compositional association with the written message which describes work culture at Facebook helps specifying the nature of such a place:

Facebook is defined by our hacker culture – an environment that rewards creative problem solving and rapid decision making. We encourage people to be bold. Our open culture keeps everyone informed and allows people to move around and solve the problems they care about the most. We work in small teams and move fast to develop new products, constantly iterating and improving. The phrase “this journey is 1% finished” is posted on our walls, reminding us that we have only begun to fulfill our mission to bring the world closer together (emphasis added).

As the point of view of the image is visually constructed to present the viewer as being inside the room and part of that gathering of people, so the verbal message seems to be constructed in terms of its interpersonal and ideational metafunctions. Indeed, on the one side, the text is made coherent by a sequence of first plural personal pronouns and adjectives (“our”/ “we”/ “our”/ “we”/ “our”/ “us”/ “we”/ “our”) that identify the represented participants as the

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3 In the Facebook context the term ‘hacker’ is used accordingly to the Jargon File (http://catb.org/jargon/html/), the MIT comprehensive compendium of hacker slang, and, as such, it does not refer to a person who breaks into the security systems of governments and private corporations to cause mayhem or steal secrets as it is explained in the section.
members of a cohesive community, which is bound and exactly described ("defined") by hacker values and practices. In order to understand such a claim, it is fundamental to briefly disambiguate the meaning of the term “hacker” starting from the definition of the word given in *The New Hacker’s Dictionary* (Raymond 1993) – the so-called *Jargon File* – a comprehensive compendium of hacker slang published on the web site of the above-mentioned Tech Model Railroad Club, the celebrated cradle of hacker culture (Isaacson 2014, 202). According to the dictionary, a hacker\(^4\) is “someone who applies ingenuity to create a clever result, [who] enthusiastically (even obsessively) enjoys exploring the details of programmable systems and how to stretch their capabilities [applying] ingenuity to create a clever result”. The original meaning of the word hacker “connoted both technical virtuosity and playfulness” (Isaacson 2014, 202): cleverness and ingenuity are usually expressed in the mastering of programming, that is, in creating elegant and functional codes, which provide smart solutions to problems. These semiotic practices are ethically connoted or, in Gabriella Coleman’s words, are “codes of value” (2013, 93). Indeed, as the journalist Steven Levy explained in his famous book *Hackers: Heroes of the Computer Revolution* (1984), the hacker community is bound to “a way of life, a philosophy, an ethic and a dream” (427- kindle version). The hacker’s ethics provides a “mix of aesthetic and pragmatic imperatives: a commitment to information freedom, a mistrust of authority, a heightened dedication to meritocracy, and the belief that computers can be the basis for beauty and a better world” (Coleman 2013, 17). Hackers can also be defined as a community of practice; that is, a “group of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis” (Wenger et al. 2002, 4). As Coleman and Golub explain, “the practices and ethics of computer hacking afford an exceptional entryway for conceptualizing liberalism” (2008, 256) since hacker ethics presents, in its overlapping of discursive expressions, a set of commitments from information freedom and meritocracy to the mistrust of authority. In addition to that, hacker practices

\(^4\) The quotations in this section are drawn from the following entries of *The New Hacker’s Dictionary* (http://www.catb.org/jargon/html/go01.html): “cracker”/ “hacker”/ “neophilia”.
and ‘products’ can be seen as partial realizations of American ideals of freedom and liberty (Coleman and Golub 2008, 267), which combine romantic with utilitarian individualism (Bellah et al. 1996). Thus, hackers appear to imbue their ethical values both in their communicative practices and in the digital artifacts they create. It is important to highlight that hackers are not to be confused with what are known as “Crackers” in this specialized community. Indeed, in the hacker lexicon, Crackers are those who break the security on a system in order to steal data or plant malicious software. This latter term was coined in 1985 by hackers themselves in order to defend against what they saw as the misuse of the word “hackers” in the press, even if its diffusion has proved to be rather unsuccessful (Raymond 1993).

A community of hackers is thus characterized by the sharing of values and practices, by the celebration of creativity and by a libertarian – almost anarchic – afflatus. In the Facebook caption, it is possible to trace such elements at semantic level in the description of the working environment as “rewarding creative problem solving”, as a community that encourages the willingness to take risks (“encourage people to be bold”) and favors an inclusive mobility and openness for people, information and ideas (“our open culture keeps everyone informed and allows people to move around”). Moreover, hackers are usually inclined to forming communities with other people who share their interests and passions. These communities are usually horizontal groups where hierarchical structures rarely exist and where individuals are judged based on their contributions. They also work as a medium for sharing knowledge, tools and ideas, thus generating a constant flow of new projects and initiatives to be carried out as a group, wherein the pleasure and love for coding is ‘celebrated’. It is a peer-to-peer form of collaboration the structure and ultimate aim of which seems very distant from those of a corporation thus creating a positive connotation for the encoder of the message. Indeed, the only token of corporate jargon is given by the reference to the outputs of such a collaborative culture, the “products”, which are produced with a not so hidden reference to a fundamental document in the history of computer programming, the *Manifesto for Agile Software Development* (Beck et al. 2001).

The *Manifesto* is a declaration of values and principles that defines the linear approach to software development which has become the “new norm”
in the last fifteen years, especially among young developers (Jeremiah 2015). It has been defined “one of the most important documents in [the software] industry’s history, a sort of Declaration of Independence for the coding set” as it has shaped the way in which “much of software is imagined, created, and delivered” nowadays (Mimbs Nyce 2017). The basic goal of the agile methodology is to deliver software by placing an emphasis on iterative development, team collaboration, and embracing change. The Manifesto was written by a group of developers as an alternative the process-heavy, activity-oriented, command-and-control thinking “Waterfall” process and aims at focusing the attention on self-organizing teams, since, according to one of its twelve founding principles, “the best architectures, requirements, and designs emerge from self-organizing teams” (http://agilemanifesto.org/principles.html). The document is hosted on a website since its first publication and has been signed by more than 20,000 developers. The first sign that appears under the Manifesto is that of Kent Beck, who was technical coach at Facebook from January 2011 to February 2018 (https://www.facebook.com/kentlbeck/about?lst=1319974168%3A612973674 %3A1541492165&section=education). In the section of the website dedicated to the history of the document (http://agilemanifesto.org/history.html), the encoders define themselves “organizational anarchists” in opposition to “corporate bureaucrats”: such a libertarian connotation highly recalls that of hackers I mentioned earlier, even if they do not define themselves as “hackers” in the “original definition of the term” (ibidem). In the Facebook message quoted at the beginning of the section, it is possible to trace many references to the Agile Manifesto that I have highlighted in bold in the quotation above and that suggest an organization based on the work of small teams which are able to self-organize in order to enable “rapid decision making” and “creative problem solving”. Moreover, a semantical/lexical chain helps strengthening the concept of movement in the entire message: “rapid”/ “move around”/ “move fast”/ “constantly iterating”/ “journey”. The reference to a defining document in software developing seems to imply that the audience of the message is intended to be within the community of developers, and that one of the main aims of the message is to attract a talented and like-minded work force along
with the rhetorical function of portraying the company as characterized by a flat, egalitarian community of peers.

4.4. Tools for “Meaningful Communities”

The company mission of “bringing the world closer together” is realized through the exploitation of hacker values, attitudes and practices, as Facebook’s culture statement in the company info section of the Newsroom website shown in figure 4 declares: “the phrase ‘this journey is 1% finished’ is posted on our walls, reminding us that we have only begun to fulfill our mission to bring the world closer together”. In detail, the accomplishment of the mission is strictly related to the creation, the spreading and the use of the technological tools produced by Facebook as the CEO explains in his speech (see Zuckerberg 2017a in the appendix) at the first Facebook community summit in Chicago, during which he presented the new community mission. Indeed, in what is defined the “full mission statement”, he connects the action of giving people “the power to build community” to the final aim of “bring[ing] the world closer together (Zuckerberg 2017a) and such an empowering process is realized by giving people and, more precisely, to the leaders of what are defined “meaningful communities” tools to build communities and to manage them, tools that “offer insights into who your members are and how they are engaged”, tools that help “remove bad actors and their content[s]” (ibidem). The so-called “meaningful communities” are the groups that “upon joining, quickly become the most important part of our social network experience and an important part of our real-world support structure” and examples are offered throughout the text from global groups created around rare diseases to professional groups. Such a decision marks a departure from the peer-to-peer structure (“historically, that’s not how we’ve set up groups on Facebook”), in favor of a hierarchical structure where group leaders, here “group admins” can manage the common activities and discussions thanks to the tools mentioned above (https://www.facebook.com/community/education). Moreover, it seems a departure from the egocentric structure of social media highlighted by boyd (2006) and where “people define their community egocentrically” and around people not interests.
Zuckerberg's speech was pronounced in the aftermath of the “filter-bubbles” scandal that arose after the election of Donald Trump to the US Presidency and, more broadly, after the rising of populist movements all through the year 2016 and, even if there is no direct reference to the issue, the text addresses the problem when stating that Facebook has the “responsibility” to “give people a voice to get a diversity of opinions out there” and to make people “meet new people with new perspectives” since it is necessary to “build enough common ground so we can all make progress together”(2017). The use of the collective first personal pronoun, the so called inclusive “we” portrays the company as part of the same community of users thus distancing itself from what has been defined “algorithmic paternalism” (Pariser 2011a), that is the idea that a website will take as information what the users’ behavior suggests over what they explicitly say, thus creating a “filter bubble” (ibidem). The algorithm in question is Facebook’s News Feed, a feature introduced in 2006 in order to “highlight what’s happening in [people’s] social circles on Facebook [that] updates a personalized list of news stories throughout the day” (https://www.facebook.com/notes/facebook/facebook-gets-a-facelift/2207967130) and that find its roots in advertising-based business models. The News Feed could prevent people from exposure to information making Facebook, along other tech-giants like Google, the new algorithmic gatekeepers, whose editorial points of view are not made clear. Indeed, by “filter bubble” we mean to refer to a “unique personal universe of information” (Pariser 2011b, 9) that is created by an array of personalized filters which originate out of an algorithmic tailorization of information. The term describes the intellectual isolation that can occur when websites make use of algorithms to selectively assume the information a user would want to see, and then give information to the user according to this assumption. Websites make these assumptions on the basis of the information related to users, such as former click behavior, browsing history, search history and location. For that reason, the websites are more likely to present only information that will abide by the users’ past activities. A filter bubble, therefore, may cause users to get less contact with contradicting viewpoints that could broaden their worldview at a significant degree, and may cause the user to become intellectually isolated.
Going back to the speech, the mission to “bring the world closer together” is related to the necessity to strengthen the social fabric as “for decades, membership of all kinds of groups has declined as much as one-quarter” and is framed as the necessity to connect people around the world in order to address challenges that are global such as “ending poverty, curing disease, stopping climate change, spreading freedom and tolerance, stopping terrorism” (ibidem). The notion of community and civil society, that is of the importance of a strong and active civil society to the consolidation of democracy, is central to US political discourse since its origin as highlighted by Robert Putnam, according to whom, “when Tocqueville visited the United States in the 1830s, it was the Americans’ propensity for civic association that most impressed him as the key to their unprecedented ability to make democracy work” (1995, 65). In Tocqueville’s words, “Americans of all ages, all stations in life, and all types of disposition are forever forming associations. There are not only commercial and industrial associations in which all take part, but others of a thousand different types--religious, moral, serious, futile, very general and very limited, immensely large and very minute […]. Nothing, in my view, deserves more attention than the intellectual and moral associations in America” (Tocqueville, Democracy in America, quoted in Putnam 1995, 65-66). Given that, it is thus not strange that the goals set in Zuckerberg’s speech are of socio-political nature and that the speech enlists the summa of the values underlying the company actions and decisions like in programmatic discourses where the theoretical foundations of political actions are exposed. In his work on the analysis of political discourse, van Dijk (1997) argues that political discourse is “a form of political action, and a pan of the political process” (20) and that “to avoid the extension of politics and political discourse to a domain that is so large that it would coincide with the study of public discourse in general we shall not treat such forms of discourse-with-possible-political-effects as political discourse” (15), however I maintain that Zuckerberg’s speech can be considered a political discourse since the tools that the company offers are deeply ingrained in the very fabric of US politics as the opening remarks during the US House of Representatives Energy and Commerce Committee hearing on “Facebook: Transparency and Use of Consumer Data” seems to state. Indeed, the Energy and Commerce Ranking Member Frank Pallone, Jr.,
affirmed that Facebook has become integral in the lives of many Americans, who don’t just share pictures of their families, they use it to “connect for school, to organize events, and to watch baseball games” (Pallone 2018). He continues affirming that “Facebook has enabled everyday people to spur national political movements” and that most of the members of the Congress “use Facebook to reach our constituents in ways that were unimaginable 10 years ago” and this “means that many of [them] can’t give it up easily” (ibidem). Indeed, Zuckerberg’s speech at the first Facebook community summit with its political afflatus can be considered the corollary to the so-called ‘Facebook Manifesto’, the nearly 6000-words message entitled “Building Global Community” (Zuckerberg 2017b), posted by the CEO on his profile page on February 16, 2017 where he declares the company’s goals for the near future.

4.5. The Roadmap to the Global Community
The message “Building Global Community” (Zuckerberg 2017b, see the appendix) has been considered since its publication a “manifesto” (Ahmed 2017), that is, a public declaration of policy and aims, like the ones issued before an election by a political party or candidate. In their work, Rider and Murakami Wood (2018) explicitly define it a “political manifesto” (1) and, more precisely, “a coherent political […] statement about ubiquitous social media and the future of government in an era characterized, in terms of conventional nation-state politics, by a turn to authoritarianism” (2). As anticipated, the message was posted by Zuckerberg on his profile page in February 2017, that is one month after the beginning of Donald Trump’s Presidency, and detaches itself from the social media textual tradition in many aspects, starting from its length. Indeed, the post is very long and even if it does not make use of all the 63,206 characters granted as a limit to all Facebook’s status updates since November 2011 (Protalinski 2011), it far exceeds the ideal length of an average update that is estimated in the range of 40-80 characters (Wong 2018). In the next sections I analyze the post starting from its textual features and their adherence or deviation from the generic constraints of Facebook status updates and then concentrate on the exploration of its contents and the semantic references to both US culture and hacker subculture.
4.5.1. The Generic Tradition of Status Updates

As I have explained in the first chapter, the rise of social network sites (SNSs) marked a shift in the organization of online communities that from communities of interests (such as early public online communities like Usenet and public discussion forums structured by topics or according to topical hierarchies), became structured as “personal (or ‘egocentric’) networks, with the individual at the center of their own community” (boyd and Ellison 2008, 219). Indeed, in the words of boyd and Ellison, “social network sites (SNSs)” – now more commonly described as “social media” – are “web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system” (211). As already said, originally the main feature of such networks was not to “allow individuals to meet strangers, [it was] rather that they enable users to articulate and make visible their social networks” (ibidem) even if the term “friends” can be misleading, because the “connection does not necessarily mean friendship in the everyday vernacular sense, and the reasons people connect are varied” (boyd, 2006). Indeed, according to danah boyd, SNSs are “networked publics” (2011), that is, public groupings which are structured by the logic and reality of computer networks.
Going back to Facebook, it was founded as an exclusive community service for Harvard students and was originally mapped on yearbooks, a type of books that is published annually by many American high schools and colleges to celebrate the past school year (Moschini 2015). The first version of the social network was created as a sort of substitute for the official electronic version of the yearbook or “facebook”, that is the colloquial term used by students of some American universities to define the electronic directory with their photos and basic data (Carlson 2010). In these books, students are identified by means of their pictures and information and each of them is usually given the same textual space: such semiotic structure encodes the representation of a group of peers which, in the case of American Ivy League college students, constitutes a very elitist group. The Facebook social media platform rhetorically reproduces a similar tenor structure, as signaled by the word “friends”, the term chosen to identify registered users. In addition to that, people who decide to become members of the platform can create their own personal page (“profile”), where they can upload personal information and are also enabled to write comments and share messages with people who belong to their circle of friends. From this basic description of the main original features of the social media, it is possible to grasp how the design of the digital tool combines the yearbook model with another textual model, the web genre of diary blogs that started circulating in the late nineties in the U.S. Indeed, the online diary – whether called a diary or a blog, [...] began to appear on the Internet in 1995, typically developing out of the personal home pages of individuals already involved with Internet technologies [...]. In 1997 people started creating pages that became known as weblogs (or “blogs”) – these were daily lists of annotated links to other sites, without extended commentary or personal narratives [...]. In 1999 free software became available that allowed users who did not know HTML to make and post a blog or diary. As a result, blogging became an accessible activity for significantly more people, and the numbers of both diaries and blogs mushroomed [...]. Collapsing these related forms into one, the latest generation of writers marry personal narratives (like a diary) with critical commentary about the Web and its content (like a blog) (McNeil 2005).

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5 https://newsroom.fb.com/products/
Structurally, a weblog, or blog, can be defined as a “frequently modified webpage containing individual entries displayed in reverse chronological sequence” (Herring et al. 2004,1) where, as a consequence, the most recent post appears to be the first. Bloggers usually upload their blogs with comments and criticism that range from the most private to the most public topic (Rosenberg 2010) and their style is personal and informal (Herring et al. 2007). As argued by Puschmann (2013), even if blogs have aged and have been merging with newer forms of Computer-Mediated Communication, such as status updates on social networking sites, “some linguistic properties of blogs are highly stable” and, precisely, “what remains unchanged is that blogs structure digital content sequentially and that they are more frequently maintained by individuals than institutions or companies” (p. 84). In details, “the core cohesive element of a blog is time [since] blog entries are paradigmatically linked by chronology [that] acts as the governing organizational principle for information in blogs” (p. 91). As regards personal encoding, Puschmann underlines that “with relatively few exceptions, a blog is a controlled discourse environment belonging to an individual and shaped largely by his or her personal tastes and needs; therefore, the needs a blog fulfills are more individually shaped than in most other genres of public expression” (p. 98). The diary or personal journal blog is a widespread sub-genre of blogs and can be considered as the digital evolution of the paper diary (Crowston & Williams 2000). As we know, paper diaries and journals are a non-fictional literary genre that began to flourish in the late Renaissance with the rise of Humanism. Indeed, the diary is essentially a type of autobiographical writing, a regularly kept record of the diarist’s reflections and activities, and personal journal blogs enhance the self-narrative features of diaries interlacing them with the hypertextual characteristics of the Web and with its multimodal affordances. The semiotic signs that have been used on the Facebook social platform to recall a blog are a “timeline” marking the inverted chronological order of posts and the “speech balloons” (now turned into squares to functionally exploit the sites of display on mobiles) that map the encoder as a ‘SAYER’, thus emphasizing the conversational aspect of blog self-narrations. Like diaries, where people usually keep a record of personal and to some extent intimate events and thoughts, many users’ posts on Facebook
are characterized by a form of self-writing where self-labeling data characterize the encoder.

The elements in the post “Building Global Community” (Zuckerberg 2017b) that recall status updates in timelines are (see figure 5) the small profile image that features the informal image of the sender represented while smiling; the temporal marker (“February, 16, 2017”) that evokes the reverse chronological order of blogs and the world icon which acknowledges that the privacy of the text has been as been selected as “public”, that is anyone accessing the profile can see it (see figure 5). The text also features an iconic component which is given salience by the position in the layout that sets it in the first scroll of the page. The image is panoramic and unframed and features a representation of a speech given by Zuckerberg.

It is possible to identify the physical context as the Facebook headquarters in Menlo Park thanks to the orange infrastructure that culminates in the vintage sign on the right stating “The Hacker Company” (see figure 6), which was bought from a sign company based in Florida (Tsotsis 2012). More precisely, the place can be identified as the Hacker Square, the campus’ single most important public space which is described as the “meeting place” of the Facebook community in the press releases presenting the new buildings (https://newsroom.fb.com/media-gallery/menlo-park-headquarters/hacker-square/).

On the one side, it is interesting to notice that the expression “meeting place or house” is the exact translation of the Hebrew “bet kneset”, synagogue, the place where the people meet and convene and that the expression “meeting house” was chosen by the English Puritans as an alternative for Church
(Moschini 2007b). Indeed, rejecting both Parish churches and Cathedrals, the European New Englanders chose secular places of public assembly as models for places of religious gatherings and, as I explain in the next chapter, such a model has influenced extensively all the digital discourse rhetoric of the Bay area which Fred Turner describes as a “countercultural neo puritanism” (2018). On the other side, it is important to highlight the term “hack” (see figure 7) which has been paved in a mosaic of enormous tiles in the place where the “community meets to begin hackathons, the nonstop jags of creative programming that are an institution not only at Facebook but all over Silicon Valley” (McCraken 2012). The term “hackathon” is a portmanteau of the words “hack” and “marathon” and describes the collaborative events in which teams of computer programmers work intensively on software projects. From a grammatical standpoint, it can be both a noun or the imperative form of the verb, thus encoding the exhortation to keep the hacker spirit alive, to foreground the so-called “Hacker Way” that is “the approach to building that involves continuous improved and iteration”, which is encoded in “signs, stickers, and posters […] all over Facebook’s offices” (https://newsroom.fb.com/media-gallery/menlo-park-headquarters/hacker-culture/). This is the rhetorical self-description as a company where libertarian-minded programmers make the world a better place by crafting ingenious lines of code without being constrained by established rules I have analyzed in the third section of the present chapter.

The post image seems to represent Mark Zuckerberg while addressing Facebook’s internal community in their meeting place and, more precisely, while pronouncing the “Building Global Community” speech. Indeed, in the picture, the perspective assigns the screen a salient position and in the screen it is possible to see five icons (see figure 8) that represent the different sections into which the speech is divided (i.e. “supportive communities”/ “safe
community”/ “informed community”/ “civically-engaged community”/ “inclusive community”) as well as its main ideational structure as I explain better in the next section. As a matter of fact, the icons can be considered Intersemiotic Cohesive Devices of correspondence (Liu and O’Halloran 2009) as they create a logical relation between the visual and the linguistic components of the message that are here reformulated at a different level of abstraction and generality. The icons are colored and stylized and feature some nodes that recall the visual representation of the structure of system networks, that is the model of describing real networks that mathematicians have been developing since the 1960s and that translates the world in terms of nodes and links (Barabási 2011, 1). It is a representation which recalls boyd’s definition of social media as communities structured by the logic and reality of computer networks (2011).

The picture of what we can assume being Facebook’s internal community gathered in the Hacker square for the public address combined with the first line of the verbal component of the post “to our community” (see figure 5), on the one side clarify the semantic ambiguity of the possessive adjective as it makes it a reference to the exclusive community there gathered; on the other side, the world icon mentioned above that disambiguates the privacy status of the update as public makes the internal and the global communities overlap, in what can be seen as a more formal, top-down institutional discourse detached from the personal, leisure-centered, peer-to-peer register of the social network, as I explain the next section.

Figure 8 - Facebook Manifesto’s Icons (https://www.facebook.com/notes/mark-zuckerberg/building-global-community/10154544292806634 - last accessed in October 2018)

4.5.2. The Departure from the Generic Tradition of Status Updates
As I have already said, the post is very long, and its length detaches from the social media textual tradition. It also features a highly rigid structure in terms of dispositio, with an introduction, a body of the text that comprises the five
sections previously mentioned (i.e. “supportive communities”/ “safe community”/ “informed community”/ “civically-engaged community”/ “inclusive community”) which work both as “proposition” and “confirmation” and a conclusion, with a summing up and emotional exhortation. At the level of the layout, the five sections are framed by lines with one symbol among the ones represented in figure 8 for each section that functions, as above said, as an Intersemiotic Cohesive Device (Liu and O’Halloran 2009) that creates a relation of abstraction and representation between the visual and the linguistic components of the message. Moreover, the line with all the five symbols which is shown in figure 8 functions as the visual introduction to the conclusion of the message and, hypothetically, as a marker of its function of summing up the contents. Even if the image anchors the text to an oral presentation, the post presents features of written discourse in terms of lexical density and nominalized processes. Information is also ‘packaged’ as to highlight the informative components of the post, making use of bulleted points that clarify the way in which information has been structured throughout the text and fonts in bold that suggest a preferred reading of the contents, as it is possible to see in the extract that I quote below:

[...] Bringing us all together as a global community is a project bigger than any one organization or company, but Facebook can help contribute to answering these five important questions:

- How do we help people build **supportive communities** that strengthen traditional institutions in a world where membership in these institutions is declining?
- How do we help people build a **safe community** that prevents harm, helps during crises and rebuilds afterwards in a world where anyone across the world can affect us?
- How do we help people build an **informed community** that exposes us to new ideas and builds common understanding in a world where every person has a voice?
- How do we help people build a **civically-engaged community** in a world where participation in voting sometimes includes less than half our population?
- How do we help people build an **inclusive community** that reflects our collective values and common humanity from local to global levels, spanning
cultures, nations and regions in a world with few examples of global communities? […] (emphasis in the original)

These elements help balance the fact that, alongside the referential component of the post, that is the reality to which the message refers, it is its expressive nature to be manifest, as the post aims primarily to express the thoughts and the beliefs of the sender and of the company he represents. Indeed, the text is also signed by the encoder with his first name. Such a signature is, on the one side, an unusual component of status updates since the identity of the sender is generally expressed by the profile elements of the pre-given templates in Facebook posts (namely, first name, surname and profile image for individual persons) and, on the other side, it seems to be aimed at recalling the personal, peer-to-peer register of the social network I have mentioned above. As regards the intended audience, as I have already outlined, the world icon which can be found near the temporal marker of the Facebook template in figure 5 illustrates the privacy status set for the Newsfeed update as public, this means that “anyone on or off Facebook” can see it according to the platform privacy settings (see figure 9). The icon, the restricted internal community gathered in the Hacker Square inside the Company Headquarters and the explicit recipients of the message that are specified in the title and in the first line of the post “to our community” are the signs that describe the intended audience in the most salient part of the layout of the message, that is, in the first scroll of computer/mobile screens. However, the three signs vehicle a different message and play upon a semantic
ambiguity which sees the intersection of three distinct (if somehow overlapping) communities: the people who work at Facebook, the platform users and the entire world. The same ambiguity is reiterated at verbal level in the use of personal pronouns and adjectives. Indeed, the first-person plural (“we”) appears 169 times, the adjective “our” (together with the derivate words) appear 113 times and they are used to refer to the small group of the Facebook team (e.g. “We at Facebook”), to the community of Facebook users or to the entire humanity. Let us consider, for instance, the first lines of the post, which read: “On our journey to connect the world, we often discuss products we’re building and updates on our business. Today I want to focus on the most important question of all: are we building the world we all want? […]” (emphasis added). Here, at first, the personal pronouns and adjectives are used to refer to the Facebook team, and help framing the company as a collective horizontal entity which is in line with the image crafted in the culture statement previously analyzed. The second part of the quotation features a semantic shift and the arising of ambiguity, since – in the self-addressed question – we move from the reference to the restricted internal community of tools designers and producers to an inclusive “we” which seems to comprise both an example of nosism, as if it were a sort of editorial “we”, with the global audience the message is addressed to. Such a strategy is repeated throughout the text, especially in the introduction and in the conclusion where the new role that the encoder envisions for the social media platform is explained and, given the circular structure of the text, repeated. Indeed, in the introduction Zuckerberg affirms:

[...] History is the story of how we’ve learned to come together in ever greater numbers – from tribes to cities to nations. At each step, we built social infrastructure like communities, media and governments to empower us to achieve things we couldn’t on our own.

Today we are close to taking our next step. Our greatest opportunities are now global – like spreading prosperity and freedom, promoting peace and understanding, lifting people out of poverty, and accelerating science. Our greatest challenges also need global responses – like ending terrorism, fighting climate change, and preventing pandemics. Progress now requires humanity coming together not just as cities or nations, but also as a global community. This
is especially important right now. Facebook stands for bringing us closer together and building a global community. [...] In times like these, the most important thing we at Facebook can do is develop the social infrastructure to give people the power to build a global community that works for all of us. [...] (emphasis in the original)

The “next step” that Zuckerberg mentions is rhetorically constructed as both the new company aim, literally, the “next focus” (“our next focus will be developing the social infrastructure for community”) of the company as illustrated in the new company mission and as the ‘natural’ and ‘logical’ conclusion derived from the premises he gives in his sort of philosophy of history. Indeed, he offers an overall interpretation of the development of human history as a cognitive process and as a progressive linear development towards larger and more complex social infrastructures. In this context, social networks are presented as the final outcome of such a historical process which is given truth-value by the syllogistic structure of the argumentation and by the verbal selection which expresses the highest level of modality. Moreover, the text appears to be an intra-vocalized indirect endorsed quotation of the work of the Israeli historian Yuval Noah Harari and, in particular, the theory of history reads as heavily informed by Harari’s New York Time’s bestseller book, *Sapiens: A Brief History of Human Kind* (2015 [2011]) which Zuckerberg recommended in one of his posts (see figure 10). Harari’s book aims at exploring the reasons why the Homo Sapiens took over the Earth in the framework of evolutionary biology according to which humans survived because they learned to cooperate in ever bigger communities. The use of quotations as well as the heteroglossic references to authoritative sources has the function of strengthening the force
of the proposed argumentation and Zuckerberg exploits this rhetorical strategy several times in his speech when, in the five sections that make the body of the text, he cites “research” as the source of data and information on the basis of which the company has been adopting decisions so far and when he quotes the words of Abraham Lincoln in the conclusive remarks of his post. Indeed, the quotation of Founding Fathers’ statements is a common feature in US political discourse. In this case, President Lincoln’s 1862 message to the Congress before issuing the Emancipation Proclamation is used to underline the exceptionality and novelty of the historical moment humanity is witnessing by establishing a parallel with the American Civil War and, in particular, with the executive order that changed the federal legal status of the millions of enslaved African Americans who were living in the Southern States. The quotation refers to a complex ideational-thematic bundle as it comprises all together the idea that an action is necessary, that the action needs to be innovative (thus partially resembling the basic tenets of hacker culture) and that such an action aims at liberating people.

Going back to the role that the encoder envisions for the social media platform, the company can contribute to such a defining moment by setting up the new social infrastructure, which is portrayed as the final outcome of the historical process that proceeds from tribes to the global community. The aim of Facebook is thus presented as that of a facilitator that helps humankind in the (inevitable) journey towards the creation of the first global community and, to facilitate the process, Zuckerberg declares that he is committed to promoting communities that are supportive, safe, informed, civically-engaged and inclusive and specifies the details of the five sections of the body of the text I deal with in the next section. However, the strategy to frame the arc of history as inevitable (“progress requires humanity coming together not just as cities or nations, but also as a global community”) in a way that almost resembles the Hegelian modern state and external to the will of the encoder, detaches responsibility from the company which only has the role of making an inescapable and positively valued process easier by driving its development from a technological standpoint. At textual level, this is also marked by the abundance of mental clauses in the introduction and in the conclusion, which shape the image of the sender more as a SENSER than as a DOER; moreover,
the personal perspective of the encoder expresses a high modality in terms of commitment which is reinforced by a lexical/semantic chain (“stand”/ “commit”/ “responsibility”/ “stand”). The speaker is obviously interested in negotiating intersubjective space for a social position favorable to Facebook and the encoder expresses a stance towards Facebook commitment via the social values attributed to the path humanity at large is destined to. The solutions/the tools that the company is offering are evaluated positively through the enabling capacities associated with them and the company hopes they will be endorsed by its users, better by “global society at large”. Zuckerberg concludes his remarks with a token of “rhetoric-of-anti-rhetoric” when he regards as a rare opportunity the fact to be sharing the above-mentioned path with the Facebook users (“It is a honor to be on this journey with you”) and he also acts as a people pleaser when he thanks the members of the social media community and, given the blurred boundaries of the identities of the recipients I discussed previously, the entire world that actively cooperates in the enfranchising mission of building a global community facilitated by Facebook tools.

4.5.3. Values, Social Contracts and Tools
In the five sections, Zuckerberg illustrates the roadmap towards the creation of the social infrastructure for the global community, which is described many times as a “work in progress” and the concept is remarked by the lexical selection of many verbal progressive forms starting from the title. The five sections are introduced by the five self-addressed questions in the introduction which are directly related to the different aims of the social infrastructure, that is to favor the creation of “supportive”, “safe”, “informed”, “civically-engaged”, “inclusive” communities. At rhetorical level, the questions construct the identity of Facebook as a HELPER, an enabler in a set of challenges which cannot be solved by a single social entity. In the first section, entitled “supportive communities”, a connection between civic participation and the use of social media is established. Indeed, as we shall see in the next chapter, such a thematic formation represents a fundamental tile in the early stages of the digital utopia. It also recalls what Henry Jenkins affirmed in his famous blog post “‘Geeking Out’ for Democracy” (2009) regarding civic-engagement and digital platforms. His post starts from Robert Putnam’s narrative of cultural
decline according to which television has to be blamed for eroding the strong social ties that the post-WWII generation created gathering together in places like bowling alleys, and for creating a world where people spend time isolated in their homes and less time participating in communal activities. In Jenkins’ view, platforms like Facebook, YouTube, and World of Warcraft favor the reconstruction of the above-mentioned ties as they are “reconnecting home-based media with larger communities, bridging between our public and private lives [thus] offer[ing] us a way to move from media consumption towards cultural participation” (2009). In Zuckerberg’s words, online communities can “strengthen existing physical communities by helping people come together on-line as well as offline” (2017b) and contrast the deterioration of the social fabric which has occurred since the 1970s. Social media are thus portrayed not as social networking sites to be used for private circles, but as platforms with a social purpose as they can strengthen the “many mediating groups that bring us together and reinforce our values” (2017b), with the very term “social” re-acquiring its original semantic declination. The conceptualization of civic engagement seems to be in line with that of Jürgen Habermas, according to whom

by “public sphere” we mean first of all a domain of our social life in which such a thing as public opinion can be formed. Access to the public sphere is open in principle to all citizens. A portion of the public sphere is constituted in every conversation in which private persons come together to form a public […] Citizens act as a public when they deal with matters of general interest without being subject to coercion; thus with the guarantee that they may assemble and unite freely, and express and publicise their opinions freely (Habermas 1989, 203).

The public sphere is thus located in civil society and is “where people can discuss matters of mutual concern as peers, and learn about facts, events, and the opinions, interests, and perspectives of others in an atmosphere free of coercion and of inequalities that would incline individuals to acquiesce or be silent” (Fleming 2000, 304). This involvement develops individual autonomy and creates a politically relevant public opinion which is seen as a locus for limiting the power of the state. The core of civil society comprises a “network
of associations that institutionalizes problem-solving discourses on questions of general interest inside the framework of organized public spheres” (Habermas 1996, p. 367). The importance of civil society is deeply connected with the idea of democratization as, in Habermas’s view, the members of society need to come together and discuss to reach a consensus where they construct the public sphere. As already highlighted, by using SNSs, individuals seek to maintain and increase their social networks (boyd and Ellison 2008), while, to build stronger communities both online and offline, Zuckerberg highlights that individuals need to be engaged in groups that represent “meaningful social infrastructure in our lives”, the so-called “meaningful groups” the creation of which constitutes the target of the new company mission I discussed previously in this chapter. The role of Facebook in strengthening such supportive communities is a technical one as it features the implementation of a system that can suggest groups to Facebook users, as “most don’t seek out groups on their own”, together with the development of the new tools for groups admins he would later present during the first Community Summit. The textual pattern of the entire section is a PROBLEM^SOLUTION one and the solution offered is technical, that is to develop digital tools that are “not for passive consumption but for strengthening social connections” and thus the fabric of the society. The technicality of the solution is made less obscure and remote by a wide selection of examples where the personal experiences of many individuals are described in order to shorten the rhetorical distance with the audience and to portray the company and its CEO as caring and involved in the lives of Facebook users.

The second section (“safe communities”) features a similar PROBLEM^SOLUTION textual structure, however it shifts the focus from companies or organizations to national governments when it comes to the impossibility to solve problems as it affirms that “today’s treats are increasingly global, but the infrastructure to protect us is not [as] no nation can solve them alone” (2017b). According to Zuckerberg, “humanity’s current systems are insufficient to address these issues” and there is a “real opportunity to build global safety infrastructure […] building artificial intelligence” (2017b). What is interesting to highlight here is the reference to system thinking, that is the idea that “the material world can be thought of as an information system and
modeled on computers” (Turner 2006, 15) which emerged in the US government sponsored-research laboratories of World War II and, particularly, “around the Radiation Laboratory at MIT” (ibidem). The same laboratories that helped drive the development of computing in America and harbored the birth of hacker culture. Indeed, system theory was the contact language of these interdisciplinary laboratories and stemmed out of Norbert Wiener’s cybernetics. In his book, *The Human Use of Human Beings. Cybernetics and Society*, Wiener defined cybernetics as a field focused on “the study of messages as a means of controlling machinery and society, the development of computing machines, certain reflections upon psychology and the nervous system and a tentative new theory of scientific method” (1954 [1950], 15). As Kevin Kelly explained, out of cybernetics arose an almost mystical understanding of the power of information and information systems and the so-called “computational metaphor”, that is the idea that “all materials and all processes are actually forms of computation” (1998). It is the corollary to the substantial homogeneity between machines and biological organisms which was postulated by Wiener and Bigelow in the WWII Rad Lab when “conceptualizing pilots and gunners as servomechanisms” (Turner 2006, 21). As Kelly highlights, such a metaphor is deeply intertwined with the development of Artificial Intelligence, not only because “biological reproduction and evolution were described by researchers in wholly computer-science terms [during] the first Artificial Life Conference in 1987” but because “biological things could be simulated by computers so well” (1998). Going back to Zuckerberg’s post, he seems to be adopting a stance similar to that of Wiener, who stated that society is a system and that “society can only be understood [and changed] through a study of the messages and the communication facilities which belong to it (1954 [1950], 16). Moreover, Wiener affirmed that “in the future, development of these messages and communication facilities, messages between man and machines, between machine and man and between machine and machine, are destined to play an ever-increasing part” (ibidem). The systems implemented by Facebook to keep communities safe, such as the Safety Check, or the infrastructure for collective action, together with the AI researching systems that they are developing to review on line contents, have to be interpreted through the above-mentioned lens of the computational
metaphor of cybernetic origin. As per the tenor structure of the section, Facebook crafts for itself the image of the helper that is willing to “serve the needs” of national governments that call them to activate in their countries such safety nets. It is a social infrastructure which, according to the CEO, “the global community needs” and should be not activated on demand, but be made permanent (“over time, our community should be able to help during wars and ongoing issues that are not limited to a single event”).

The third section (“Informed Community”) is focused on the sharing of “new ideas” and “enough common understanding” as the prerequisite to the creation of meaningful communities. Here, the primigenial Facebook mission of connecting people together is implicitly described as an enabler of the freedom of speech principle, one of the inalienable rights granted to the people in the Universal Declaration of Human Rights and one of the rights granted by the first Amendment to the US Constitution (“giving everyone a voice has historically been a very positive force for public discourse”). At the same time, the role of Facebook regarding the “two most discussed concerns […] about diversity of viewpoints (filter bubbles) and accuracy of information (fake news)” is realized in an opaque way. Indeed, the implicit assumption appears to be that the mediating mechanism of information sharing is ‘transparent’ and almost natural, since only the act of connecting people that have ideas is mentioned and not the Newsfeed algorithm. Fragmentation seems thus to be rhetorically constructed as one of the results of the positively connoted freedom of speech and sharing of ideas: “[giving everyone a voice] has also shown it may fragment our shared sense of reality”. As O’Neil makes clear (2016), algorithms are marketed as true, scientific, objective facts and associated to mathematics, however they are models, sets of instructions to solve problems step by step expressed in formal language, but chosen by those who have coded them. The Newsfeed – as I have discussed previously in this chapter – finds its roots in advertising-based business models and has been accused of tailoring information, foregrounding contents that could ‘please’ the audience as the users’ behavior suggests. The mediating role of the platform seems thus to be disguised and the information patterns that occur are presented as the natural outcome of the intention of individual Facebook users more than the results of algorithms (“our community will
identify which sources provide a complete range of perspectives so that content will naturally surface more”). Regarding the “accuracy of information”, Zuckerberg admits that there is “misinformation, even outright hoax content on Facebook” and that they are fighting it “carefully” since, on the one hand, the line between “hoaxes, satire and opinion” is not clear and since, in a “free society”, it is important for people to have the power to share their opinion. They will thus as a company “focus less on banning misinformation” and more on “surfacing additional perspectives”. Such choices are discursively supported by a double reference to “research” as an authoritative source since high positive value is associated to research as the systematic investigation and the study of materials and sources in order to establish facts and reach new conclusions. If these references are associated to a high technical value, the lack of specific details of the works he might want to refer to, transforms them into rhetorical voices, rather than into authoritative and recognizable sources. It is a practice which would not be accepted in the scientific community he discursively engages with.

The fourth section (“Civically-Engaged Community”) opens with an axiomatic structure which features the highest level of truth-value both in terms of the strengthening of the idea of the necessity to engage in civic participation and in the kind of social infrastructures that “must be built”. The ambiguity of the semantic extension of the term “social”, that expresses the idea of belonging to societies but that can be also related to social media, is here played upon by the selection of the passive form combined with the deletion of the agent. As per the types of social infrastructures that are necessary, Zuckerberg divides them into two broad categories, the first one “encourages engagement in existing political processes”, we are then dealing with a national dimension; the second one aims at “establishing a new process for citizens worldwide to participate in collective decision-making” and the focus is on “community governance” at a global scale, with semantic ambiguity here played on the very notion of community that can be a token of political language as well as a term of digital jargon. It is possible to infer the implied value scale embedded in the classification if we intratextually connect it with the historical framework that sets the ideational cornerstone of the entire text. Indeed, history is portrayed as a process that proceeds from tribes to the global
community and, as a corollary, nation states are implicitly valued as outdates, as a heritage of the XIX century in the (inevitable) journey towards the creation of a supra-national entity. In such an ideational context, Facebook can offer a testimony on “how community governance can work at scale” since it is the “largest global community”. In the rest of the text, examples are given of the tools that have already been settled and used to support voting across the world and he also announces the creation of new tools that would be developed to strengthen “local civic engagement” and to “connect with representatives at all levels” since social media is “becoming the primary medium for civic communication in the 21st century” just as TV was in the 1960s. One of the tools that was presented a few weeks after the publication of the post was the menu feature iconically named “Town Hall” that offers a “simple way for users to find and connect with their government representatives on a local, state and federal level” (Perez 2017). The advocacy was developed for the US users and attempts to strengthen civic-participation and facilitate the dialogue between Facebook users and legislators by helping users find and contact the elected representatives in their areas at both local, national and federal level (at least those who have a Facebook account). A detailed analysis of the app is beyond the scope of the present section; however, I maintain important to highlight that the name chosen for the tool reinforces the rhetorical construction of the social media as the place for the administration of government and that, in North America, the term “Town Hall” evokes the direct democratic rule that originated in colonial New England and that lies at the foundation of the American constitutional history (Lutz 1980). At the same time, the use of the app ideationally maps a solitary activity onto a collective action when actually the practice lacks the collegiality the name itself recalls.

The last section (“Inclusive Community”) focuses on creating better guidelines for what’s appropriate and inappropriate on Facebook, that is on the “Community Standards” which, as the video on the related Facebook page states, “decide what and who should be removed” from the platform (https://www.facebook.com/communitystandards/). Indeed, Facebook is described as a “community of people”, not “just technology or media” and the values expressed in the Community Standards which every user accepts while
creating a profile on the social media is portrayed as a sort of ‘social contract’ that aims at reflecting the “cultural norms of the community”, above which the “leading principle” of sharing more stands. In this section, Zuckerberg acknowledges also the cultural shift that has occurred to the platform which, from a site for private connections, has turned into a “source of news and public discourse”. At the same time, while advocating for a global community and global standards, he also asserts the necessity to “evolve towards a system of more local governance” especially in places where different cultural norms such as Europe, Middle East or Asia are in place. The kind of global government envisioned combines Artificial Intelligence and a “system of personal control” over users’ experience. Such a “large scale democratic process” provides that all the users could decide how they “would like to set the content policy for themselves”, as in a “worldwide voting system” and for “those who do not make a decision” the default will be whatever the majority of people in the region decide, “like a referendum”. The parallelism created between the setting of the users’ profile rules and the act of voting, together with the repeated use of political jargon make the representation of Facebook as a socio-political space strong and is functional to reinforce the concept, here expressed, that Facebook could be a model of “how collective decision-making may work” in the (inescapable) global community of tomorrow.

4.6. Summary
The present chapter has been dedicated to the analysis of the rhetorical strategies and the epistemic formations of the new company mission that was presented in February 2017. I started from the analysis of Facebook’s self-definition and self-conceptualization as it is vehicled in the About section of the social media profile on Facebook and in the Company Info area of the Newsroom. What has emerged is that the discursive construction of Facebook features the description of the social media as the enabler of the building of communities at a global scale. Such a definition goes beyond the boundaries usually associated with social network sites as the tools that organize and make already existing off-line connections visible. The process of “building the global community” is semiotically realized as a work in progress and as the accomplishment of a mission that is deeply imbued with US technological
utopianism, that is “the belief in the inevitability of progress and in progress precisely as technological progress” (Segal 2005 [1995], p. 1). More precisely, the global community is created through the digital empowerment of Facebook users who are granted tools developed by a company that declares to share the ethics and the practices of hackers. Indeed, hackers’ communities are characterized by values such as the celebration of creativity and by a libertarian – almost anarchic – afflatus. The rhetorical self-description as a company where programmers make the world a better place by crafting ingenious lines of code without being constrained by established rules has the function of portraying Facebook as a flat, egalitarian, libertarian-minded community of peers. The company mission of “bringing the world closer together” is thus realized through the exploitation of hacker values, attitudes and practices, that can be seen also as partial realizations of American ideals of freedom and liberty (Coleman and Golub 2008, 267).

In the second part of the chapter, I have analyzed the two speeches where the new company mission is narrated: Zuckerberg’s keynote address at the First Facebook Community Summit and the so-called “Facebook Manifesto”, the “Building Global Community” message posted by Zuckerberg in February 2017, where he envisions the role of the platform as the future world “social infrastructure”. In these texts, the accomplishment of the mission is strictly related to the creation, the spreading and the use of the technological tools produced by Facebook. More in details, Zuckerberg crafts for the social media the role of the helper in the progressive linear development of human history towards larger and more complex social infrastructures, that is from tribes to the global community. Both the texts feature the intersection of three distinct (if somehow overlapping) communities: the people who work at Facebook, the platform users and the entire world; moreover, they feature the creation of another subject – the so-called “meaningful communities” – that marks the departure from the original peer-to-peer structure of the social media in favor of a hierarchical structure where group leaders can manage the common activities and discussions thanks to the newly developed tools. At the same time, the two texts are characterized by the playing with the ambiguity of the semantic extension of the term “social”, that expresses the idea of belonging to societies but that can be also related to social media. Indeed, social media
are described, in line with Jenkins, as the enablers of the strengthening of the social fabric and, more in detail, of that civic participation which has been central to the US socio-political experiment in Habermasian terms since its beginning. Moreover, in the last two sections of the Facebook Manifesto, the ambiguity is made clear via the rhetorical construction of the social media as the place for the administration of “community governance” at a global scale. It is a collective decision-making process aided by Artificial Intelligence that, according to Zuckerberg, could function as a model since “Facebook is the largest global community” and “humanity’s current systems are insufficient to address global issues”.

As per the role of technology in the creation of the social infrastructure for the (inescapable) global community of tomorrow, the function of Artificial Intelligence is invoked and defended in a potential debate when Zuckerberg affirms that “in tech community […] discussion around AI has been oversimplified to existential fear-mongering”; at the same time, the role of algorithms is realized in an opaquer way since the mediating mechanism of information sharing is described as ‘transparent’ and almost natural. The mediating role of the platform seems thus to be disguised and the information patterns that occur are presented as the natural outcome of the intention of individual Facebook users more than the results of algorithms. Before entering, in the next chapters, in the analysis of Facebook’s architectural structure and the debate over the arising of a new “data industrial complex” (Cook 2018), as it has been defined by Apple’s CEO in his address to the 40th International Conference of Data Protection and Privacy Commissioners, it is fundamental to analyze the cultural construct of digital tools as a liberating technology, not only because it has been (at least rhetorically) adopted by Facebook at the very basis of the definition of its culture, but also because it can help us decode the frame in which such a debate over data and AI is realized.
5.1. Introduction
The scope of the present chapter is to investigate the epistemic formation of ‘digital tools as a liberating technology’ that has been adopted by Facebook as the core idea which imbues the company’s values analyzed so far. Indeed, digital technologies have been described for decades as tools enabling enfranchisement, participation, democracy and social change. Such a depiction is the result of the very peculiar historical blending out of which personal computers and the Internet originate that is a mixture of Cold War military and industrial research culture, US counterculture and DIY ethos (Turner 2006). The libertarian connotation of digital technologies is a complex cultural construct which merges (at least) US technological utopianism with the conceptualization of the world as an information system coming from cybernetics, with a pragmatic theorization of tools deriving from Buckminster Fuller and with the politics of consciousness developed by a precise component of US counterculture (Roszak 1995 [1969]).

The chapter starts with the analysis of a selected corpus of texts that have been chosen as they represent milestones in the creation of the cultural construct of digital technologies as liberating tools such as the purpose and the first cover of The Whole Earth Catalog (WEC), the magazine founded by the Bay area entrepreneur Stewart Brand and published continuously from 1968 to 1972, which was defined by Steve Jobs “one of the bibles of [his] generation” (2005); 1984 Apple Ad, a landmark television advertising that launched the Macintosh and explained the philosophy of the company that had invented personal computers; John Perry-Barlow’s Declaration of the Independence of Cyberspace that was published electronically on the website of the Electronic Frontier Foundation in response to the 1996 Telecommunications Act in the United States; the renowned 2006 Time Person of the Year cover which represents the first mainstream celebration of the Web 2.0 revolution. The final part of the chapter is dedicated to the debate over the “platformization” of the Web (Helmond 2015), that is the arising of
platforms as the dominant infrastructural and economic model of the social Web, and the related dystopic fear of a new “data industrial complex” (Cook 2018) which has emerged with the recent scandals involving the gathering and exploitation of users’ data by social media as well as with the call for a new contract for the Web as advocated by its inventor (Berners-Lee 2018).

5.2. The WEC: Tools, Cybernetics and the Politics of Consciousness

I start from The Whole Earth Catalog (WEC), the seminal publication of the countercultural era which has influences the creation of the representation of digital technologies to the point that it was considered, as above said, as a sort of Bible. The Whole Earth Catalog was founded by the Bay area entrepreneur Stewart Brand in 1968 and published continuously until 1972 (http://www.wholeearth.com/index.php). In the course of the interview on The Whole Earth Catalog’s legacy fifty years from the publication of its first issue, Stewart Brand (2018) quoted the designer and engineer Buckminster Fuller – to whom the first pages of the Catalog are dedicated – as his source of inspiration, and, particularly, his conceptualization of tools as the engine of change in society. Indeed, according to Fuller, in order to change the way people think, it is necessary to give them new tools that would lead to new ways of thinking. Fuller’s engineering vision offered a resolution to the dilemma that young adults in the 1960s were facing between the technologically supported goods that the military and industrial bureaucracies had endowed people with and the threads the same bureaucracy was associated it: either the menace of a nuclear holocaust and the demand to turn young people into ‘contained’ adults, into what the sociologist C. Wright Mills had defined as “Cheerful Robots”

Figure 1 - The cover of the first issue of the WEC (1968)
(1956). His idea of a “comprehensive design” also offered people “a way to embrace the technologies, the technocratic politics and the flexible, collaborative work styles of the Cold War military and industrial worlds even when they build their alternative communities” (Turner 2009, 147). According to Fuller, the world was made of information patterns that could be changed and modeled by information technologies, such as the computer. It is a vision that Fuller declared to trace back to his great aunt Margaret Fuller’s involvement with the XIX century philosophical movement of Transcendentalism, even if it is deeply imbued with Cold War military-industrial information theory (Turner 2009, 151-152). The comprehensive designer would be a person outside the corporations and government but able to process the information they produce, the technologies they created and translate them into “tools for human happiness” (Turner 2009, 150) in order to solve the problems of global distribution of material resources and restore harmony with nature.

Returning to the Catalog, it was a compendium of products for sale that enlisted all sorts of items for a self-sustainable and useful lifestyle (from clothes to books, from machines to seeds) and represented the convergence of cybernetic theory with the so-called “politics of consciousness” (Turner 2009, 153). Indeed, according to Fred Turner, the Whole Earth Catalog reflected “the complex intertwining of two legacies: that of the military-industrial research culture, which first appeared during WWII and flourished across the Cold War era, and [a particular wing] of the American counterculture” (2006, 3), the “New Communalists” who “turned away from political action and toward technology and the transformation of consciousness as the primary source of social change” (4). The New Communalists were college-educated young people that decided to go back to the land to create egalitarian communities and were familiar to Wiener’s cybernetic vision of the world, according to which society can be seen as an interconnected non-hierarchical system seeking self-regulation through the process of exchanging information (Wiener 1950). For this wing of the counterculture, a cybernetic vision of the world “where material reality could be imagined as an information system was comforting because the notion of the globe as a single, interlinked pattern of information could be seen as a promise of global harmony” (Turner 2006, 5). In this context, society
could be changed improving individual conscience and sharing information while small scale technologies – from axes to amplifiers, slide projectors and even LSD – could provide the tools to carry on this revolution, as the cover of the first issue of the *Whole Earth Catalog* (1968) suggests (see figure 1). Indeed, the cover is a “multimodal cluster” (Baldry and Thibault 2005, 11) that well shows the shift from a de-humanized Cold War attitude to a globally interconnected natural *afflatus*. The military-industrial perspective is here completely overturned because the reader’s attention is focused on the Earth, not on the Moon – the desired object of the Cold War space race. The message that Brand wants to communicate is that the attention of mankind should be turned to the Earth because our planet is an interconnected system, for the protection of which all humanity is involved beyond partitions.

The WEC cover features a total black setting which enhances the hyper-real image of our planet made “salient through its exaggerated size” (Kress and van Leeuwen 1996, 108). The image realizes a symbolic visual act that is an “equivalent of the ‘existential’ processes in language” (Halliday 2004 [1985], 210 ff.), because it “represents the world in terms of […] general truths, rather than in terms of actions or mental processes” (Kress and van Leeuwen 1996, 114). The frontal angle and the size of the object offer a god-like perspective to the viewer, while the close intimate distance of the image demands for the viewer’s engagement (131). Indeed, Brand – inspired by Buckminster Fuller – campaigned to convince the NASA and the Russians to use their satellite photography technology to “finally turn the cameras backward” towards the Earth and release a photograph of the whole Earth (Brand 1976). He printed a few hundred buttons and posters with the question, “Why haven’t we seen a photograph of the whole Earth yet?”, which he sent to the NASA and US government officials and sold personally on the campuses of the University of California Berkeley, Stanford, Harvard, and MIT. The image would eventually become a seminal icon of American environmentalism (Kirk 2007). Going back to the cover, the visual concept of “globality” is recalled at verbal level by the adjective “whole”, a marker of the cybernetic rhetoric of systems and information here applied to personal empowerment and social enfranchisement and not to central control. The subtitle recites “access to tools”, thus marketing the publication as the do-it-yourself (DIY) “door” to all
the technologies and eco/techno-futurist practices, from organic farming and wind power generation, to electronic synthesizers that would support the emergence of individual power and the salvation of humanity from the nuclear holocaust. The New Communalists’ “politics of consciousness” is expressed, in particular, in the section which states the purpose of the publication, as envisioned by Brand himself.

We are as gods and might as well get used to it. So far, remotely done power and glory – as via government, big business, formal education, church – has succeeded to the point where gross obscure actual gains. In response to this dilemma and to these gains a realm of intimate, personal power is developing – power of the individual to conduct his own education, find his own inspiration, shape his own environment, and share his adventure with whoever is interested. Tools that aid this process are sought and promoted by the WHOLE EARTH CATALOG.

The first words of the Catalog appear to be intertextually quoting the Scriptures, since they reverberate what the serpent said to Eve to convince her to taste the fruit from the tree of knowledge: “Ye shall not surely die: for God doth know that in the day ye eat thereof, then your eyes shall be opened, and ye shall be as gods, knowing good and evil” (Genesis 3, 5-6). The first intensive relational clause identifies the Carrier of the “divine” attribute with the plural personal pronoun “we” thus “democratizing” the biblical message, while the low level of probability of the modal verb “might” used in the paratactic sentence, together with the colloquial expression “get used to”, seem to soften the modality of the first clause. A high degree of “certainty” appears again in the abstract material sentence, which announces the coming of “a realm of intimate, personal power”: a power that is described through an additive series of hypotactic clauses that structures the semantic extension of the concept. Finally, the Catalog’s broad definition of tools, which recalls the cover, is unified by a “commitment” to aid the emergence of such a self-conscious process of empowering. It is a vision according to which, through the use of tools, each individual can become a “comprehensive designer”, can return to transcendence and transform the individual and society at large, as advocated
by Theodore Roszak (1995 [1969], 240) in the volume which first popularized the term “counterculture”:

This […] is the primary project of our counterculture: to proclaim a new heaven and a new earth so vast, so marvelous that the inordinate claim of technical expertise must of necessity withdraw in the presence of such splendor to subordinate and marginal status in the lives of men. To create and broadcast such a consciousness of life entails nothing less than the willingness to open ourselves to the visionary imagination on its own terms.

The vision of the world promoted by The Whole Earth Catalog and the work of Stewart Brand functioned as a catalyst for a heterogeneous group of people that, as we can read in the next section, defined themselves as hackers and shared a set of values, those which Zuckerberg implicitly refers to when he declares his company based on hacker culture, but they would not agree on a business model able to sustain such values. Indeed, this is a problem which is still actual as the debate and the scandals over users’ data I discuss in the last section of the chapter show.

5.3. The Hacker Conference: Digital Technologies as Liberating Tools
As I have anticipated, Steve Jobs declared in his famous Commencement Speech at Stanford (2005) that his vision of technology was profoundly influenced by The Whole Earth Catalog, which was “one of the bibles of [his] generation, [and] a sort of Google in paperback form, 35 years before Google came along […] idealistic and overflowing with neat tools and great notions”. Indeed, in the decades after Brand created the Catalog, he founded the WELL (The Whole Earth ‘Lectronic Link 1985) one of the first and most influential virtual communities, where Howard Rheingold first coined the term “virtual community” (Rheingold 2008 [1987]) and where the online community movement was created. This “primordial ooze […] start[ed] with a dialog between the fiercely independent writers and readers of the Whole Earth Review” (https://www.well.com/about-2/) and gave rise to organizations like the Electronic Frontier Foundation (https://www.eff.org/) or Craig’s List (www.craigslist.org). In addition to that, Stewart Brand and members of his WEC staff helped founding Wired magazine, the self-proclaimed voice of the Digital Revolution (Turner 2013, 48). However, it was with the organization of
the first Hackers’ Conference in 1984 that the ideological work of merging digital technologies and libertarian utopianism was carried on (Turner 2006b). In 1972, Brand had published an article on the magazine *Rolling Stone* entitled “Spacemar: Fanatic Life and Symbolic Death among the Computer Bums” which was “one of the first and still one of the most quoted descriptions of the Bay area computer scene” (Turner 2006a, 116). In his journalistic piece, Brand provides a detailed description of the new play-oriented culture created by hackers, who were defined not merely technicians but “cultural revolutionaries”, an “elite of fanatics with its own apparat[us], language and character, its own legends and humor” (Brand 1972). The term “fanatic” – chosen by Brand to define hackers – means to refer to a person with an obsessive single-minded interest and enthusiasm for a particular activity or cultural object; it describes a person driven by strong interests and passions. It is a meaning that is reinforced by the Latin etymology of the term, which originally indicates a behavior that might result from possession by a god or a demon.

In these pages, Brand describes the nightly activities of the hackers at Stanford’s Artificial Intelligence (AI) Laboratory, those who Stephen Levi’s famous book *Hackers: Heroes of the Computer Revolution* (1984) would refer to as the “first generation of hackers” that first emerged at MIT in 1959. They were university students who clustered around a giant computer commissioned for defence research and donated to the MIT and, by 1966, most of them gathered, at MIT’s Artificial Intelligence (AI) Laboratory, together with other MIT graduates and teenagers from the area. Within this lab, a culture clash emerged between hackers and planners, since the latter conceived computers as instruments to be used to create models to study different subjects, but, above all, the mind of people, while hackers focused on computer systems and computer programming, approaching them not from “a theoretical point of view or an engineering point of view, but from sort of fun-ness point of view” (Levy 1984, 104) being able to solve, in many cases, seemingly impossible problems.

According to Levy, these hackers were followed by two generations of people with a similar attitude, the first one of which is what he defines the “hardware hackers” of the 1970s, that is, programmers like Ted Nelson or Lee Felsenstein or the founders of the Apple Computer, Steve Wozniak and Steve
Jobs who lived around the San Francisco Bay area and gathered around The Homebrew Computer Club, one of the early computer hobbyist group in Silicon Valley. This generation of hackers aimed to transform computers from large, centralized instruments of surveillance and defence research into tools of democratization and personal enfranchisement. The last generation of hackers Levy speaks of is the software hackers of the early '80s, who created the application, education and entertainment programs for personal computers such as Mitch Kapor, who would later found with John Perry Barlow the Electronic Frontier Foundation I discuss in the next sections. According to Levy, many of the “young game hackers” of the 1980s who were not so familiar with the countercultural values of their predecessors in what he foresees as a gradual commercializing of hacker values. They founded companies producing video games, such as the On-line Systems and adopted an open-management structure in their organization, where game designers were conceived as a sort of hacker, that is (almost) independent, creative, individuals. It is a model which, according to Turner (2006, 19), was pioneered by MIT’s Radiation Laboratory, the so-called Rad Lab which was founded in 1940 by the National Defence Research Committee to help win World War II. Even though the Rad Lab was operated in the context of a large-scale military engineering bureaucratic project, it was a “site of flexible, collaborative work and a distinctly nonhierarchical management style [where] the collaboration and entrepreneurship among various professionals, and particularly among the engineers and designers was strongly encouraged” (ibidem). According to Levy (1984, 27-33), even if they had never met, members of all three generations shared a set of six values, a so-called “hacker ethic”, that I quote below:

1) Access to computers – and anything which might teach you something about the way the world works – should be unlimited and total;
2) All information should be free;
3) Mistrust Authority – Promote Decentralization;
4) Hackers should be judged by their hacking, not bogus criteria such as degrees, age, race, or position;
5) You can create art and beauty on a computer;
6) Computers can change your life for the better.
Stewart Brand was familiar with Levy’s work and, together with Kevin Kelly – the future chief editor of *Wired Magazine* who was working at the time at Brand’s *CoEvolution Quarterly* magazine – decided to “hold a conference at which they would bring the three generations of hackers together […] to see whether hacking was a precursor to a larger culture” (Turner 2006b, 261). In the document which chronicles the debate over information freedom, the hackers’ ethics and the rising information economy, Brand presents hackers as “the most interesting and effective body of intellectuals since the framers of the U.S. Constitution” who have been able to “liberate a technology and succeeded [and] force corporate America to adopt their style” (1985, 44). According to Brand, “in reorganizing the Information Age around the individual, via personal computers, the hackers may well have saved the American economy [since] in 1983 America had 70 percent of the $18 billion world software market and growing” (*ibidem*). What is interesting to outline here is that during that conference, the invited reporters began to intertwine counterculture with an industry that had emerged out of the military-industrial complex and with centralized institutions such as the MIT, Stanford and Hewlett-Packard. In Turner’s words, “hackers were not simply highly individualistic and innovative engineers[,] they were cultural rebels – and their computers were the new tools of utopian cultural change” (Turner 2006b, 264). However, the debate shows that there was no consensus among the participants on how to combine a shared hackers’ ethics with a sustainable business model. It is an issue which is of central importance nowadays, especially regarding themes such as privacy and data exploitation as I explain at the end of the chapter.

5.4. 1984 Apple Ad: Personal Computers vs Tools of Surveillance

1984 has been a pivotal year in the ideological work of creating the link between digital technologies and the utopia of individual enfranchisement and social change since it is the year when Stephen Levy’s book on hackers’ ethics
was published, the first hackers’ conference was convened by Stewart Brand and Apple – the company that had invented personal computers – presented the Macintosh, the first personal computer to be sold with a user-friendly graphic interface (GUI) and a mouse. The Macintosh was launched in the famous 1984 Apple Ad, a landmark television advertising that popularized the utopian worldview that I have discussed so far. Indeed, Apple’s commercial was aired on January 22, 1984 during the Super Bowl and, since then, it has set the frame for the interpretation of the supreme ideational battle of the Information Age: the struggle for freedom. “Apple is the only force that can ensure freedom” announced Steve Jobs showing the ad for the first time in his Keynote Speech at the company’s annual sales conference (1983).

According to Jobs, people – not just governments and big corporations – should have the control of technology, in order not to be enslaved and de-humanized. And it is his vision of the power and the potential of personal computers that has eventually triumphed, becoming the ideological underpinning of the so-called “Digital Revolution”. The ad was a one-minute movie directed by Ridley Scott that never showed the product (which was quite a novelty in 1983) and created the image of Apple’s personal computer as a liberating technology featuring an epic battle between freedom and tyranny set in a dystopic Orwellian scenario. The video opens with a line of people wearing a uniform that march in unison through a long tunnel. The crowd ends up in a hall dominated by a gigantic screen where a Big Brother-like figure is giving a speech for the celebration of the first anniversary of the “Information Purification Directives” (see figure 2). In this industrial-like setting of grey and blue tones, there emerges a woman dressed in a bright colored “athletic uniform” carrying a huge hammer (see figure 3). She races towards the large
screen, chased by the police and, once near it, with a liberating howl she launches her sledgehammer that destroys the screen while the “Big Brother” affirms “We shall prevail!”. The crowd of mute drones starts to regain consciousness in a whirlwind of light and smoke. The commercial ends with a voice-over, accompanied by a scrolling black text that recites: “On January 24th, Apple Computer will introduce Macintosh. And you’ll see why 1984 won’t be like ‘1984’”. When the voice-over ends, the rainbow Apple logo appears on the now black screen (see figure 4).

Apple’s Ad is an example of “inter-generic textuality” since it contains “the voice of a different genre” (Cook 2001 [1992], 194) when it evokes George Orwell’s novel, that is a quite a common feature in advertising discourse. As Cook puts it, “ads exist through other genres and culturally significant artifacts either by attaching themselves to them (sometimes quite literally), by co-occurring with them, or by imitation” (2001 [1992], 39). Advertising can be defined as a “parasite discourse[,] an extreme example of a tendency apparent in all discourse”: many modernist literary texts “achieve similar effects through bricolage, that is the borrowing and interweaving of material from other genres” as in James Joyce’s Ulysses, while in postmodernist texts “all ‘new’ discourse is regarded as to some degree the reworking of existing discourse, and finds virtue in the complexity of writing which can tolerate many voices and influences at once” (Cook 2001 [1992], 39). Obviously, “parasite discourse” requires a wide culture and a complex reading procedure on the side of the receivers who wish to decode the many layers of meaning of the text. In our case, 1984 Apple Ad is a postmodern metatextual video which entails a knowledge that goes from Orwell’s 1984 to
the visual canons of sci-fi movies like *Blade Runner* (1982), directed by Ridley Scott himself.

The text is structured on contrastive pairs (man vs woman/crowd vs individual/darkness vs light) the aim of which is to oppose Apple’s liberating message to the one of its main competitors – IBM – represented as the embodiment of the oppressive Cold War military-industrial complex (Edwards 1996) and all the semiotic modes concur to create a PROBLEM^SOLUTION textual pattern (Hoey 2001), the aim of which is to reinforce Apple’s message. At visual level, monochromatic blue-grey tones metatextually recall the nickname “the Big Blue” given to IBM (Simmons 1988, 137), but also provide an overall cohesive background that conveys the representation of a dystopic industrial setting while the red color of the woman’s dress draws the viewers’ attention and gives salience to her. In addition to that, following the parametric approach to color analysis, the ad is structured along the “scale of value” that goes from “maximally light to maximally dark” (van Leeuwen 2011, 60) and along the “scale of saturation” that goes from “the most intense, pure manifestation of a color to ‘chromatic grey’” (61). The highly saturated red is “positive, exuberant and adventurous” and here symbolizes vital energy, while the “low saturated” blue-grey setting “expresses cold and repressed” emotions. As concerns the “scale of value”, in the video there are two contrasting sources of light: the big electronic screen that sheds an artificial one and the woman that appears to be glowing from within. According to van Leeuwen (2011, 62-63) and following the tradition of medieval painters, “the quality of radiating from within suggests the meaning potential of luminosity − […] the supernatural and the divine” and the woman, who embodies Apple’s Macintosh – “the only force that can ensure future freedom” (Jobs 1983) – is represented as the CARRIER of a sort of “divine” power able to re-awake the crowd. As regards the sound structure of the text, the military marching of the drones reproduces the monotone rhythm of industrial machines and is a metaphor for social control. Indeed, since clocks were pioneered in Benedictine monasteries, they have provided human enterprise with the regular collective beat of the machine (van Leeuwen 1999, 36-37): an activity of timing that has become “a major tool for social control, first of labor, then also of other human activities” (37). Moreover, the two-time tempo of the marching symbolizes nationalistic values and is associated to the
public and to work and opposed to the “private side of the industrial age” (the one of leisure) and to the “ethos of individualization and self-expression” (49). The “semiotic system of aural perspective” of the video features the drones marching in a “ground” position, that of the sounds which are “part of the listener’s social world, but only in a minor and less involved way” (23), while the liberating howl of the woman is put in a “figure position” that is “the most important sound”. Both her “figure position” and “visual salience” contribute to the semiotic cohesion of the text. At the same time, the voice of the Big-Brother shifts from “ground” to “figure” following the visual perspective of the ad that opposes the two sources of luminosity in a frontal battle, finally won by the woman when she destroys the screen and frees the drones.

In the last shots, a change in luminosity (from darkness to light), a change in sound (from silence to sound) and a change in the portrayal of the drones themselves (reacquiring their human expression) mark a “transition” between the Problem “phase” and its Solution (Baldry and Thibault 2005, 47), thanks to the power of freedom, here represented as a light that awakens the crowd of drones. On that liberating visual manifesto a postmodern ironic message appears affirming that 1984 “won’t be like ‘1984’” (see figure 4), the Orwellian’s dystopia of a controlling central de-humanizing power but, on the contrary, it will see the dawn of the utopia of a liberating technology. The verbal message is composed by two sentences which are very different in terms of the “experiential line of organization” (Halliday and Matthiessen 2004 [1985], 168): the first one instantiates a “transitive creative material clause” with Apple Computer as the “Actor” of change, while the second one is a “mental clause”, a sentence that “[is] concerned with our experience of the
world of our own consciousness” rather than “with our experience of the material world” (197). The verb here used, “see”, reveals both a perceptive action and a cognitive/desiderative one, as anticipated by Jobs in his Keynote Address (1983). The time markers (“January 20 / “1984” / “1984”) constitute a lexical-semantic chain that enhances text cohesion (Halliday and Hasan 1976, 274 ff.) and provides the key to the decodification of the message: it is exactly on the pun-like repetition of the date 1984 that irony is played. The tenor of the text shifts from an impersonal third person perspective, which introduces the action Apple Computer will perform, to a colloquial second person message that directly engages the addressee, involving him/her as a sort of ‘eyewitness’ of the epic battle. The voice-over is a sound event that functions as a transitional element connecting, as it does, the fading shots of the awakening drones and the appearance of Apple’s logo: a stylized version of a colored bitten apple emerging from a total black setting. The image presents a high degree of modality since in “abstract coding orientations […] modality is higher the more the image reduces the individual to the general and the concrete to its essential qualities” (Kress and van Leeuwen 1996, 170). According to Jean Louis Gassée (executive at Apple Computer from 1981 to 1990), the famous logo is “the symbol of lust and knowledge, bitten into, all crossed with the colors of the rainbow in the wrong order. You couldn’t dream of a more appropriate logo: lust, knowledge, hope, and anarchy” (Sculley and Byrne 1987, 280).

Indeed, the logo seems to offer a conceptual representation of the basic Gnostic and transcendent concept according to which salvation is achieved through access to knowledge. It is a representation, which appears to be profoundly influenced by the Romantic vision of Satan and of the original sin, where the Devil is turned into a sort of Promethean hero that teaches mankind how to rebel against a tyranny that prevents access to the fruits of the tree of knowledge of good and evil (Genesis 2, 16-18) and, consequently, to freedom and happiness (Milner 1961). Actually, the overall message of the ad is a promise of salvation and, in such a context, rebellion to tyrants constitutes the first step towards the liberation of mankind and the Macintosh represents a tool of enfranchisement because it can potentially offer access to knowledge/information to every human being/customer. With this pivotal text, Apple shaped a vision of technology and, in particular, of personal computers.
as tools for personal and collective liberation which is deeply imbued with US rhetoric of liberty and which has become pervasive as the analysis of Facebook Company mission carried out in the previous chapter reveals.

5.5. “A Declaration of Independence” and the Concept of Liberty

Traces of Apple’s message can be found in one of the most important documents of the Digital Revolution, *A Declaration of the Independence of Cyberspace*, where the connection with the US founding rhetoric of liberty is strengthened and where the liberating vision of digital technologies and tools is extended to comprise the so-called “cyberspace” in a moment when, for the first time, the internet was included in broadcasting and spectrum allotment for regulation. Indeed, the document was written by John Perry-Barlow, in response to the 1996 Telecommunications Act in the United States, and published electronically on the website of the Electronic Frontier Foundation, a non-profit organization committed to the defence of civil rights on digital platforms, of which Barlow was one of the founders along with the already cited Mitch Kapor. In the *Declaration*, cyberspace is defined as “the new home of Mind” and opposed to the tyrannical governments of the Industrial world that seek to impose on it “increasingly hostile and colonial measures”. But, with an act of separation, the inhabitants of the cyberspace form “their own Social Contract” and give rise to “a new civilization of the Mind” based on the principle of liberty. The language chosen by Barlow, a former lyricist of the Californian psychedelic group “The Grateful Dead” (the house band of the Trips Festival Acid Tests, the series of parties organized by the Merry Pranksters and Stewart Brand in the San Francisco Bay Area in the mid-1960s), intertwines gnostic and cybernetic markers with elements from American political discourse; it is a “user-generated version” of the document that “performed” the creation of the nation (Austin 1962) and built the American myth (Moschini 2007). The following fragment shows how the linguistic features help create such a libertarian connotation:

> Governments of the Industrial World, you weary giants of flesh and steel, I come from Cyberspace, the new home of Mind. On behalf of the future, I ask you of the past to leave us alone... I address you with no greater authority than that with which liberty itself always speaks. I declare the global social space we are
building to be naturally independent of the tyrannies you seek to impose on us. [Cyberspace] is an act of nature... We are forming our own social contract... The only law that all our constituent cultures would generally recognize is the Golden Rule... These increasingly hostile and colonial measures place us in the same position as those previous lovers of freedom and self-determination who had to reject the authorities of distant, uninformed powers. We must declare our virtual selves immune to your sovereignty... We will create a civilization of the Mind in Cyberspace (emphasis added).

The aim of the text is to focus on common enemies, the “Governments of the Industrial World”, whose importance is underlined by their thematic position. In order to achieve this purpose, a contrastive rhetorical strategy is chosen, mainly constructed on bipolar options such as new/old, material/immaterial, tyranny/ freedom. These polarities are expressed at lexico-grammatical level through the use of personal pronouns (“I/We” vs “You”) and through lexical density with positive connotations vs negative connotations. For instance, in the first sentence, “flesh and steel”/ “mind” work as “tokens of judgment” (Martin and White 2005) when referred to the gnostic hierarchical conceptualization of the world that opposes material and spiritual world, while the negative connotation of “governments” is emphasized by the evaluation marker “weary”. The socio-political utopia of a “new civilization of the Mind” is marked by the lexical chain underlined in the fragment above, where the “semantic prosody” (Sinclair 1991) is mapped on the social contract theory based on the granting of natural rights, that is the true foundation of the American social knot. Moreover, the explicit reference to the Declaration of Independence (1976) in the title is an example of a Bakhtinian heteroglossic construction (Bakhtin 1981 [1930]) – the aims of which seem to be the rising of the authority of the message and the expression of the Dialogic Engagement of the author with the founding document (Martin and White 2005, 29).

The tenor structure of the text – that shifts from the first singular pronoun to the first plural pronoun – seems to reinforce the Dialogic Engagement of the author with the founding document, since it engages also the receivers of the message in the common fight against tyranny. As regards the interpersonal meanings expressed in the lexis, the words selected to describe the actions carried on by the speaker are all un-emotional verbal processes (“ask”/
“address”/ “declare”) that semiotically distance the Actor from the actions. While the cyber community is lexically associated to positively connoted material processes (“create”/ “forming”/ “building”), the old-world governments are accused of being “distant, uniformed powers”, that is far from knowledge, the source of enlightenment: it is the worst charge in a cognitive gnostic frame, which immediately de-authorizes such governments. In addition to that, the strategies chosen for self-presentation feature the speaker claiming an authority stemming directly from liberty itself, a sort of “supreme natural right” which could be conceived as a divine entitlement received from the “Laws of Nature and of Nature’s God”. Here the communicative context is construed as a single voiced “categorical assertion” that “has no dialogistic alternatives which need to be […] engaged with” (Martin and White 2005, 99). It is an axiomatic construction that can be traced back to the cultural preamble of the original Declaration itself (Bayley 1993). The same act of separation, expressed by the sentence “We must declare our virtual selves immune to your sovereignty”, faithfully follows the rhetorical style of the founding document, since the modal “must” realizes the inevitability of the action which is the fulfilment of God’s will (ibidem). The netizens are thus represented as people who “acquiesce to the necessity” of separating their virtual selves from tyrannical powers in order to follow God’s rules as “those previous lovers of freedom”. Indeed, the only law they “subjectively proclaim to endorse” (Martin and White 2005, 130ff) is the so-called “Golden Rule”, a moral principle that finds one of its earliest formulations in the biblical precept “[…] thou shalt loue thy neighbor as thy selfe […]” (Leviticus 19:18), an ethical code which was defined by Hobbes “the sum of the Lawes of Nature” (cited in Singer 1963, 293). Thus, the people inhabiting cyberspace are represented as linked by the ethical bond of reciprocity and committed to saving this “new home of Mind” from the invasion of un-moral earthly powers. They are also tied by a founding principle – liberty – which intertwines biblical precepts with cybernetics, Gnosticism with natural rights and semiotically constructs cyberspace as the digital embodiment of the millennialist visions carried to the American continent by utopianists through centuries. As I illustrate in the next section, after the opening of the Internet to the general public and to private companies, such a vision of cyberspace would progressively interlace with the conceptualization
of the digital arena as a market. This would eventually lead to the merging of the countercultural utopic vision with the neo-liberal rhetoric of the New Right in the so-called “California Ideology” that was characterized by the fight against the bureaucratic supervision of politics and market and that has ideologically accompanied the development of social media platforms like Facebook.

5.6. Cyberspace as a Market and the “Californian Ideology”

In the previously analyzed Declaration of Independence of Cyberspace, Barlow affirms that the digital arena “consists of transactions, relationships, and thought itself, arrayed like a standing wave in the Web of our communications” (1996). Such a description foregrounds an economic component, that is, the conceptualization of cyberspace as made up of commercial interactions and exchanges which began to be intertwined with the enfranchisement promise in the 1990s, after the opening of the Internet to the general public. Indeed, the Internet – which is the global system of interconnected computer networks that use the Internet Protocol Suite (TCP/IP) to link devices worldwide (Leiner et al 1997) – stemmed out of the ARPANET, that is an early packet-switching network developed by the US Department of Defence which serve as a backbone for interconnection of regional academic and military networks until the 1980s. However, in 1989, the first US on-line commercial providers such as Compuserve or MCI Mail started to foster the public commercial use of the Internet (Lee 1989) which marked the beginning of the transition to the modern Internet. In 1990, the English scientist Tim Berners Lee and his colleagues at the Centre Européenne pour la Recherche Nucléaire (CERN) created a system of information exchange that exploited the Internet's information transfer protocols and that enabled users to navigate information thanks to the hyperlinks embedded in the texts and to the Universal Resource Locator (URL) system – colloquially termed web address – that enables to specify the location of a resource on a computer network and a mechanism for retrieving it. In the same years, a team of the National Center for Supercomputing Applications at the University of Illinois led by Marc Andreesen developed a web browser called Mosaic which “allowed users to embed hyperlinks in images for the first time and also permitted users to post color images within their Web pages” (Turner 2006, 213). The browser was
released to the public in November 1993 and by the spring 1994, more than a million copies were in use (*ibidem*). Mosaic fueled the growth of the Web which had been at first distributed by CERN only within the scientific community and between 1990 and 1997, the percentage of households in the United States owning computers increased from 15% to 35% as computer ownership progressed from a luxury to a necessity (US Department of Labor 1999). All these factors together and combined with relatively lower interest rates contributed to the shift towards a new economy based on information and to the rising of what would become known as the dot.com bubble, where venture capitalists and investment banks started to invest millions in technological startups (Teeter, Sandberg 2017). The rising of the New Economy was accompanied by a swing to the right in American political and corporate life marked by a process of deregulation of industry even under Bill Clinton’s presidency and by the first Republican majority in both Houses of Congress. In particular, the newly elected Speaker of the House of Representatives, Newt Gingrich, pushed for the downsizing of government and widespread deregulation, especially in the telecommunications sector (Turner 2006, 215). According to Gingrich, technology would free markets from bureaucratic regulations and make them able to boost social and political change.

From a discursive point of view, such a period marked a shift in the rhetoric of liberty associated with the so-called Digital Revolution and saw the merging of the New Communalist’s countercultural heritage with the neo-liberal rhetoric of the above-mentioned social conservatives of the New Right. Such a narration was labeled by Barbrook and Cameron (1996), the “Californian Ideology” and, according to them, it “promiscuously combine[d] the free-wheeling spirit of the hippies and the entrepreneurial zeal of the yuppies” (44). The possibility to merge the two visions was given by the reference to the Jeffersonian democracy and, more precisely, to the ideas imbued in the *Declaration of Independence* (1776), according to which the rights of the citizens, among which we find by means of “constitutive intertextuality” (Fairclough 1992, 85) John Locke’s (1689) right to individual private property, have to be secured against oppressive laws and unjust taxes imposed by monarchs or, more largely, by powers that are considered abusive as they do
not rule to serve the people. The “Californian Ideology” was popularized by the magazine *Wired*, founded in 1993 by the entrepreneur Louis Rossetto who hired as his chief editor Kevin Kelly, a former collaborator of Brand’s *CoEvolution Quarterly* magazine, as anticipated previously in the chapter. However, the “Californian Ideology” was theorized chiefly by Alvin Toffler, George Gilder and Esther Dyson in the document entitled *Cyberspace and the American Dream: A Magna Carta for the Knowledge Age* (1994), which supported Newt Gingrich’s vision of a future era where technology would infringe the necessity of bureaucratic supervision of politics and market and which was published electronically on the webpage of the Progress and Freedom Foundation, a market-oriented think tank that studies the digital revolution and its implications for public policy. In their text, cyberspace is described as “the land of knowledge” that has ushered the Third Wave of economy, the Knowledge Age, which “has profound implications for the nature and meaning of property, of the marketplace, of community and of individual freedom [since] it shapes new codes of behavior that move each organism and institution […] inexorably beyond standardization and centralization” (Dyson et al 1994). The new information technologies would destroy the “central institutional paradigm of modern life”, that is, the bureaucratic organization and Governments that are “the last great redoubt of bureaucratic power” by “driving the financial costs of diversity toward zero” and “turning the economics of mass-production inside out” (*ibidem*).

The authors inscribe the Knowledge Age in the discursive construction of America as a society where “power resides with the people, who delegated it to the government”, an idea that is “the result of more than 150 years of intellectual and political ferment, from the Mayflower Compact to the U.S. Constitution” (*ibidem*) and, making use of the metaphor of the frontier and exploiting the rhetoric of the first Anti-Federalist community (Sacerdoti Mariani 2005), America is described as “the land of individual freedom”, that creates the perfect environment for the “uniquely American phenomenon of the hacker, who ignored every social pressure and violated every rule to develop a set of skills [that would] eventually made him or her highly marketable, […] and, a creator of new wealth in the form of baby businesses” (Dyson et al 1994). In addition, the authors include their document in the above-mentioned libertarian
tradition by defining it “an affirmation of freedom” against the “mass institutions of the industrial age [that] encouraged conformity and relied on standardization” thus suffocating individual liberty. In the same document, the authors investigate the effect that such a deregulation would have on communities, which are here defined as “electronic neighborhoods” bound by shared interests instead of by geography. An interesting perspective from the point of view of the development of social media platforms is the quotation of the words of Phil Salin, where he envisions cyberspace as a “connected ‘platform’ for a collection of diverse communities […] as distinct places of private property the potential variations on design and prevailing customs will explode”. In such a scenario, “the ‘externalities’ associated with variations can drop; what happens in one cyberspace can be kept from affecting other cyberspaces”. It is a vision of the global network which detached itself from the system of information exchange theorized by Tim Berners Lee and more in line with the architecture of social networks and the landscape of privatized enclosed spaces I discuss at the end of the chapter.

5.7. “You” or the Engaged Citizens of the Global Village

The liberating vision of technology is the key ideational of component also of the first mainstream celebration of the Web 2.0 revolution: the renowned 2006 Time Person of the Year cover that depicts the Internet – symbolized by an Apple personal computer with a reflective screen – as an empowering tool (see figure 6). 

The term “Web 2.0” was coined by Dale Dougherty, vice President of the O’Reilly Media, and presented during the first O’Reilly Media Web 2.0 Conference in 2004. Although the term suggests a new version of the World Wide Web, it does not refer to an update of technical specifications, but to changes in the ways software developers and end-users utilize the net. Web 2.0 can be described as the evolution of the World Wide
Web from an interconnected series of static websites to a global environment
where online software, broadband connections and multimedia applications
facilitate interaction among users. In the opening talk of the first Web 2.0
conference, O’Reilly summarized what he saw as the themes of Web 2.0
(2006): he argued that the Web had become a platform, with software above
the level of a single device, leveraging the power of the “Long Tail” and with
data as a driving force. The expression “Long Tail” was first coined by Chris
Anderson in a *Wired* magazine article (2004) to describe the niche strategy of
businesses, such as Amazon.com, where even though a smaller quantity of
each item is sold, there is a much greater variety of these items to sell.
According to O’Reilly, an architecture of participation where users can
contribute to website contents would create network effect and enhance
creativity, information sharing and, most notably, collaboration among users at
a global level as predicted by Negroponte (1996).

The very basis of this user-friendly platform lies in web services, as we shall
see in more details in the next chapter. Technically, a “web service” is “a
software system designed to support interoperable machine-to-machine
Every web service presents two layers: a superficial user interface and, more
profoundly, languages and standards. It is exactly the choice of standards
enabling machine-to-machine interaction that favors communication among
different systems and their hybridization (in IT jargon, their “mash-up”). Thus,
interconnected applications with user-friendly interfaces constitute the basic
components of Web 2.0. Thanks to the development of web services,
everyone could easily produce and upload her own contributions on the net.
This has led – since 2005 – to the increasing of user-generated contents
(UGCs). The paradigmatic case history of mass UGCs is *YouTube*, the video
sharing website created in February 2005 by three former Pen Pal employees
and acquired by Google Inc. in 2006 and that is visually reproduced in the
TIME magazine cover by the reference to the control buttons, such as the play
or the rewind button, and the red video progress bar.

In his editorial, the TIME magazine’s director Richard Stengel decided to
honor the community of web users because, as he declared, “[they] control the
information age” and he used an innovative semiotic material resource for the
cover (the “polyester reflective resin Mylar”) to reproduce a mirror in order to “literally reflect” the idea of the empowering force of technologies such as the personal computer, the internet and the new generation of the Web. Along with explicit textual markers of cybernetics (the computer screen and the word “information”), the cover features an implicit contrastive rhetoric which opposes “You”, the inhabitants of the new digital world to “We, the media creators”, the authorities of the “old world”. The second element of the contrast is not verbally referred to in the cover, but it is “witnessed” by the context of communication itself: the newspaper and its worldly renowned Person of the Year issue. The opposition is made explicit in the lines of the editorial quoted below, where the web users are rhetorically contrasted to the people who fear them. Such a “conflict” is framed in a socio-political perspective and linked to the “great tradition” of the American past, which the encoder of the message overtly endorses. At the level of tenor, the high modality of the editor’s endorsement shortens the distance between the “citizens of a new digital democracy” and the recipients of the message, that are implicitly asked to take their stance in this ideological battle:

The creators and consumers of user-generated contents are […] the engaged citizens of a new digital democracy […] this new global nervous system of the world is changing the way we perceive the world […] There are a lot of people […] who believe that this phenomenon is dangerous because it undermines the traditional authority of media institutions like TIME. Some have called it an “amateur hour”. And it often is. But America was founded by amateurs. The framers were… amateur politicians…. The new media age of Web 2.0 is threatening only if you believe that an excess of democracy is the road to anarchy. I don’t.

The editorial, like the Declaration of Independence of Cyberspace, mixes cybernetics with the American socio-political utopia since the Web is at first defined as the “new global nervous system of the world”, a clear token of the “computational metaphor” I discussed in the previous chapter, that is a “singular almost mystical understanding of the power of information” (Turner 2006, 15) according to which “the universe is a computer” (Kelly 1998). The Web is then described as the “new digital democracy” and its model is
identified in the American experiment. Worth noticing is the expression “engaged citizens” which underlines a “commitment” on the side of cyber-inhabitants to this new socio-political subject, the roots of which lie in the founding Covenant (Walzer 1985, 52-53). In addition to that, I argue that the contrastive pair “democracy”/“anarchy” can be decoded as an indirect intertextual reference to the original Declaration of Independence where the colonists, profoundly influenced by the English Bill of Rights and by the work of John Locke, describe their action “a revolution, not a rebellion, the subversion of tyrants, not the subversion of laws” (Bayley 1993, 28), thus representing themselves as morally committed to defend God-given natural rights against tyrannical usurpations (Bonazzi 1999). However, as I illustrate in the next sections, the technical features of Web 2.0 and web services and the related rise of social networking sites such as Facebook have led to a shift in the rhetorical paradigm of digital technologies that from liberating tools have started to be considered tools of surveillance after the scandals related to the exploitation of users’ data.

5.8. The “Platformization” of the Web and the Paradigm Shift
The architectural structure of Web 2.0 that I have explained above in the previous section, based as it is on communication among different systems, has been influencing the process of making meaning favoring the assembly of derivative artifacts out of the combination of already existing materials. Such a remixing discursive process has affected both the production of digital contents and the design of application programs. Indeed, in the last decade, many websites have progressively offered to developers access to part of their programming code through web services that, as anticipated above, are “software systems designed to support interoperable machine-to-machine interaction over a network” (Haas 2004). In this scenario, the semiotic artifacts that can be created are either applications hosted within the ecosystem of the platforms releasing their strings of code or stand-alone applications leveraging some of the features provided by the websites.

Facebook was the first social networking site to launch a service for developers (https://developers.facebook.com) that exposes its web services and the correlated APIs (“application programming interfaces”) thus allowing
programmers to “create tools that could live within Facebook.com” (Parr 2009). This choice turned the social networking site into a platform and enabled the software company to become the core component of an ecosystem of artifacts and relationships dependent on its products and services. The first step of this process was the introduction, in August 2006, of a new set of services enabling developers to create outside applications that work with Facebook. The first edition of the Facebook Development Platform was promoted as “a great opportunity for users and developers to engage with Facebook in new and exciting ways” (Fetterman 2006). Indeed, while – on the one hand – the platform was transforming Facebook into a developer environment giving access to third-party programmers to data such as friend relationships, photos, events, and profile information to create web and desktop applications, on the other hand lay users or “people who aren’t into programming” (ibidem) were able to extend their experience thanks to applications that are built on top of the environment.

In May 2007 the platform was announced in the course of the first f8, the conference dedicated to developers (Arrington 2007). As Geminder (2007) explains, having provided developers with a set of tools for sending and retrieving data from and to the platform, any of them could potentially build the applications as if they were Facebook developers, they can also integrate their application into Facebook and into the Social Graph, that is the mapping of “all the connections between people and the things they care about” (Hicks 2010). Such an announcement officially marked the passage from being a social networking site (boyd and Ellison 2008), that is, a place where users can create their profiles, build and display a list of connections with other users in the network, to become a social media platform. This shift was part of a process that has been described by Helmond as the “platformization of the Web” to refer to platforms as the “dominant infrastructural and economic model of the social Web” (2015, 5). Indeed, platforms are online “cloud'-based software modules that act as portals to diverse kinds of information, with nested applications that aggregate content, often generated by ‘users’ themselves” (Hands 2013, 1). These features have been often associated with Tim O’Reilly’s definition of Web 2.0, I have quoted in the previous section, where
he conceptualized the Web as a “robust development platform” offering websites the opportunity to “become software components” (2005).

The word “platform” is broad enough to comprise the description of numerous concurrent phenomena such as the increasing importance of cloud computing and the passage from desktop and table computing to an ‘app’-based mobile internet experience. The term was adopted by social media companies for “the description of the online services of content intermediaries, both in their self-characterizations and in the broader public discourse of users, the press and commentators” (Gillespie 2010, 348). The term features many connotations: “political, a place from which to speak and be heard; figurative, in that the opportunity is an abstract promise as much as a practical one; and architectural, in that [social media platforms are] designed as open-armed, egalitarian facilitations of expression” (352). However, Gillespie highlights how the original meaning of an infrastructure to build applications on offers “a comforting sense of technical neutrality and progressive openness” (360).

Social media platforms have been widely criticized as a move away from the open, free Web towards an ecosystem of private apps and platforms (Berners-Lee 2010; van Dijck 2013; Zittrain 2009). The spatial metaphor of the “walled gardens” (Arora 2014) has been used to describe the architecture of social networks and, more precisely, the way they structure the process of accessibility in a commodified environment since, as the author argues, social networks are “privatized enclosed spaces” (2014, xv). Indeed, as Gillespie outlines (2018, 14), “over the course of more than a decade, the kinds of encounters with information and people that were once scattered across the Web have been largely gathered up by a small set of companies onto a handful of social media platforms” which function as gatekeepers and, the access to which is paid by users with their data and metadata (van Dijck 2014). The issues related to “dataification” (Mayer-Schroenberger and Cuckier 2013), that is, the transformation of social action into on-line quantified data that allows for real-time tracking and predictive analysis and the related business model exploited by the above-mentioned connective media will be discussed in the next chapter; in the present chapter, I mean to focus on the shift that has occurred to the rhetorical paradigm of digital technologies as liberating tools I have been exploring so-far after the scandals related to the use of social media.
users’ data. The shift has been discursively marked by two coeval speeches given in autumn 2018 by two key participants in the digital utopia discourse structuring, namely, the CEO of Apple Inc., the company that invented personal computers and Tim Berners-Lee the inventor of the World Wide Web.

5.9. The “Data Industrial Complex” and the Call for a new Contract
On October 24, 2018, Tim Cook, Apple’s CEO pronounced a keynote speech during the International Conference of Data Protection & Privacy Commissioners in Brussels, calling for “a comprehensive federal privacy law in the United States” in the same year when the regulation on data protection and privacy issued by the European Union in 2016 became enforceable. The European General Data Protection Regulation (EU) 2016/679 disciplines data protection and privacy for all individuals within the European Union (EU) and the European Economic Area (EEA) and addresses the export of personal data outside such areas. The work of the European Union and of the European Data Protection Supervisor, Giovanni Buttarelli, is defined by Cook an example of commitment to the “possibility of human-centered technology,” an almost oxymoronic commitment which is rhetorically opposed to the new “data industrial complex”, an expression that echoes the term “military industrial complex” popularized by President Eisenhower in his farewell address to the nation (1961) to describe the informal alliance between the defence industry, the military and public policy and to warn US citizens against the “acquisition of unwarranted influence” on the government which might “endanger […] liberties or democratic processes”. According to Cook, a similar situation is occurring nowadays as personal data is being “weaponized against [citizens] with military efficiency” (emphasis added). The use of a lexical semantic chain (“weaponized/ military”) reinforces the association with the military-industrial complex mentioned above and recalls Freud’s concept of the uncanny – Das Unheimliche – “a peculiar commingling of the familiar and the unfamiliar […] that can take the form of something strange and unfamiliar unexpectedly arising in a familiar context” (Royle 2003, 2) with data that originate in the comfort zone of most people that are turned or may be turned into instruments of control and “surveillance”, as Cook explicitly defines it. And it is exactly through the reference to such a vigilance activity that Cook reactivates a Cold
War frame, he also recalls the famous 1984 Apple Ad that rhetorically marked the beginning of the company’s discourse of liberation associated with digital technologies, a discursive construct that is here being subverted by corporations the aim of which is to “assemble, synthetize, trade and sell” users’ data. In Cook’s words, the advertising business logic that is being exploited by corporations such as Facebook – a participant which is never mentioned, but clearly implied by means of many items of shared knowledge – is functional to the creation of “enduring digital profiles” and, when combined with algorithms, can give rise to the filter bubbles I discussed in the previous chapter, that is, to the creation of distorted, isolating and tailored versions of reality. The 1984 Apple Ad, Cook says, was “a warning of what can happen when technology becomes a tool of power and loses touch with humanity”; in the advert, as discussed in the fourth section of the present chapter, Apple is portrayed as a Promethean source of liberation since it gives people access to personal computers, the tools which help realize the transcendent promise of the Whole Earth Catalog and implement the New Communalists’ politics of consciousness. On the contrary, the business model based on “dataification” (Mayer-Schroenberger and Cuckier 2013) reproduces a one-to-many distribution of power in the media environment which, according to the 1940s US Committee for National Morale, was the model of political dictatorship, and betrays the many-to-many semiotically diverse media environment which is the foundation of a democratic system of government (Turner 2013b, 16).

Such a fear is amplified by the risk of the development of Artificial Intelligence, which could be turned into an instrument of surveillance if basic human rights, such as privacy, are not respected, indeed, “for Artificial Intelligence to be truly smart, it must respect human values, including privacy” (Cook 2018).

The speech given by Cook outlines a change in the conceptualization of the role of government, and public policy, more broadly, in the relationship between digital technologies, citizens and civic liberties, as he envisions it as a key asset in the creation of a human-centered technology and not an apparatus to be dismantled like in the Californian Ideology. It is a position which the same Stewart Brand seems to be in line with, since he recently defined himself a “post-libertarian”, a shift that he attributed to “a brief stint working with Jerry Brown, during his first term as California’s governor, in the
nineteen-seventies” (Wiener 2018). Indeed, as he declared in the course of an interview with The New York Times, “the ‘Whole Earth Catalog’ was very libertarian, but [they] didn’t know what government did” and he continued affirming that “the whole government apparatus is quite wonderful, and quite crucial [and that it] makes [him] frantic, that it’s being taken away” (ibidem).

On the contrary, Tim Berners-Lee has always been conscious of the public utility of his invention, which he gave to the world for free and has always advocated for the strategic role of the Web for the development of democratic societies and civic equality. During his talk at the opening of the Web Summit in Lisbon on November 4, 2018, he presented his Contract for the Web (https://contractfortheweb.org/) to ask to join forces at a global level in order to overcome the digital and economic divide and grant people access to the Web, and to advocate for the role of governments to protect personal data. Indeed, according to Berners-Lee, “humanity connected by technology on the Web is functioning in a dystopian way. We have online abuse, prejudice, bias, polarization, fake news, there are lots of ways in which it is broken. This is a contract to make the Web one which serves humanity, science, knowledge and democracy” (Sample 2018). As in Tim Cook’s speech, he calls for a comprehensive law on personal data protection on the model of the landmark General Data Protection Regulation (GDPR) in the European Union as it has laid out a set of strict data protection rules for all companies operating in the EU, no matter where they are based. As it is possible to read in the text of the contract, “the inherent trust that characterized the early days of the Web — and is so critical to its success — is receding” (https://contractfortheweb.org/), especially as it regards data collection, the use of collected data and data breaches. And it is necessary, in Berners-Lee’s view, that governments start protecting technologies that are in the public interest and start defending people’s rights and freedoms on the internet against frauds and exploitation.

5.10. Summary
The aim of the present chapter has been to investigate the utopian discursive construction of digital technologies as tools of personal and social enfranchisement which lies at the core of Facebook’s self-definition as a hacker company, as well as to explore the arising in such a discourse of a
debate over the necessity of a more public/government centric focus on digital ethics in the development of platforms and in the management of users' data. Indeed, the utopian and the dystopian versions of the discourse which structures the narration of digital technologies are central to the understanding of the cultural components that imbue Facebook's self-representation and the debate over the development of Artificial Intelligence and the business model exploited by social media platforms.

The first part of the chapter was dedicated to the exploration of so-called 'hacker ethics' (Levy 1984) and its popularization in the early 1980s thanks to the organization of the first Hackers' Conference by the Bay Area entrepreneur Stewart Brand, where the ideological work of merging digital technologies and libertarian utopianism was carried on. It is a highly peculiar vision of libertarian utopianism the roots of which can be traced back to what Turner describes as the “politics of consciousness” (2006), which is the idea that social change would come if people were free to expand their consciousness with the help of technological tools. Such technologically 'augmented' people can lead society to regain its pure communalist form, which was also the original spirit of the first American settlements.

This vision of technology was adopted by a branch of US counterculture, the so-called "New Communalists" (Turner 2006) and was inspired by The Whole Earth Catalog (WEC), a magazine founded by Stewart Brand, which was defined by Steve Jobs “one of the bibles of [his] generation” (2005) and which was shaped by Buckminster Fuller's ideas and, in particular, by his engineering vision of society, according to which, in order to change the way people think, it is necessary to give them new tools that would lead to new ways of thinking. According to Fuller, the world was made of information patterns that could be changed and modeled by information technologies, such as the computer. It is a vision that Fuller declared to trace back to his great aunt Margaret Fuller's involvement with the XIX century philosophical movement of Transcendentalism, even if it is deeply imbued with Cold War military-industrial information theory. The politics of consciousness with its merging of Gnosticism/Transcendentalism and Fuller's conceptualization of tools lies at the core of the ethics of the “hardware hackers” of the 1970s, who lived around the San Francisco Bay area and gathered around The Homebrew
Computer Club, like Steve Wozniak and Steve Jobs, the founders of the Apple Computer, the company that invented personal computers. This generation of hackers aimed to transform computers from large, centralized instruments of surveillance and defence research into tools of democratization and personal enfranchisement as clearly expressed in the famous 1984 Apple Ad which created the image of Apple’s personal computer as a liberating technology featuring an epic battle between freedom and tyranny set in a dystopic Orwellian scenario.

The second part of the chapter was dedicated to the investigation of the so-called “Californian Ideology” (Barbrook and Cameron 1996) which saw an increasing commercialization of hacker values and the merging of the New communalist’s countercultural heritage with the neo-liberal rhetoric of the social conservatives of the New Right, which was popularized by the magazine Wired and favored by the opening of the Internet to the general public. Indeed, in one of the most important documents of the Digital Revolution, A Declaration of the Independence of Cyberspace, written by John Perry-Barlow, in response to the 1996 Telecommunications Act in the United States, the digital arena is primarily conceptualized as made up of commercial interactions and exchanges. The “Californian Ideology” was theorized chiefly by Alvin Toffler, George Gilder and Esther Dyson in the document entitled Cyberspace and the American Dream: A Magna Carta for the Knowledge Age (1994), which supported the vision of a future era where technology would infringe the necessity of bureaucratic supervision of politics and market and where the widespread of deregulation and the downsizing of government would free markets from bureaucratic regulations and make them able to boost social and political change.

The final part of the chapter revolved around the paradigm shift which seems to have occurred in the conceptualization of digital technologies in relation to the “platformization” of the Web (Helmond 2015), that is the arising of platforms as the dominant infrastructural and economic model of the social Web. Indeed, the liberating vision of technology I have discussed so far was the key ideational of component of the first mainstream celebration of the Web 2.0 revolution: the renowned 2006 Time Person of the Year cover that depicts the Internet – symbolized by an Apple personal computer with a reflective
screen – as an empowering tool and that describes the Web as the “new digital democracy” and its model is identified in the American experiment. As I have explained, the so-called Web 2.0 was favored by the development of web services, technically, “software systems designed to support interoperable machine-to-machine interaction over a network” (The World Wide Web Consortium W3C 2003). The standards enabling machine-to-machine interaction favored communication among different systems and their hybridization. Thanks to the development of web services, everyone could easily produce and upload her own contributions on the net. This has led – since 2005 – to the increasing of user-generated contents (UGCs). The following step in the exploitation of the web services architecture was the arising of platforms, which are “‘cloud’-based software modules that act as portals to diverse kinds of information, with nested applications that aggregate content, often generated by ‘users’ themselves” (Hands 2013, 1). Facebook was the first social networking site to launch in 2006 a service for developers (https://developers.facebook.com) that exposes its web services and the correlated APIs (“application programming interfaces”) thus allowing programmers to “create tools that could live within Facebook.com” (Parr 2009). This choice turned the social networking site into a platform and enabled the software company to become the core component of an ecosystem of artifacts and relationships dependent on its products and services. Social media platforms have been widely criticized as a move away from the open, free Web towards an ecosystem of private apps and platforms (Berners-Lee 2010; van Dijck 2013; Zittrain 2009). The metaphor of the “walled garden” (Arora 2014) has been used to describe the architecture of social media platforms and the way they structure the process of accessibility in “privatized enclosed spaces” (2014, xv). Over the course of fifteen years, people, institutions and information that were once scattered across the Web have been gathered by a few companies onto a handful of social media platforms” which function as gatekeepers, the access to which is paid by users with their data and metadata (Gillespie 2018, van Dijck 2014). The issues related to “dataification” (Mayer-Schroenberger and Cuckier 2013), that is, the transformation of social action into on-line quantified data that allows for real-time tracking and predictive analysis and the related business model exploited by social media along with
the scandals for the use of social media users’ data seem to have led to a
discursive shift in the rhetorical paradigm of digital technologies that, from
being portrayed as liberating tools, have started to be feared as instruments of
surveillance, exactly like the Orwellian’s dystopia of a controlling central de-
humanizing power we find in 1984 Apple’s Ad. It is not by chance that the
current Apple’s CEO, Tim Cook, made reference to that advertisement when
describing the fear of the arising of a new “data industrial complex” in his 2018
speech during the International Conference of Data Protection & Privacy
Commissioners in Brussels which, together with Tim Berners-Lee speech at
the opening of the Web Summit in Lisbon in November 2018, marks the shift
in the paradigm I have discussed thus far. Indeed, both the speeches highlight
the necessity of the protection of the rights of the individuals, including the right
to privacy and outlines a change in the conceptualization of the role of
governments, and public policy more in general that, from being apparatuses
to be dismantled or downsized, are defined key assets in the creation of the
new utopia of a human-centered technology. It is a position which the same
Stewart Brand seems to be aligned with as he now defines himself as a “post-
libertarian” (Wiener 2018).
6.1. Introduction

The aim of the chapter is to explore if and to which extent the study of the architecture of the social media platform enriches the critical analysis of Facebook’s public narration. In details, the chapter investigates the description of the business model that Facebook gives to a global generalist audience and compares it to the study of the architecture of Facebook as a platform in order to reveal any discrepancies, deliberate omissions or inaccuracies present in it. To provide the investigation of Facebook’s architecture, I apply the framework presented in the third chapter that combines the socio-semiotic and multimodal approach with platform studies to the authentication service which lies at the core of Facebook’s ad-revenue business model (the Facebook Login). I argue that the model can help shed light on the processes and on the power structures among all the participants as they are very often realized at the level of software encoding and made clear in technical documentation, which is not a usual object of investigation for critical discourse analysts.

The chapter starts from the analysis of the article published by the Wall Street Journal in January 2019 where Mark Zuckerberg illustrates the principles that underpin the business model around which the social media is built with the aim of reassuring the users. The text has been selected as it is explicitly addressed to the general public after the scandals that have involved the gathering and exploitation of users’ data and the scope of my critical analysis is to deconstruct the message with the combined tools of Linguistics and Platform Studies to investigate whether the message presents any deliberate omission of information. Indeed, the chapter continues with a focus on the architectural structure of the social media that, as I have already stated in the previous chapters, has evolved from a small interactive college directory to a global social network as Facebook has been the first social networking
site to launch a service for developers. Such a choice has turned the social networking site into a platform where not only users can create their posts, but also where users can develop applications using the libraries of APIs (application programming interfaces) offered by the social media platform and populate the Facebook ecosystem. It is a second level of service that needs to be explored from a socio-semiotic point of view in order to understand the roles and the relationships of power among the participants in Facebook’s business model since “Facebook ad-based revenue model is centred around Open APIs” (Bodle 2011, 328). Moreover, the API system is deeply connected with the scandals over the exploitation of the users’ data and the alleged lack of transparency, especially as it regards the kind and the amount of users’ data that app developers and marketing partners can access.

The final part of the chapter features the analysis of the cross-platform authentication service offered by the social media to its active users to illustrate the interrelations among end users, app developers and the social media platform. The Facebook Login service (https://developers.facebook.com/docs/facebook-login) has been chosen since it is the evolution of one of the first features launched to extend the platform functionalities back in 2008 (the so-called “Facebook Connect”), but also because it is deeply intertwined with the ad-revenue business model and the above mentioned scandals as the service, which is free of charge for the end users, is actually ‘paid’ for through the access to their data. As a matter of fact, a modified version of the Facebook Login service was released in the aftermath of the Cambridge Analytica data scandal and just a few days before Facebook CEO’s congressional hearings that took place on April 10-11, 2018.

In the last part of the chapter, the two versions of the Facebook Login service are analyzed adopting a critical multimodal perspective integrated with the multilayered model I discussed in the third chapter and compared with the description that Zuckerberg gives of Facebook’s business model in the Wall Street Journal article. This shows that Zuckerberg presents only a partial account of Facebook’s business model. It is also revealing of how Zuckerberg appeals to the concept of ‘freedom’ in order to provide moral legitimacy for Facebook’s business model, while the analysis proposes that it is a freedom
based on a communication which does not meet the rational conditions of “unconstrained communication free from domination” (Habermas, 1980, 205).

6.2. “The Facts About Facebook” or The Business Model Explained

In January 2019, on the pages of the Wall Street Journal Mark Zuckerberg published a sort of statement entitled “the facts about Facebook” (see the Appendix), that was announced via a Facebook post the day before (see Figure 1) and then posted to Facebook Zuckerberg’s profile on February 4, 2019 (https://www.facebook.com/zuck/posts/10106411140260321). The entire article is narrated in the first personal perspective and its main communicative function is to answer the questions on the business model that underpins the platform by explaining the “principles” according to which the social platform operates.

From a semantic point of view, I maintain that it is important to highlight the polysemy of the word “principle” which can describe the functioning laws of a model or the fundamental truths or propositions that serve as the foundation for a system of beliefs as well as a moral behaviors and attitudes. Indeed, while the title frames the article as a collection of truths (“facts”) that are objective, external to the encoder and that express the highest degree of modality as opposed to interpretation, the text features the repeated use of mental clauses where the sender is portrayed as a SENSER (“I realized”/ “I believe”/ “We believe”) and that encode cognitive and ethical attitudes.

The article opens with a reference to Facebook’s fifteenth anniversary and the turning of a service that was created to connect people into a global
company which is continuing to develop services which “billions” of people around the world have found “useful” and “use every day”. The connection between the three development steps is made stronger by the repetition of the same verbal selection (“build”/ “built”/ “build”) which emphasizes the material and structural component of the system and its services. The article continues introducing the aim of the text, that is – as mentioned previously – “to explain the principles” of how the company operates. The polysemy that I have highlighted above is played upon here since the sentence that follows such a statement is a cognitive mental clause which sets the foundational ethical stage for all the activities, the developments and the rules of the company, including its business model (“I believe everyone should have a voice and be able to connect”). In addition, it is a stage dominated by the not so hidden reference to that freedom of speech and expression granted by the First Amendment to the US Constitution and to the company mission with its technological utopian afflatus which I have discussed in Chapter 4. Moreover, in Zuckerberg’s words, if service needs to “serve everyone” it has to be “affordable” and the best way is to give the service for free, a condition of possibility which is enabled by advertisements. It is a subtle semantic shift from the concept of a service that is reasonably priced to a service that is free which is realized by a syllogistic structure that appeals to logos, that is to arguments based on reason (Charteris-Black 2018, 12), and that marginalizes the debate over the possibility of different revenue models, such as, for instance, the crowdsourced encyclopedia Wikipedia based on donations, or the WELL (The Whole Earth ‘Lectronic Link) I discussed in the previous chapter, the users of which pay reasonably priced subscriptions in order to be part of the community.

The central body of the text is dedicated to the explanation of the business model that enables the offering of free services. It starts from the use of an heteroglossic extra-vocalized quotation the sender seems to detach from in terms of intertextual positioning (“people consistently tell us that if they are going to see ads, they want them to be relevant”). The first rule underpinning the social media that is described is the process of targeted advertising which is not new in media contexts and that is presented here as the necessary corollary to the given premises by means of a supplementary relative clause that elaborates on the semantic anchor and that provides an additional unit of
information ("that means we need to understand their interests") and a modifier ("so, based on what people like [...]”). Targeted advertising is thus narrated as a process which has not been invented by on-line advertising and where the only participants who are “charged” are the advertisers who pay in order to show their ads to profiled categories of users. It is important here to notice that the term “charge” belongs to a lexical-semantic chain related to money and costs ("affordable”/ “free”/ “charge”) that helps to shape the tenor relationship between the represented participants with the advertisers who are given the role of “payers”. The text continues explaining that, contrary to what happens with traditional media, the internet allows “far greater transparency and control” over the ads people see and takes as an example the “Your Info and Facebook Ads Section” (https://www.facebook.com/help/516147308587266/?helpref=hc_fnav) that illustrates how ads work on Facebook and how to set the ad preferences, inaugurated in June 2018 (Binder 2018). Zuckerberg names these tools “transparency tools” with the rhetorical aim of making them more memorable thanks to the use of alliteration and to associate them to the semantic sphere of trust. Moreover, he opposes the tools to the opacity that many people may perceive as associated to the targeting ads model ("still, some are concerned about the complexity of this model […]"/ “this model can feel opaque”) with the aim of addressing the criticism the platform has been receiving. Indeed, while the information about Facebook are connoted as “facts” since the framing title of the article, the opinions of the users are associated with the realm of concerns/ feelings/ distrust/ conjectures/ assumptions and even ignorance (“we are all distrustful of systems we don’t understand”). Always in order to address the criticism that the platform has received, the opinions of the users are here extra-vocalized through the reference to the most popular beliefs according to which Facebook would sell people’s data and that are here confuted by means of the dialogic disendorsment of the reported speech (“people assume we do things that we don’t do). On the contrary, Zuckerberg affirms that “selling people’s information to advertisers would be counter to [their] business interest” since it would reduce the value of their service to advertisers and that they have a “strong incentive to protect people’s information".
The text continues discussing on-line engagement and disputing assertions that the social platform stimulates participation even when content is harmful, or when we are dealing with phenomena like junk mail or clickbait. According to Zuckerberg, from a “business perspective” this is not the case since, not only do users “consistently tell” Facebook that “they do not want to see this kind of content”, but also because “advertisers don’t want their brands anywhere near it”. From a rhetorical point of view, the consistent dialogical structure of the text aims at potentially presenting all the stakeholders and their positions and interests and their voices as heteroglossically represented by means of a register which is colloquial and informal in order to reach a wider audience as well as to obfuscate the crucial components of the ad-revenue based model. As a matter of fact, the pervasive semantic-lexical chain belonging to the area of economic/monetary value (“selling”/“business”/“interest”/“reduce”/“value”/“incentive”/“interest”/“incentive”/“increase”/“estate”/“interest”) gradually shifts the focus from the foundational element upon which the entire business model is built, and that is not discussed in the entire article. This foundational element is the mediating and modulating mechanism which lets third parties access people’s data in the app ecosystem as it is explained in the next section.

The style of the article changes in the next part where the position of the company conquers the stage and where Zuckerberg states, with a sentence characterized by the highest degree of certainty, that “there is no question” that the company “collect[s] some information for ads”, even if the modality of the affirmation seems to be softened by the use of the modifier (“some”). He then continues that “information is generally important for security” and for the functioning of their services as well. Again, it is the modifier (“generally”) which mitigates the universality of the claim. Moreover, Zuckerberg affirms that the same control people are granted by the previously introduced “transparency tools” on how the company should use the data they have collected, is not extended to how the company would use the same data for “security” or for “operating [their] services”. With a sort of logical leap, the text goes back to dialogism and to ads control, when Zuckerberg states that when they asked people for “permission to use” their data to “improve their ads” as requested by the European Union’s General Data Protection Regulation, the “vast
majority” of users agreed, “because they prefer more relevant ads”. From a semantic point of view, the logical leap seems to divert the argument flow from the acknowledged use of data for security and functional matters by implementing a circular structure that goes back to the beginning of the discussion. In addition, the process of inferring the reasons which underpin the decisions of the “vast majority of the users” provides an end to the argumentation, which is a supposition and not a logical conclusion, thus being evasive by closing off the discussion.

In the final part of the article, Zuckerberg goes back to the “principles” which inform his company’s philosophy and makes a list of the most important principles around data, namely, “transparency, choice and control”. The key term around which the argumentative discourse is constructed is the word “clear” which is used to describe both the implications for the company (“we need to be clear about the ways we’re using information”) and its users (“people need to have clear choices about how their information is used”) and to introduce a new participant, “regulation”, which is framed as an enabler of the business model and not as an obstacle, as the alleged Facebook lobbying activities that have been reported against data privacy legislation would suggest (Cadwalladr and Campbell 2019; Goodwin, Campbell and Skelton 2019). Moreover, the business model is described as a positive force (“there are clear benefits to this business model”) for both people who are granted a “free service” to express themselves and be connected with those who care, that is, to sustain and support two the most celebrated US values, such as the focus on individuals and on families, and – echoing the Whole Earth Catalog – to give “access to tools” that only big companies could previously use to small business that can thus “create economic growth around the world” and enabling that freedom of enterprise which is another founding tile of US society. Indeed, when chairing and introducing Mark Zuckerberg’s second Congressional Hearing on data privacy and Russian disinformation on the social network that took place in April 2018, the US Representative Greg Walden assessed that “[his] success story is an American success story, embodying our shared values of freedom of speech, freedom of association and freedom of enterprise” (The Washington Post 2018). Zuckerberg concludes his statement by shifting the attention from the beliefs of the
company to those of the users (“if you believe in a world where everyone gets an opportunity […]”) and by creating a syllogistic structure according to which, if the values of users coincide with the above mentioned company principles around data that are also the basic tiles of American discourse on society then, the only logical conclusion is that Facebook’s mission to build a technology that serves everyone is important and the business model is the fundamental and essential prerequisite (“makes it possible”). Such a rhetorical construct is aimed at postulating a convergence between the interests of the users and those of the company that would exonerate Facebook of any of the negative effects of its practice.

Despite the declared aim of the article to illustrate the principles on the basis of which Facebook operates regarding ads and users’ data, the discussion seems to lack a key component, namely, the explanation of its platform structure, that is “the programmable digital architecture [which] organizes interactions between users [and which] is geared toward the systematic collection, algorithmic processing, circulation, and monetization of user data” (van Dijck, Poell, de Waal 2018, 4). Indeed, Facebook’s ad-based revenue model “is centred around Open APIs, which are used to brand the social network, drive traffic, and collect user data to serve targeted display ads” (Bodle 2011, 328). Moreover, developers of applications on Facebook receive access to the platform’s millions of members and their data, receiving profit from such an access. It is exactly this kind of access to end users’ data granted to apps in the context of the mobile media ecosystem and of the political economy of platformization that needs to be put in focus for a critical study of the tools the social media platform is providing to users and to understand what are the stakes that are involved in this business model.

I argue that the declared aims of Zuckerberg’s article were to explain Facebook’s business model to the general public and to address the criticism the social media has been experiencing so far. However, from a close scrutiny of the text, it has emerged the lack of reference to the ad-based revenue model in the mobile eco-system that, as we shall see in the next section, is the main source of revenue for the social media. In order to understand the business model and the power structures among all its participants and, thus, to clearly understand the key importance of the information which has been omitted in
the Wall Street Journal’s article, it is fundamental to investigate the connections between the technological and the economic aspects of the social media platform and these will be explored both in economic documents such as the company’s annual reports and in technical documents like the APIs’ documentation.

6.3. Technological and Economic Aspects of Social Media Platforms

As above said, the description of the ad-based revenue model is not complete without the investigation of the company’s evolution in the age of mobile media and of the related political economy of the platformization process since mobile advertising has become Facebook’s primary revenue driver. Indeed, as it is possible to read in Facebook’s 2018 Annual Report, the company features a 55.84 billion dollars revenue with an increase of 37% compared to 2017 (35) and “generates substantially all of [the] revenue from advertising” (64) as the advertising revenue constitutes 98% of the total revenue ($ 55.01 billion in 2018) with mobile advertising representing “approximately 92% of total advertising revenue” (44). In addition, “the most important factor driving advertising revenue growth [in 2018] was an increase in revenue from ads on mobile devices” (44). As Nieborg and Helmond (2019, 197) highlight, advertising-driven platforms such as Facebook or Google are considered businesses that have demonstrated the ability to expand their markets, partner and users’ base at an unprecedented rate and, in the case of Facebook, one of the drivers of its rapid growth has been the spreading of mobile media and the acquisitions of potential competitors such as Instagram or WhatsApp (Goggin 2014) that have been among the most downloaded apps in the last five years in both Apple and Google app stores. But, how is advertising revenue generated? As we can read in the 2018 Annual Report,

advertising revenue is generated by displaying ad products on Facebook, Instagram, Messenger, and third-party affiliated websites or mobile applications. Marketers pay for ad products either directly or through their relationships with advertising agencies or resellers, based on the number of impressions delivered or the number of actions, such as clicks, taken by our users (65, emphasis added).
To have a more nuanced view of such a system, it is fundamental to focus our attention on Facebook’s mobile app ecosystem and the role played by the “third-party affiliated websites or mobile applications” we can read of in the above quotation and that have not been mentioned in the Wall Street Journal’s article which I have analyzed in the previous section. Indeed, as we can read in the Annual Report, among the risks and the uncertainties that can potentially affect the financial results of the company and that the company is unable to predict or that are outside of their control is that they “may not be able to continue to successfully maintain or grow usage of and engagement with mobile and web applications that integrate with Facebook and our other products” (24). This is the reason why they “have made and are continuing to make investments to enable developers to build, grow, and monetize mobile and web applications that integrate with Facebook and [their] other products (ibidem)”. I have already introduced the concept of the “platformization” of the Web (Helmond 2015) in the previous chapter when discussing the architectural structure of Web 2.0, but in the next section I explore the architectural structure of the social media as a multisided platform that facilitates interactions among consumers (end-users), third-party content developers (e.g. game developers), advertisers and small and medium sized businesses and others. Indeed, since the launching of Facebook’s Development Platform in 2007, the company has taken steps to favor its outward expansion by opening up to third-party developers and by expanding its marketing partner ecosystem (Helmond et al. 2019). The motivation of such a shift is obvious, since the creation of a platform “enables a software company to become the nexus of an ecosystem of partners that are dependent on its products” (Kirkpatrick 2010, 218). Moreover, as I discuss in the next sections, the extraction of users’ data is fundamental to advertising-driven business platforms and the development of socially integrated apps is functional to the expansion of data collection, as Mark Zuckerberg (2012) explained to the investors when presenting the mobile shift of the company and the strategy of mobile platform monetization. Indeed, Facebook’s CEO stated that “over the next five to 10 years, the best products in every category [would] be social” and that, what he sees as “a lot of success is getting developers to connect their apps to Facebook” as Facebook’s business would be “to build a sustainable and profitable platform […] through
developers buying ads, running ads through [their] network, using [their] Payments service, or other possible ways" (ibidem).

6.3.1. Social Media Platforms as Data Infrastructures
As I have highlighted above, the political economy of social media platforms is deeply linked to their technical structure and their infrastructural ambitions, especially in the era of mobile media. According to Plantin, Lagoze, Edwards and Sandvig (2016), corporate giants like Google or Facebook have gained footholds as modern-day equivalents of the railroad, telephone, and electric utility monopolies of the late 19th and 20th centuries and, even if they are centrally designed and controlled systems, their contemporary ecologies look like a network linking independently developed and maintained systems (e.g. apps) to their core components and have achieved such enormous scales that co-exist with infrastructures and, in some cases, compete with or even supplant them. Indeed, the process through which platforms like Facebook extend their boundaries in the mobile ecosystem via the integration of services or via plug-ins is different from the first steps in the “platformization” process (Helmond 2015) when platforms were connected to the Web and were simply pulling web data into the platforms. Nowadays, they are expanding infrastructurally by offering software development kits (SDKs), sets of application programming interfaces (APIs) and plugins that give rise to a “data infrastructure”, that is, a “socio-technical system implicated in the creation, processing and distribution of data [that, in the case of Facebook] hosts a variety of platform instances that include a website and a ‘family’ of over 72 apps” (Nieborg and Helmond 2019, 4). Such a data infrastructure is central to Facebook’s advertising-driven model. Indeed, as Srnicek (2016) highlights, the first characteristic of platforms is that they are digital infrastructures that enable different groups to interact (e.g. users, advertisers, developers), thus positioning themselves as “intermediaries that bring together different users: customers, advertisers, service providers, producers, suppliers, and even physical objects” (2016, kindle version) and, more often than not, they also “come with a series of tools that enable their users to build their own products, services, and marketplaces” (Gawer 2009, 54). A platform does not build a marketplace, it provides the basic infrastructure to mediate between different
groups and the key advantage that platforms have over traditional business models lies exactly in their position between users and the ground where their activities occur, which gives them a privileged access to data and their records. Facebook, for instance, draws on “a variety of intimate social interactions that can then be recorded” (Srnicek 2016). Platforms are, thus, more than tech companies, since they operate wherever digital interactions take place. Another feature of platforms is that the more people use a platform the more valuable that platform becomes: it is the so-called “network effect” (ibidem), that leads to platforms having a natural tendency towards monopolization and to the ‘corollary’ to the network effect according to which an ever-increasing offer of more activities is fundamental in order to involve ever-more users and, thus, create more data. Finally, as intermediaries, not only do platforms control and govern over the spaces where others interact on, but also their core architecture enables others to build upon them. In the case of Facebook, for instance, its Development Platform has allowed developers to produce apps and the social plugins have allowed users to share information in a way that brings in even more users and more data.

6.3.2. Interoperability and Open APIs

Many scholars (e.g. Gawer 2014; Helmond 2015; van Dick 2013) have highlighted how the business dimension and the technical dimension of Facebook are deeply intertwined: they can be considered a sort of “double articulation” (Langlois and Elmer 2013, 5) as Facebook’s business logic is implemented and realized through its software and, in particular, as Robert Bodle affirms, “Facebook ad-based revenue model is centred around Open APIs” (2011, 328). Indeed, as he explains, the interoperability provided by Open Application Programming Interfaces (Open APIs) on the one side provides new ways to participate and sharing in the on-line environment but, on the other side, it represents a means through which companies like Facebook or Google can achieve market dominance. As I have anticipated in the previous chapter, technically, APIs are software tools that enable interoperability for the sharing between on-line services and websites, making it possible for people to use services in an interconnected way such as, for instance, to check a map provided by Google when looking for the position of
a hotel on the hotel’s website or to see a YouTube video on Facebook. Such an interoperability has enabled new ways for people to interact through applications like social games (e.g. Candy Crush), mobile applications, mash ups, Facebook’s quizzes or social plug-ins (e.g. the “Like” button) and, not only, these applications have enabled social media platforms to interact, they have enabled third-party developers to build applications on top of the social media with their ecosystems of which they enter into a relationship of dependency. In such a context, social media use “Open API’s and a growing number of social applications to solicit, collect, and open up user data for advertisers and data brokers” (Bodle 2011, 321) and when people navigate, comment, like, cross-post and recommend, they share information both with their networks and with the “third-party sites and services that are the conduits or interoperability” (ibidem). The regulation on data protection and privacy issued by the European Union in 2016 and enforced in 2018 is aimed at making the conditions for sharing and accessing contents more secure, transparent and user controlled as the risks of lack of control over one’s own information, lack of transparency regarding what data are collected and what information is being used are really high as many of the recent scandals have shown. The point is that interoperability has become the dominant industry paradigm of the Web since the standardization of data protocols was introduced by the HTML programming language and open technical standards have encouraged interoperability and contributed to the mainstreaming of the Web. With the advent of Web 2.0, interoperability and the opening of APIs have started to be considered a sustainable business move to encourage the creation of ecosystems of third-party developers that would increase the value of a web service (O’Reilly 2002). Thus, it has become fundamental for platforms to engage as many third parties as possible in order to increase their value and third parties have benefited from this interoperability with access to an ever increasing amount of users data. Companies like Amazon, Google or Facebook have started to exploit interoperability as a means to achieve market dominance since Open APIs are used to brand their services, drive traffic and collect user to serve targeted display ads (Bodle 2011, 328). The understanding of such a mechanism in terms of how it works both technically and financially is fundamental if one aims to analyze the relationships of power
among the involved participants. Indeed, interoperability has become even more central in the mobile ecosystem where, as I have already noted, companies like Facebook have turned into data infrastructures that host multiple platform instances and lie at the center of multisided markets enabled by Open APIs, with a significant increase of revenues from mobile advertising as the 2018 Annual Report mentioned above shows.

6.3.3. Facebook’s Open APIs, the Cambridge Analytica Scandal and the Facebook Login

In Facebook’s 2018 Annual Report, Zuckerberg declared that the company has been “the subject of intense media coverage involving the misuse of certain data by a developer that shared such data with third parties in violation of [their] terms and policies”. The “misuse” he is referring to is the so-called Cambridge Analytica Scandal which broke out in March 2018 and that involved a British political consulting firm, Cambridge Analytica Ltd, accused of having harvested the personal data of millions of users’ profiles on Facebook without their consent and used them for political purposes. The illicit harvesting of personal data was first reported in 2015 (Davies 2015) but erupted in early 2018 when an ex-Cambridge Analytica employee accepted to come forward as a whistleblower (Cadwalladr, Graham-Harrison 2018; Rosenberg, Confessore, Cadwallard 2018). The Cambridge Analytica Scandal has been defined a watershed moment in the public understanding of the potential threats in the use of digital personal data and has stimulated the public debate on consumers’ protection in online media, the right to privacy and the regulation of tech companies’ use of data just a few months before the enforcement of the European Union’s General Data Protection Regulation (GDPR) which occurred in May 2018. Moreover, it eventually led to the Congressional Hearings of Facebook’s CEO which took place in April 2018.

As far as the present thesis is concerned, to understand what happened in the Cambridge Analytica Scandal is fundamental as it helps to discern the relationships between the social media platform infrastructure and ecosystem, its interoperability, its business model, its users and the third-party websites and applications. That is, all the elements that are central to the mobile ad-
based revenue model which is Facebook’s main source of income and that were not mentioned in Zuckerberg’s article.

The mechanism through which the users’ data was acquired involves the exploitation of two of the platform functionalities, namely the Facebook Login and the Social Graph that are central to the process of outward expansion and infrastructuralization of the platform and its related market value and that I analyze in the following sections. In detail, Christopher Wylie, the whistleblower working for Cambridge Analytica, revealed that the company, which was owned by the hedge fund billionaire Robert Mercer, “used personal information taken without authorization in early 2014 to build a system that could profile individual US voters, in order to target them with personalized political advertisements” (Cadwalladr, Graham-Harrison 2018). The data were collected through thisisyourdigitallife, an app built by academic Aleksandr Kogan, who separately from his work at Cambridge University and through his company Global Science Research (GSR) and in collaboration with Cambridge Analytica, paid hundreds of thousands of users in order to take a personality test and have their data collected for academic use. The app also collected the information of many people other than the test-takers leading to an unprecedented harvesting of a data pool tens of millions strong since the test-takers had been asked to access the app via the cross-platform authentication service offered by the social media to its active users (the so-called Facebook login) and this had enabled the app developers to access the data of the test-takers’ Facebook friends. Indeed, as it is described in the next sections, Facebook’s design and its interoperability allowed the app to collect not only the personal information of people who agreed to take the survey, but also the personal information of all the people in those users’ Facebook social network even if the social media “platform policy” allowed only the collection of friends’ data to improve user experience in the app and barred it being sold on or used for advertising. The understanding of how Cambridge Analytica exploited the Facebook authentication system to collect the data of users and their friends is fundamental as it shows that the architecture of the Facebook login feature that I analyze in the forthcoming sections was functional to Facebook’s business model as they make money out of mobile advertising and
out of their interoperative ecosystem, which is not mentioned in Zuckerberg’s Wall Street Journal article.

6.3.4. From “Facebook Connect” to the Facebook Login

The Facebook login is a form of single sign on (SSO) designed to simplify authentication for end users that draws information from a social media to sign into a third-party website/application instead of creating a new account for that app or website. On the Facebook for Developers section of the social media,

![Facebook Login](https://developers.facebook.com/docs/facebook-login)

the feature is described and 'promoted' as a “secure, fast and convenient way for users to log” into the app developed by the third party developers as well as a “secure, fast and convenient” tool through which the third-parties can “ask for permission to access data” (see figure 2). The amount of data third-party developers can access has been going through a lot of changes and limitations since the first launching of the service both as the outcome of legislative regulations such as the GDPR and of scandals like the above-mentioned Cambridge Analytica issue. In the next section, the Facebook login feature is analyzed with the multilayered framework introduced in the third chapter in order to critically outline the interrelations among end users, app developers and the social media platform, but before that, I maintain it important to concentrate on the main components of this socio-technical affordance which is a founding tile of the social media interoperability and ecosystem. Indeed,
the Facebook login represents the evolution of one of the first iterations of the platformization of the social media, the Facebook Connect which was launched in 2008 (see figure 3).

![Facebook Connect](https://developers.facebook.com/blog/post/2008/05/09/announcing-facebook-connect/)

As I have already stated, Facebook was the first social network to pursue interoperability through Open APIs as the company launched its service for developers in August 2006 and in the years before its initial public offering (IPO), which took place in May 2012 it released a series of services for developers that incremented its interoperability, such as the Facebook Platform in May 2007, the Facebook Connect in May 2008, the Open Stream in April 2009 and the Open Graph with Instant Personalization in April 2010. It was a profitable situation for all the parties involved since, as Robert Bodle (2011, 328) explains, developers of applications on Facebook were able to receive access to the platform’s millions of members profiting from it, while the social media had the opportunity to become an increasingly valuable platform by growing its membership base and, consequently, by raising its ad rates. In the post that introduced the feature (Morin 2008), the Facebook Connect API was presented as the iteration that “allows users to ‘connect’ their Facebook identity, friends and privacy to any site”: users will be able to connect their account with any partner website using a “trusted authentication method”
having “total control of the permission granted”. In a section of the post entitled “friend access”, we read “with Facebook Connect, users can take their friends with them wherever they go on the Web [and] developers will be able to add rich social context to their websites” (ibidem). The amount of data that could be accessed by third-party developers depends on the different versions of the login as the Facebook Connect (then Facebook Login) has undergone a series of changes, the most important of which have taken place in 2014 (Facebook for Developers April 30) and in 2018 (Facebook Newsroom March 21). At the beginning, third-party apps had access to the complete member’s profile as well as to one’s friends’ profile information, making the user’s friends’ data vulnerable (Bodle 2011, 329). In 2013, a change was proposed but it involved people’s concerns about “apps posting on their Timeline or to their friends” (Facebook Newsroom August 22, 2013) but, with the then updated version of the Login, any app would have to ask “permission to post back to Facebook” (ibidem). It is interesting to notice that, in the post, the users’ concerns over privacy are framed only in relation to the end-user interface of Facebook, as it is possible to see also in the dissemination video posted to YouTube (see figure 4), where both the title and the tagline “Choose What You Share” rhetorically represent users as empowered (Facebook Developers October 22, 2013). Indeed, as we have seen with the Cambridge Analytica Scandal, the main data breaches did not involve the end-user interface but were related to the data that third-party developers could access back end. This latter aspect has been taken into partially by the second major change to Facebook Login that was announced in April 2014 when the Login Review Process was introduced: the review is a process that any app which requests access beyond users’ public profile, e-mail and friend list must undergo to “make sure that it requests the permissions it really needs” (Facebook Developers May 1, 2014). According to the Cambridge Analytica whistleblower (The Guardian 2018), it was in the early 2014 that Cambridge Analytica’s CEO met the scholar who would propose to use the applications he had developed on Facebook as a ‘Trojan horse’ in order to harvest the data not only of the users participating in the research and signing the informed consent form, but also the information of their social network of friends. He also added that the data was collected in the following two or three months, that is in the first part of 2014 and,
apparently, in the same period around which the App Review process was introduced.

The latest version of the Facebook login was released in the aftermath of the Cambridge Analytica scandal and was announced in a post entitled “Cracking Down on Facebook Abuse” (Facebook Newsroom March 21, 2018). The new version of the feature restricts the amount of data that a third-party developer can access without an app review only to “name, profile photo and e-mail address”. In the next section, the analytical framework introduced in the third chapter to enrich the critical study of digital discourse is applied to the social login in order to explore how the relationships among all the participants to the authentication service are made clear at the level of interfaces, but also in the software architecture and the related API documentation. Indeed, while the analyses carried out at the first and second level of the proposed framework can highlight the features related to the messages, the design of the interfaces and their usability, it is only with the subsequent two layers that it is possible to enter into the network of relationships in the technological mediation of the practice of identities authentication in the programmable Web.
6.4. An Integrated Analysis of the Facebook Login Service

The multilayered model presented in the third chapter (see Table 1) focuses on an analytical approach to social media which takes into account not only the front-end interfaces and the messages that are shown at this level but also the back-end processes such as the ecosystem of the communication flow, the organization of information and, where possible, the system architecture of the entire platform. I maintain that an analysis which relies only on front-end messages offered to end-users may not be sufficient to investigate the processes that are going on both in terms of the contents and of the relationships among the participants to the exchanges, while the framework helps deepening the critical analysis since it can help highlight the power structures among all the participants that are very often realized at the level of software encoding and made clear in technical documentation. In the case of the Facebook login, the analysis of the front-end messages and templates where a user can select the activation of the service would not be helpful in fully understanding the power relationships among the participants involved in the process as well as the nature of Facebook as a multisided platform and the centrality of the authentication service in the social media interoperability and, consequently, in its business model. Thus, my analysis starts from the exploration of the first two layers described in the model, namely the messages and the templates, and then takes into account the third and the fourth layer, which aim to describe the information flow and the organization of information in order to shed light onto the process and on the role of the participants. The final level of the model deals with the source code designed by the platform programmers and, as I stated in Chapter 3, corporate social media platforms feature algorithms that are transparent to computer users this is the reason why this type of investigation cannot be performed here. As already mentioned, the Facebook login is a form of single sign on (SSO) designed to simplify authentication for end users that draws information from the social media to sign in into a third-party website/application instead of creating a new account for that app or website. The participants in the process are at least three: the end user who asks for the authentication on a third-party application through her social media profile; the developers who choose to integrate the web service into their app or website and the social media platform offering the
service. The end user who asks for the authentication through her social media profile will be asked by the application the permission to access her data (see figure 5).

The type of data that can be collected by the application depends on the user’s privacy settings and available information. The authentication process offered by the social media to its active end users is semiotically realized as ‘user friendly’ in terms of usability and its simplicity is foregrounded by the brand recognizability. Indeed, as it is possible to see in figure 5 which shows an example of the permission form, the front-end interface features a blank neutral setting with a blue button that invites the end-user to continue the app experience with his Facebook account, which is here expressed by the reference to the first name of the user (“Continue as Jay”) in a personalization process that shortens the distance between the user and the technological products. The layout gives prominence to the button and such a visual salience,
combined with the use of the imperative form of the verb, construes the receiver of the message as “empowered”, while the third-party application which is referred to both via its name and its logo is rendered as the passive receiver of the transaction (“Serverless Stack Demo will receive…”). The interface is thus realized as a dialogue between the user, who is exhorted to act, and the Facebook platform, which is recognizable in the button, in the upper left section of the template that recalls the banner it is possible to find in any of the standard social media pages and in the verbal reference (“This doesn't let the app post to Facebook”, emphasis added). The position of the app seems to be rhetorically backgrounded in favor of the visibility of the social media that is strengthened by the above mentioned three cohesive signs, while the user is semiotically constructed as a DOER and, consequently, his role appears to be foregrounded and empowered.

The permission form has to be configured by each third-party application following the rules for the definition of the login with Facebook experience that are illustrated in the software developer kit (SDK) and that present indications on how to design the layout of the front-end interface in order to favor recognizability and to “encourage more people to login” (https://developers.facebook.com/docs/facebook-login/userexperience). The suggestions include references to the use of colors (“white and the official Facebook blue; 4267B2”), the size and position of the button (“as fast and easy to recognize and tap as possible”), the label of the button (“recommended labels are ‘Continue with Facebook’ or ‘Login with Facebook’”) or additional messaging such as “reassuring messages” (“We don’t post to Facebook”) or “benefit statements” (“In a hurry? Log in with Facebook”). Indeed, as regards the messages that we can read in the permission form shown in figure 5, it is possible to highlight a version of the reassuring text previously mentioned (“this doesn’t let the app post to Facebook”) strengthened by the icon that represents a closed padlock, a well-known digital lock icon which indicates a secure mode of communication in online environments. This message and the related icon are the markers of the change that was introduced in 2013 as an answer to people’s concerns about apps posting to their profiles and according to which any app would have to ask permission to post to Facebook on behalf of the users who have chosen to use the social media authentication service
(Facebook Newsroom August 22, 2013). On the contrary, the other text ("Serverless Stack Demo will receive: your name and profile picture and e-mail address") is a marker of a rising process of awareness in the target audience of users on the acquisition of data below the surface level and, thus, not only concerning the possibility for apps to post to personal profiles but dealing with processes that occur back end. Indeed, the message declares that the app will receive only some data, such as “the name, the profile picture and the e-mail address” of the user. If we compare the message with the one shown in figure 6 ("Access Internet will receive: your public profile, e-mail address, birthday and current city"), we can easily see that the amount of data the app is granted access to is considerably different. This latter message refers to the Facebook Log in version prior to March 2018 when, as stated above, the social authentication service underwent a change in the aftermath of the Cambridge Analytica scandal (Facebook Newsroom March 21, 2018). The new version of the service restricts the amount of data that a third-party developer can access without an app review only to “name, profile photo and e-mail address” as it is possible to read in the Permissions Reference of the API documentation of the Facebook Login (https://developers.facebook.com/docs/facebook-login/permissions) that enlists all the default fields of the User object\(^6\) (see figure 7).

The message in the permission form shown in figure 6 is related to the previous version of the social authentication process according to which the basic information that could be accessed are those in the public profile such as the first name, last name, location (city and geographic coordinates), gender, birthdate, Facebook profile picture, the list of user’s friends and the email address (Facebook Developers May 1, 2014) as it is possible to read in the Permissions Reference of the API documentation of the Facebook Login dated February 20, 2018 (see figure 8).

\(^6\) In computing language and, more precisely, in the object-oriented paradigm, objects are data constructs that provide descriptions of the attributes of the items they represent and define their method of operation.
User Data

**default**

*Does not require App Review.*

Grants your app access to the default fields of the User object that are a subset of a person's public profile:

- id
- first_name
- last_name
- middle_name
- name
- name_format
- picture
- short_name

**email**

*Does not require App Review.*

Grants your app permission to access a person's primary email address.

**Allowed Usage**

☑️ Allow a person to use their Facebook email address to login to your app.

**Disallowed Usage**

☒ Spamming users. Your use of email must comply with both Facebook policies and the CAN-SPAM Act.
Permissions Reference - Facebook Login

Each permission has its own set of requirements and suggested use cases. All these permissions, except the default, **public_profile**, require that you have Client OAuth Login enabled for your app on the Facebook Login tab of your app dashboard.

Basic permissions, (**public_profile**, **user_friends**, and **email**) do not require Review, but all other permissions do.

**public_profile** (Default)

Provides access to a subset of items that are part of a person’s public profile. A person’s public profile refers to the following properties on the user object by default:

- id
- cover
- name
- first_name
- last_name
- age_range
- link
- gender
- locale
- picture
- timezone
- updated_time
- verified

On the web, **public_profile** is implied with every request and isn’t required, although the best practice is to declare it. On iOS and Android, you must manually request it as part of your login flow.

**gender** & **locale** can only be accessed if:

- The person queried is the person using the app.
- The person queried is using the app, and is a friend of the person using the app.
- The person queried is using the app, is not a friend of the person using the app, but the app includes either an app access token or an **appsecret_proof** argument with the call.

**timezone** & **verified** can only be accessed if:

- The person queried is equal to the person making the request.
Nevertheless, any app that accepts to undergo the process of a review can access more categories of users’ data on the condition that the review certifies that the app requests “only the permissions [it] needs to provide a great user experience” (https://developers.facebook.com/docs/facebook-login/review/what-is-login-review). The permission form of a reviewed app may look different from the previous ones since it may not present a direct reference to data that can be accessed by the app as it is shown in figure 9 which features the Log in template of the famous on-line game Candy Crush that was created leveraging Facebook tools and services offered to game developers.

As Bodle highlights, social games were among the first apps, together with widgets and mash ups, to “exist within the walled garden of the Facebook site” (2011, 329). Back in 2009, platforms APIs gave rise to a rapid development of social games and to a contextual viral adoption by Facebook members who “authorized full access to their profiles as a condition to play” (ibidem) and, at the time, that is before the introduction of the app review, they had full access to players’ friends’ profile information making them vulnerable, as in the case of the quiz app developed by Cambridge Analytica. However, for on-line games to be social multiplayers, games need to access more data than those
it is possible to find in the public profiles, especially in the latest version of the Facebook authentication service. Going back to the template shown in figure 9, here users do not find any immediate reference to the kind of data the app will have access to when logging in with the social media. It is information that can be retrieved if the user selects the yellow icon on the left which leads to the privacy settings (https://king.com/privacyPolicy) where the section dedicated to the information the social game receives from Facebook reads as follows:

If you log in to your King Profile using your Facebook account details, we will receive some of your Facebook account information. If you choose to play our games online on the desktop version of Facebook.com, your basic Facebook account information will automatically be associated with your King Profile. Exactly what information we receive will depend on your settings in your Facebook account, but typically we will receive your basic public profile information such as your username, email address, age range, gender, chosen language, country, friends list and any other public information. We will also collect the email account associated with your Facebook account and the name and avatar of those of your Facebook friends that are already playing our games. [...] (emphasis added)

It is interesting here to highlight how the text makes specific reference to the data that can be collected if the user chooses to play the online game “on the desktop version” of the social media, while no direct mention is made of the data that can be accessed when the game is played on mobiles. Such a stylistic choice realizes the sentence “some of your Facebook account information” as a sort of superordinate that might need further specification and that makes the lack of information regarding the data that are collected when the game is played on mobiles less manifest.

From a general point of view, even if all the permission forms indicate with different degrees of clarity and accessibility the kind of data that the applications exploiting the Facebook service will receive, the complexity and the extension of the authentication process might not be immediately discernible by lay users. Indeed, the service, which is free of charge for the end user, is actually ‘paid’ through the access to her Social Graph data, that is a diagrammatic representation of the relationships among internet
users/objects or, to use the words of the Facebook developer who introduced the product, the mapping of “all the connections between people and the things they care about” (Hicks 2010) that is constantly updated based on users’ activities. At the same time, the value that the access to the users’ Social Graph may have for third-party apps in terms of the commercial exploitation of data may not be clearly perceived and the relationships that exist between the service provider and the app using the service might be opaque to the final users, especially in the case of reviewed apps. Such themes were outlined by the same Zuckerberg in his Keynote Speech at the f8 Conference (2014) when presenting to developers the new Facebook login and the related process of the app review. Indeed, he addressed the audience underlining that the main scope of the Facebook platform was to build “the cross-platform tools that [developers] need to build, grow, and monetize [their] apps” and that the Login was one of these tools in a moment when “most [of] the developers [were] building mobile apps” and when the same Facebook had made the “transition to being a primarily mobile company”. The Login service was thus contextualized as a fundamental tool for the implementation of interoperability which is in turn central to the company’s evolution in the age of mobile media and the role of mobile advertising in its ad-based revenue model as I have discussed previously in this chapter.
In the course of the same speech, Zuckerberg presented the new Facebook login as an instrument to “put people first” as some people had manifested a fear in “pressing the blue button” and he contextually introduced a feature called Anonymous Login (see figure 10) that would have let users log in anonymously in order to demo apps before providing their personal data, even if data continued to be collected by the social media platform (Hill 2014). However, the feature – which never overcame its beta status – was discontinued in 2015 because of the (highly predictable) lack of interest on the side of developers who would have been no longer able to collect data should the service had become accessible to all users (Bell 2018).

I argue that the framework proposed in Chapter 3 can help to unveil such complexity and the extension of the Login authentication process and the relationships among all the participants that, as above said, might not be immediately discernible by lay users as they are realized at the level of software encoding and made clear in technical documentation. The understanding of the relationships among the participants and the structure of the processes that are at stake are fundamental in order to be able to critically analyze the tool and to understand the reasons for Zuckerberg’s strategic elusiveness in his Wall Street Journal article where he does not mention the mobile ad-based revenue and the roles of users and third parties in this system.
The framework proposes to integrate the socio-semiotic and multimodal analysis of the front-end components (that is the messages and the template) with basic elements of the architecture of Facebook as a platform, such as the ecosystem communication flow which highlights the stream of information among the different subjects and objects and the organization of information that is possible to find in technical documentation such as the Web Services Descriptors and the API documentation, as in the above mentioned Permissions Reference of the Facebook Login. I start here from the investigation of the communicative ecosystem which is illustrated by the UML sequence diagram in figure 11 that describes the process of user authentication and, as we shall see, of authorization and the information flow among the three participants: the end user, the application and the social media platform.

UML Sequence Diagrams are interaction diagrams that detail how operations are carried out. In details, they depict the interaction objects involved in a collaborative process and are time focus, as they visually show the order of the interactions by using parallel vertical lines to represent the different objects or processes that concur and, as horizontal arrows, the messages exchanged between them in the order in which they occur. As I have already mentioned in the third chapter, diagrams could be the object of semiotic investigation as they are flowcharts that are used to represent social practices or processes and that have become pervasive in the last decades in relation to the rising and spreading of neoliberalism and its core focus on market, competition and flexibility (Ledin and Machin 2016). In particular, the flowchart here selected to describe the user authentication process can be considered an example of “cybernetic diagram” (Höllerer, van Leeuwen et al 2019, p. 113), that is a narrative diagram where the vectors graphically represent the series of actions that are activated by the user’s inputs into the system which provides feedbacks. As Boeriis and van Leeuwen (2017) argue, arrows — that play an important role in many diagrams — feature a polysemous nature as their meaning can be vague and open to interpretations especially when flowcharts are used to represent social practices instead of technical processes as in the case of figure 11, where the diagram describes the technical answers of the system to two different options when the user
gives permission to access her data and when she denies it. In particular, the diagram represents the application authenticating the user trusting the Facebook identity manager and accessing the Facebook user information according to the authorization profile for that specific user.

The diagram shows that the user login (“authentication”) is just the first step of a more complex interaction that allows the application to access the Facebook data related to the user logged in. Indeed, when a web application obtains the access token for a Facebook user, it can perform authorized requests on behalf of that user, including the access to her Facebook Graph. In more general terms, the application will be allowed to access the information defined by its developers and granted by Facebook unless the user denies the access.
to certain categories of data in her privacy settings (https://www.facebook.com/help/325807937506242). As it is shown in the diagram, once the application leveraging Facebook login web service has been granted permission, it can access Facebook Content Server and user protected resources. Facebook Login is an authentication service that enables an authorization process which is dynamic in two different ways: on the one hand, the application can potentially access the user’s protected resources in subsequent time intervals without signaling it to the user who has already granted the permission thus having access to an evolving set of data represented by the Social Graph which can be used for a progressive user profiling; on the other hand, the app can ask for additional information to users already logged in via Facebook since the Facebook Login service supports “granular permissions” and, as mentioned earlier, applications which successfully undergo a review process can gain access to data other than name, profile image and email (https://developers.facebook.com/docs/facebook-login/overview) provided that the user has given consent to make the data accessible.

It is interesting to compare the version of the Facebook Login Overview and Permission Reference before the Cambridge Analytica Scandal to the version of the same documents after the changes that occurred in March 2018 as, along with the systemic changes, there have been shifts in the discursive strategies that from promoting the service to the developers for marketing reasons have become more neutral as to tone down the role played by the service in the ad-based revenue model. Indeed, as it is possible to see when we compare the Facebook Login Overview page before March 20, 2018 (see figure 12) to the same page after this date (see figure 13), the language chosen to frame and present the service shifts from a promotional message (“Facebook Login supports over 30 permissions”) directed to the target audience of the developers (and marketers) strengthened by the number of permissions that could be accessed and reinforced by the modifier “over” to a toned-down selection, characterized by an indefinite reference to the “many [granular] permissions” that are granted, the explanation of which is left to the transversal link signaled by the blue ink (see figure 13). The title of the page itself shifts from “Facebook Login for Apps”, a specification which places
emphasis on the function of the service and its implied intended audience to a more neutral, descriptive title “Facebook Login Overview”. It seems thus that the community of users which was defined by Zuckerberg during the above analyzed Keynote Speech at the f8 Conference (2014), “the most important out of everyone that we serve” and among which are, in this order, “developers, advertisers, employees” has conquered its stage, albeit at a rhetorical level.

- **Granular Permissions**
  Facebook Login supports over 30 permissions which determine which information people share with your app. This means you have precise control over what you request and people have precise control over what they choose to approve.

- **People Have Control Over What They Share**
  Great experiences start by giving people control. With Facebook Login, people can choose which information they share with your app. They can still get the benefits of logging in with Facebook even if they feel uncomfortable granting access to certain information. Your app can later re-request this information once you’ve explained how the person’s experience will be enhanced.

- **Gradual Authorization**
  Facebook Login supports the gradual authorization—you don’t have to request all the information you want up front—you can do it over time. This means people can quickly and easily create accounts in your app—and as their experience with your app deepens, you can request addition information to further enhance their experience.

*Figure 12 - Facebook Login for Apps - Overview (extract) dated March 9, 2018 retrieved at https://web.archive.org/web/20180309021655/https://developers.facebook.com/docs/facebook-login/overview/*

- **Granular Permissions**
  Facebook Login supports many permissions which determine which information people choose to share with your app. This means you have precise control over what you request and people have precise control over what they choose to approve.

- **People Have Control Over What They Share**
  Great experiences start by giving people control. With Facebook Login, people can choose which information they share with your app. They can still get the benefits of logging in with Facebook even if they feel uncomfortable granting access to certain information. Your app can later re-request this information once you’ve explained how the person’s experience will be enhanced.

- **Gradual Authorization**
  Facebook Login supports the gradual authorization—you don’t have to request all the information you want up front—you can do it over time. This means people can quickly and easily create accounts in your app—and as their experience with your app deepens, you can request addition information to further enhance their experience.

*Figure 13 - Facebook Login Overview (extract) dated June 10, 2019 (https://developers.facebook.com/docs/facebook-login/overview)*
Permissions Reference - Facebook Login

Each permission has its own set of requirements and suggested use cases. All these permissions, except the default, public_profile, require that you have Client OAuth Login enabled for your app on the Facebook Login tab of your app dashboard.

Basic permissions, (public_profile, user_friends, and email) do not require Review, but all other permissions do.

Please see the details for each permission to learn more about how to use it in your app. Remember, all use of these permissions are subject to our Platform Policies and your own privacy policy.

User Data

Read Permissions - User Attributes
- email
- public_profile
- read_custom_friendlists
- user_about_me
- user_birthday
- user_education_history
- user_friends
- user_hometown
- user_location
- user_relationship_details
- user_relationships
- user_religion_politics
- user_work_history

Read Permissions - User Activity
- user_actions.books
- user_actions.fitness
- user_actions.music
- user_actions.news
- user_actions.video
- user_games_activity
- user_likes
- user_photos
- user_posts
- user_tagged_places
- user_videos
- user_website

Read Permissions - User Events and Groups
- user_events
- user_managed_groups

Figure 14 – Permissions Reference Facebook Login (extract) dated February 20, 2018 retrieved at https://web.archive.org/web/20180220185752/https://developers.facebook.com/docs/facebook-login/permissions

Regarding the granular permissions that are granted before and after the Cambridge Analytica Scandal, we can compare the Facebook Login Permissions Reference dated February 20, 2018 (see figure 14) with the version of the same document dated June 20, 2019 (see figure 15) and see how the permissions that can be acquired after a successful app review have been sensibly reduced and a focus has been put on information related to groups activities (groups_access_member_info/ publish_to_groups) mirroring the shift from individual users to groups I have discussed in Chapter 4 when analyzing the Facebook Manifesto.
User Data

- Default Public Profile Fields
- email
- groups_access_member_info
- publish_to_groups
- user_age_range
- user_birthday
- user_events
- user_friends
- user_gender
- user_hometown
- user_likes
- user_link
- user_location
- user_photos
- user_posts
- user_tagged_places
- user_videos

Figure 15 - Permissions Reference Facebook Login (extract)
dated June 10, 2019 (https://developers.facebook.com/docs/facebook-login/permissions)

As regards the app review process, the declared aim of the review is “to help people feel in control of how [the third party] app is using their data” and the specified criteria are “utility” – in order to “clearly improve the user experience” – and “visibility” since “data gained from the permission needs to be tied to a direct use” (https://developers.facebook.com/docs/facebook-login/review/what-is-login-review). In addition, all integrations must follow Facebook Policies and Best Practices and it is exactly in this last section that the main changes have occurred after the data scandal and the enactment of the European General Data Protection Regulation. Indeed, as it is possible to see when comparing figure 16 with figure 17, the “tips and considerations” offered to developers to

Facebook Login Best Practices

The onboarding experience is one of the most important user experiences in your app. Facebook Login lets people start using your app quickly and easily, and they’ll enjoy more personalized and meaningful experiences.

In this doc, we offer some tips and considerations to optimize your login flow. A high-quality onboarding experience can lead to conversion rates above 60%.

1. Prompt people to log in at the right time.
2. Only ask for the permissions you need.
3. Ask for permissions in context and explain why.
4. Use the button that comes with your SDKs.
5. Avoid having people log in from a WebView.
6. Provide a way to log out.
7. Test and measure.
8. Follow the Facebook Platform Policy.
9. Submit your app for Login Review.

Figure 16 - Facebook Login Best Practices (extract) dated March 9, 2018 retrieved at https://web.archive.org/web/20180309020736/https://developers.facebook.com/docs/facebook-login/best-practices

“optimize the login flow” have increased as they are twelve instead of nine and among these we find the “data deletion request callback” (see figure 18) that provides a “way for people to request [apps] to delete data [they] have from
Facebook about them”. In the example provided, the “example app’s data access” states that the app may still have access to info that have been previously shared but cannot make additional requests for private info. Such a sentence outlines the dynamic process of data access highlighted when discussing the UML sequence diagram according to which the application can potentially access users’ protected resources in subsequent time intervals without signaling it to them as it has already been granted the permission, thus, even if the user requests to delete all the data, it is very unlikely that the information that has been already shared will be canceled.

Checklist

In this doc, we offer some tips and considerations to optimize your login flow. A high quality onboarding experience can lead to conversion rates above 80%.

1. Prompt people to log in at the right time.
2. Only ask for the permissions you need.
3. Ask for permissions in context and explain why.
4. If you don’t use the Facebook SDKs, regularly check whether the access token is valid.
5. If data access for someone has expired, put them through the reauthorization flow.
6. Use the button that comes with our SDKs.
7. Avoid having people login from a WebView.
8. Provide a way to log out.
10. Follow the Facebook Platform Policy.
11. Implement a Data Deletion Callback
12. Submit your app for App Review.

Figure 17 - Facebook Login Best Practices dated June 10, 2019
(https://developers.facebook.com/docs/facebook-login/best-practices)
Data Deletion Request Callback

Facebook app settings provides a way for people to request your app to delete the data it has from Facebook about them.

This generates a POST with a signed request that is sent to your app. The signed request contains an app-scoped ID identifying the user making the request. For an example of how to parse the request and the structure of the parsed request, see the following section.

In response to the user request, you should acknowledge receiving a user data deletion request through the technical means we provide, and provide a link and a confirmation number. The link and confirmation number must give the user access to a human-readable explanation of the status of their request, including a legitimate justification for any refusal to delete (where legitimate will vary based on jurisdiction and our case-by-case interpretation of our policy as it relates to their stated reasons).

As far as the relationship between the social media platform and the third-party apps is concerned, it is in the section “things you should know” of the Facebook platform policy (https://developers.facebook.com/policy), that we learn how app developers will ‘pay’ for the authentication and authorization service. They will pay for it both in terms of data sharing (“1. We can analyze your app, website, content, and data for any purpose, including commercial”, emphasis added) and of ‘idea sharing’ (“9. We can create apps or products that offer features and services similar to your app”, emphasis added) with the relationship of power made clear at the language level by the highest degree of possibility expressed by the modal verb and granted to the social media, here represented by means of a non-inclusive collective pronoun. In the same section, it is made clear that they do not “guarantee that Platform will always be free” and that the offer terms “may change at any time without prior notice”, so app developers are invited to “check them regularly”. These are all markers of the deep power asymmetries that lie at the core of the political economy of platforms between the social media, its users but also its partners as I have
discussed earlier in this chapter and as it has been stated recently by scholars
in the field of Platform Studies (Nieborg and Poell 2018; Nieborg and Helmond
2019). Indeed, the infrastructuralization of the social media, which has been
going on since the launching of the Facebook for Developers platform, has
made its position dominant from an economic and a technological point of view.
The absence of reference to this core foundational mechanism in the Wall
Street Journal article analyzed at the beginning of the section and dedicated
to the explanation of the business model seems to be an elusion that has the
aim of making the process opaquer rather than clearing it to generalist
audience.

6.5. Summary
The aim of the chapter has been to answer the third research question on how
to introduce the technological dimension of mediational means into the critical
multimodal analysis of Facebook. I have done this through the application of
the framework presented in Chapter 3 that integrates socio-semiotic and
multimodal analysis with basic concepts of software architecture to the
investigation of one of Facebook’s central tools, that is the social media
authentication service Facebook login. The service has been chosen since it
lies at the core of the digital architecture of the social media and is deeply
intertwined with its economic dimension too. Indeed, the Login service can be
considered a semiotic entry point in the social media data infrastructure, which
is the heart of its multisided business structure, but also the ‘Trojan horse’ that
has been exploited for the collection of users’ data in the context of the
Cambridge Analytica Scandal. In detail, I have compared two versions of the
service, namely, the version before the Cambridge Analytica Scandal, which
was active from April 2014 to March 2018 and the one inaugurated in March
2018. I have highlighted the processes that are activated when a user selects
the service both in terms of the contents and of the relationships among the
participants to the exchanges (the end user, the social media platform and the
third-party website/application).

From the exploration of the front-end interfaces, it has emerged that when
an app has access to many more data than the default ones, the information
is usually to be found in the app privacy policy and looked for, as in the case
of the Candy Crush Saga here analyzed. Moreover, the role of the collectors is rhetorically backgrounded while the user is semiotically realized as a DOER, and her role is foregrounded and empowered. When the analysis has been extended to the third and the fourth layers of the framework, it has stemmed out that the process of authentication and of authorization is dynamic as applications can potentially access users’ protected resources in subsequent time intervals thus having access to an evolving set of data. Indeed, the social media service supports granular permissions which, before the data scandal, were advertised to developers as a way to monetize their apps and, on the side of the platform, to increase and expand its interoperability. Finally, from the analysis of the API documentation, it has come up that the kind of relationship that exists between the platform and the third-party app developers is unbalanced and that the developers pay for the service both in terms of data sharing and in terms of the sharing of ideas as Facebook can create apps or products that offer features and services similar to the reviewed app. I argue that my multi-layered framework assists in the critical analysis as it enables the investigation of technical documents and digital artifacts that critical discourse analysts do not usually take into account in their studies. Moreover, I maintain that the sole study of the front-end interface would have not been sufficient to shed light on the processes that are going on and on the power relationships among all the participants as they are realized at the level of software encoding and made clear in its specialized documentation.

The critical analysis of the tool has been realized in the context of a broader exploration of the company’s evolution in the age of mobile media and of the related political economy of the platformization process starting from Facebook’s 2018 Annual Report. The political economy and the mobile advertising revenue model are strictly linked to the architectural structure of the social media as a multisided platform to which the authentication service acts as one its main semiotic entry points. Indeed, since 2007 when the company launched its Development Platform, the company has taken significative steps in its outward expansion both by opening up to third-party developers and by expanding its marketing partners ecosystem. In this scenario, the development of socially integrated apps is functional to the expansion of data collection and the gathering of users’ data is fundamental to
advertising-business platforms as Zuckerberg clearly explained to the investors in 2012.

I maintain that the understanding of such a technological ecosystem is not only a requisite for a deeper understanding of the social media business model, but is also crucial for the critical analysis of the self-representation that Facebook gives regarding its business. Indeed, in the article published by the Wall Street Journal in January 2019 where Mark Zuckerberg illustrates Facebook’s business model and the principles that underpin it to a global generalist audience there is no reference to the ad-based revenue model in the mobile eco-system (2019a). In the paper, targeted advertising is narrated as a process which has not been invented by social media and one where the only participants who are charged are the advertisers that pay for their ads to be shown. However, the explanation omits any discussion of the mediating and modulating mechanism which lies at the core of Facebook’s ad revenue model and its programmable digital architecture which has been highly implicated in the scandals over the misappropriation and abuse of users’ data. The study of the connections between the technological and the economic aspects of the social media platform has been fundamental in identifying such a crucial omission, which would have otherwise passed unnoticed in a purely discursive critical investigation of the text.

The entire article is framed as an objective statement of truths, starting from its title (“The Facts About Facebook”) and, at the same time, as an ethical assertion of the system of beliefs that serves as the foundation for Facebook’s actions. From its close scrutiny, it has emerged a semantic shift which functions as a cornerstone for the entire argumentation. According to Zuckerberg, everyone should have a voice and be able to connect and, in order to serve everyone, the service offered has to be affordable or, even better, free: a condition which is enabled by advertising. The semantic shift between an affordable service and a free one is subtle but fundamental as it cuts from the debate stage reflections over the possibility of different system models, which is a discussion that has been going on since – at least – the first Hackers’ Conference in 1984 as mentioned in the previous chapter. In addition, this shift favors the conceptualization of a business model which is based on advertising revenues as the condition of possibility for the social
media enactment of free speech. It is a model that is quite far from what Habermas envisions as the actual enactment of freedom of speech since the commercial exploitation of data might be considered as a condition for “systematically distorted communication” (1980, 205) which undermines the principle of rational discourse that would be guaranteed only by the consensus produced under idealized conditions of “unconstrained communication free from domination” (ibidem) and that would give freedom of speech its fundamental content.

To conclude, from a discursive point of view, in order to study the nature of the platform that Zuckerberg describes as “the social infrastructure for the global community of tomorrow” (see chapter 4), it is fundamental to understand its business model and the business model is based on interoperability and on the multisided role as data infrastructure with most of the revenues coming from mobile advertising. All these elements appear to be absent from the description that Zuckerberg gives in his Wall Street journal article the aim of which was to explain the social media business model to the public after the scandals. Such an omission seems to suggest the desire to avoid, despite his declared intentions, any explanation of the actual mechanism which is the basic source of revenue for the social media. I maintain that the combination of multimodality with Platform Studies has been central to the identification of this elision and can thus provide scholars with an analytical toolkit that can help in the investigation of a discourse that encompasses multiple levels, many of which are of technical nature as in the case of the Facebook Login analyzed in this chapter which can be considered one of the semiotic entry points into Facebook’s multisided data infrastructure and its business model.
CHAPTER SEVEN
DISCUSSION, IMPLICATIONS AND FUTURE DEVELOPMENTS

7.1. Introduction
The chapter begins by discussing what do the results of the three empirical chapters mean in terms of the analysis of Facebook and the reasons why these results matter. The chapter takes into account the implications of the research for the disciplines that I have drawn upon for the theoretical and methodological approach and also describes the limitations of the study. The final part of the chapter is dedicated to the potential future developments of the research and to concluding comments.

7.2. Discussion of the Results: The Ideational Layering
In a recent paper, Danny Hillis (2016) argues that our technological and institutional creations have become more complex. As we are becoming more entangled with our technologies, we are also becoming more entangled with each other. Power (physical, political, and social) has shifted from comprehensible hierarchies to less-intelligible networks. We can no longer understand how the world works by breaking it down into loosely connected parts that reflect the hierarchy of physical space or deliberate design. Instead, we must watch the flows of information, ideas, energy and matter that connect us, and the networks of communication, trust, and distribution that enable these flows. According to Hillis, unlike the Enlightenment, where progress was analytic and came from taking things apart, progress in the Age of Entanglement is synthetic and comes from putting things together.

A similar perspective has been adopted in my research where the object of the analysis has been investigated combining different approaches in order to grasp a highly articulated phenomenon which is, at least, socio-cultural, economic and technological. Indeed, the approach that I have envisioned and adopted (the implications of which I discuss later in the chapter) comes from ‘putting things together’ as it features the intermingle of Systemic Functional Linguistics, Social Semiotic Multimodal Analysis, Cultural Studies and Platform Studies. I maintain that all the components are functional to the study of a
world where socio-cultural and technological elements are deeply entangled and where, to understand the way they work, it is fundamental to take into account both the flows of information and ideas as well as the distribution networks that enable such flows. In detail, the object of this work is the study of social media platforms as socio-political entities and the main scope of the research has been to investigate the worldviews that are discursively and multimodally encoded in Facebook’s public communication as a company and in its digital architecture and tools. I have done this through a critical multimodal analysis that highlights the cultural and the technological dimensions of mediational means.

The initial part of the research aimed at investigating the discursive strategies and the main conceptual pillars around which the official communication of Facebook is developed. In addition to that, the research aimed to explore if, and to which extent, the study of the digital architecture of the social media platform and its digital tools can enrich the critical analysis of Facebook. I have described my analytical approach as a process of ‘multimodal, ideational and technological mapping’, the founding tile of which is the conceptualization of criticality as knowledge and discourse mapping. In my case study, the whole procedure has been iterative as both the ideational and the technological layerings have further deepened the critical analysis of Facebook’s self-description and self-declared worldview.

From the multimodal analysis of the rhetorical strategies of the company mission it has emerged that, primarily, Facebook defines itself as a “community enabler”. Specifically, Zuckerberg crafts for the social media the role of being an enabler in the progressive linear development of human history towards larger and more complex social infrastructures, that is from tribal societies to the global communities of tomorrow. In Zuckerberg’s institutional communication, social media are portrayed not only as social networking sites to be used for private circles only, but as platforms with a social purpose as they can strengthen the many mediating groups that bring people together and reinforce collective social values, with the very term “social” re-acquiring its original semantic declination of relating to society. Online communities can, thus, reinforce civic participation and contrast the deterioration of the social
fabric which has occurred since the 1970s by strengthening existing physical communities and by helping people come together on-line and off-line.

The term “community” is central to Facebook’s communication and presents a semantic ambiguity as it can be a term of digital jargon as well as a token of political language. Cultural analysis has been fundamental to explore the semantic load of the term “community” and to highlight the way it has been functionally played upon. Indeed, the term is used by Zuckerberg with reference to two broad discursive traditions: the tradition of Californian digital utopianism and that of American political discourse. In US political discourse “community” has been conceived as the cornerstone of American society since the 1830s when Tocqueville identified in the forming of associations the key to make democracy work. According to Tocqueville, the associations which spontaneously emerge in the United States represent the pre-requisite for the spreading and the maintenance of democracy since they constitute the public sphere, that is the domain of social life in which public opinion can be formed. In describing Facebook as the enabler for the global community of tomorrow, Zuckerberg rhetorically aligns himself with the American liberal tradition and frames his platform as a socio-political space where the basic freedoms are granted, above all, freedom of speech. At the same time, the term community identifies the community of practices that Facebook declares it adheres to in terms of its values, that is, the community of hackers. The rhetorical description of Facebook as a community of hackers is functional to connote the company as a flat, egalitarian, libertarian-minded community of peers where programmers make the world a better place by crafting ingenious lines of code without being constrained by established rules. At the same time, the rhetorical construction of the mission of “building the global community” is deeply imbued with US technological utopianism, that is the belief in the inevitability of progress conceptualized as technological development. Specifically, the global community is created through the digital empowerment of Facebook users who are granted tools developed by a company that claims to share the ethics and the practices of hackers. This can also be seen as a partial realization of the American ideals of freedom and liberty as the ‘hacker ethics’ that Zuckerberg refers to is a complex conceptual construct where the
ideological work of merging digital technologies and libertarian utopianism is accomplished.

In his speeches and posts, especially in the so-called Facebook manifesto (2017b), Zuckerberg’s rhetoric presents features of political discourse as the goals set for the platform are of a socio-political nature. At the same time, even if the role of Facebook in accomplishing its mission of “bringing the world closer together” is portrayed as a technical one with the creation, implementation and spreading of technological tools, the role of technology and the mediating mechanism of information sharing are backgrounded, almost made ‘transparent’ and natural while its strategic function in the development of society at a global scale is foregrounded. The final part of my research, which comprises the technological layering of critical analysis and that I deal with in the next section, is functional to investigate the social media as a technological platform and to compare its structure and business model with the liberating epistemic formation that I have discussed so far and which lies at the core of Facebook’s institutional rhetoric.

7.3. Discussion of the Results: The Technological Layering

From the ideational analysis, it has emerged that the liberating paradigm associated with digital technologies has profoundly changed in the last few years as an outcome of the so-called process of “dataification”, which is the transformation of social action into on-line quantified data. Indeed, the recent scandals which have emerged relating to the use of social media users’ data – including Facebook – have led to a discursive shift in the rhetorical paradigm of digital technologies that, from being portrayed as liberating tools, have come to be feared as instruments of surveillance, or better, are back to being feared as systems of control as they were before the advent of personal computers.

Facebook was the first social networking site to turn into a platform by launching in 2006 a service for developers and allowing programmers to create tools thus becoming the center of an ecosystem of artifacts and relationships. Such an architecture is deeply intertwined with a business model that is based on advertising and where third-party developers and advertisers pay Facebook to leverage users’ data. In the third empirical chapter, I have dealt with Facebook’s business model and its relationship with the architecture of
Facebook as a platform through the analysis of a corpus of texts that comprise tools and technical documentation. The analysis focused on one of Facebook’s central tools, that is the social media authentication service Facebook login. The service was chosen because it lies at the heart of its multisided business and digital structure, but also because it was exploited as a ‘Trojan horse’ for the collection of users’ data in the context of the Cambridge Analytica Scandal. The critical analysis of the tool was realized in the context of a broader exploration of the company’s evolution in the age of mobile media.

The understanding of such a technological ecosystem has been fundamental to shed light on the processes that are going on, or on the power relationships among all the participants as they are realized at the level of software encoding and made clear in its specialized documentation. Moreover, it was crucial for the critical analysis of the self-representation that Facebook gives regarding its business. Indeed, comparing the results of the technological layering with the article published by the Wall Street Journal in January 2019, where Mark Zuckerberg aims to describe to a generalist audience Facebook’s business model after the data scandals framing it as an objective statement of truths, it has emerged that the targeted advertising process is explained only partially and that the discussion of the mediating and modulating mechanism which lies at the core of Facebook’s ad revenue model and its programmable digital architecture is omitted.

Moreover, in the same speech, Zuckerberg presents advertising as the enabler of an affordable, or even better, ‘free’ access to social media. This shift favors the conceptualization of a model which is based on advertising revenues as the condition of possibility for the social media enactment of free speech and for the participation in what is presented as the global (digital) public sphere of tomorrow where people can discuss matters of mutual concern as peers. Such an involvement in the public sphere is functional to the creation of a politically relevant public opinion which is seen as a locus for limiting the power of the state. Indeed, the importance of civil society is deeply connected with the idea of democratization as, in Habermas’s view (1989), it is through civil society that people are able to come together to debate in order to reach a consensus. Facebook’s advertising business model appears to be quite distant from what Habermas envisions as the actual enactment of
freedom of speech since the commercial exploitation of data by Facebook might be considered as a condition for “systematically distorted communication” (1980, 205). This undermines the principle of rational discourse, which would be guaranteed only by a consensus that was produced under idealized conditions of “unconstrained communication free from domination” (ibidem) and which would give freedom of speech its fundamental content.

7.4. Implications of the Research

The originality of the research approach of this thesis, which I define a ‘multimodal ideational and technological process of mapping’, is twofold as it lies in putting the concept of culture back in focus in Discourse Analysis and in adding to CDA a more material, in this case, technological perspective. Indeed, the theoretical and methodological framework that I have envisioned for the study of social media platforms features a combination of the multimodal study of the worldviews that are discursively encoded in their public communication with the diachronic exploration of the main epistemic formations that lie at the core of their institutional communication and the critical analysis of the architecture of the digital platforms.

From a theoretical point of view, the framework presented insights from Critical Discourse Analysis, Multimodality from a Socio-semiotic perspective, American Cultural Studies and Platform Studies. Its main pillar is the notion of criticality as a process of “mapping” the ways in which meanings are encoded into texts and how these texts contribute to the discursive mediation of society and culture (Pennycook 2001; O'Regan 2006). I have chosen this approach as I agree with Poynton (1993) and Pennycook (2001) when they affirm that the critical approaches to texts can overcome the structuralist scope of Applied Linguistics which has narrowed the scope of Linguistics largely to the internal workings of language. Linguistics has somehow failed to register the linguistic turn that was asking different kinds of questions about language as a sociocultural phenomenon. In line with this perspective, I wish to argue that Linguistics, and more broadly, multimodality are technologies for understanding how the representations constituting discourses are actually constructed. My approach can be positioned in the wake of the tradition inaugurated by Hodge and Kress in 1979 which constitutes the first account of
conceptualizing Linguistics in Whorfian terms as the theoretical and methodological framework for the analysis of culture. Indeed, I maintain – alongside Poynton and Lee (2000) and Threagold (2003) – that Linguistics and more broadly Multimodality can offer a textual metalanguage for Cultural Studies even if Cultural Studies have never truly engaged with Discourse Analysis. The aim is to deepen the understanding of what Halliday defined as the “context of culture” which has been ‘sidelined’ by the more sociological notion of the “context of situation” either in Systemic Linguistics or in Multimodality. It did occur probably because, before the advent of globalization, the social contexts were more homogeneous in cultural terms, while contemporary scenarios are characterized by interrelated yet disjunctive global cultural flows that need to be taken into account when discussing about “ideoscapes”, “mediascapes” and “technoscapes” (Appadurai 1996).

Indeed, many systemic functional analyses (as well as many multimodal analyses) feature a problem that Poynton (1993, 13) describes as “the problem of the singularity of text(s)”, that is the fact that they privilege synchrony over diachrony and in so doing fail to deal with both the context and the provenance of the context of the discourses mobilized in texts. To overcome this problem and to reach the goal of exploring the context of culture that I interpret, along with Geertz (1973), as a “semiotic system”, I have proposed to integrate the multimodal analysis of Facebook with the strand in American Cultural Studies influenced by Media Studies and Cultural Anthropology. As noted in Chapter 3, Geertz’s notion of culture has been criticized for its abstraction from the social-historical circumstances in which texts are produced, transmitted and received. In my framework I have addressed this criticism by strongly focusing on the diachronic contextualization of the documents and by adopting a socio-semiotic according to which meaning making as is a motivated social process. Methodologically, from American Cultural Studies, my framework has borrowed the techniques of “textual criticism” that are used to investigate such a complex nexus of communication, culture and historical perspective. Indeed, in my ideational mapping, I have adopted the methodological combination of the synchronic analyses of texts and of the diachronic exploration of the ideational roots of such texts in order to investigate the cultural and political work of the social media as artifacts and socio-political actors.
The last step of the process of multimodal mapping is given by what I have defined a ‘technological layering’, which takes into account the technological nature of the social media platform through the analysis of its digital architecture leveraging on basic concepts from Information Theory. This ‘vertical’ dimension of analysis was theoretically based on the integration of Social Semiotics with the technical-material perspective of Platform Studies and has been functional to investigate the mediating and modulating mechanism which lies at the core of Facebook’s programmable digital architecture and ad revenue model I have described in the previous section. Indeed, the processes of semantic and technological layering proposed by the model of this thesis can be descriptive or inform the critical analysis of discourse. In my case study, the whole procedure has been iterative as both the semantic and the technological layering have further deepened the critical analysis of Facebook as a social media platform.

7.5. Limitations of the Research

The critical analysis of discourse which is proposed in the present thesis could have benefited from the combination with a social scientific method such as ethnography, as ethnography can “illuminate multiple aspects of a social practice both synchronically (at the time of the fieldwork) and historically” (Chouliaraki and Fairclough 1999, 62), especially as regards the investigation of the discursive practices of hacker communities. However, the methodological approach of this thesis does not feature such an integration, as it is primarily a textual investigation, even if the work of cultural anthropologists has been an invaluable second source of information regarding the practices and the beliefs of hacker communities.

Another limitation of this thesis lies in the balance given to the two main paradigms related to digital technologies since the paradigm which sees digital technologies as enfranchisement tools is explored in its diachronic evolution over an arc of about five decades, while the paradigm shift is investigated only through its more recent manifestations. This is due to the fact that it is quite an emerging paradigm. However, if I were to collect the data for Corpus B again (Chapter 5), I might incorporate into the research additional texts in order to put more in focus the process of the shaping of the new paradigm.
In this thesis, the use of basic notions from Information Theory has been functional to the exploration of the architecture of the platforms, which contributes to the meaning making process of semiotic artifacts that are technically mediated by social media platforms. The technical analysis of the Facebook platform (Chapter 6) focused on the organization of information at the level of API documentation, on technical formal language such as UML (Unified Modeling Language) and on the web services descriptors combining tools from Applied Linguistics, Multimodality and System Architecture. However, since the source code of the platform is not public, a further step, with the assistance of an IT specialist, could have been to apply tools from coding analysis and reverse engineering to the social semiotic and critical analysis at the system architecture level.

7.6. Future Developments

The link between technology and socio-political values that have been discussed throughout the present thesis is clearly stated by Zuckerberg in the speech (2019b) that he gave at the Georgetown University in October 2019, where he connects his technological platform with American liberalism and its values. He warns the audience about the future of the global internet as follows:

China is building its own internet focused on very different values, and is now exporting their vision of the internet to other countries. Until recently, the internet in almost every country outside China has been defined by American platforms with strong free expression values. There’s no guarantee these values will win out. A decade ago, almost all of the major internet platforms were American. Today, six of the top ten are Chinese.

I envision a two-fold future development of my research based on the model here proposed. On the one hand, I argue that my framework, combining as it does a critical multimodal approach with the material analyses of platforms and with a cultural analysis based on the diachronic investigation of sources, could offer a valuable resource for the study of other social media platforms such as the emergent Chinese video-sharing social-networking service TikTok. Using this model, it would be possible to investigate the articulation of TikTok’s public communication and declared values and to compare them with the semiotic
and material realization of their digital artifacts and tools. Further, I believe that the technological layering component of the model could be useful in enriching the digital literacy competences as well as the critical awareness of users. I see, as one of its future applications, the integration of skills emerging from the model in the *Common Framework of Reference for Intercultural Digital Literacies* (Sindoni *et al.*, 2019) which I have been developing with other colleagues in the context of a project funded by the European Union during the last three years.

7.7. Concluding Comments

The model of "multimodal ideational mapping" proposed in this thesis can be a fruitful lens when dealing with the contemporary global cultural flows as it does not deal only on the punctual analysis of selected texts and their contexts of situation, but puts in focus the broader and heteroglossic context of cultural discourses the texts engage with. The use of this model has strengthened the multimodal analysis of Facebook’s worldview as it has helped define the semantic extension of key passages of the social media public communication as it is encoded in the analyzed texts by highlighting the heteroglossic relationships between the discursive practices under scrutiny and those that function as the context, both cultural and situational, which they engage with. Moreover, I argue that the framework here proposed constitutes an original contribution in the socio-semiotic area of the study of digital discourse which has up to now been concerned predominantly with texts types and interactions, rather than directly with the mediational technologies themselves. Only recently has there been an emerging focus on the study of software as Semiotic Technology, the aim of which is to investigate both the technological resources for meaning making provided by digital products and the socio-cultural norms that are encoded within them. The model for technological layering in the multimodal analysis of digital discourse that I have proposed here integrates the analysis of social media interfaces and of the communicative/textual practices they favor with that of their digital architecture and tools. I believe that this model can enrich both the descriptive analysis of the processes of meaning making of artifacts that are mediated by social media platforms, and also inform the critical investigation of social media by
including within such enquiry an investigation of the digital architecture of platforms. As David Berry (2011) affirms, looking at computer code is difficult, due the high technical skills required of the researcher. However, we need to become more adept at reading computer code in order to fully understand the translation involved in the technical mediation provided by software. In the words of Bogost and Monfort, “the scholars we need most in digital media are those who bring nuanced cultural analysis to bear on computer systems” (2009, 5). This thesis is a contribution to that ambition.
Hey everyone! Thanks for coming out to our first ever Facebook Community Summit! It’s great to be here in Chicago where there’s so much great work building community.

Before we get started, I want to introduce myself. I’m Mark, and I’m a member of the Zuckerberg family group. I’m also a member of Max’s Circle, which is like our family group except we all just share cute photos of my daughter doing ridiculous things.

I’m a member of five groups for people who like the same kind of dog. That’s my dog. His name is Beast. He’s a Puli. He’s basically a walking mop, except he makes things dirtier, not cleaner. And it turns out there are thousands of dogs just like him.

Not that many people know this, but I’m also an admin of a group for people who love the game Civilization. I have to screen a bunch of requests from people who don’t actually play the game, so I know what you all go through.

Some communities are more serious. We created a group to support my dad, who is recovering from heart surgery. Dad, if you’re watching this, we’re all sending you love and praying for a quick recovery. I’ll see you when I’m back home in a few days.

All of you with us today have built some of the strongest communities on Facebook. You’ve built communities for new moms and dads, for helping kids get into college. One of the leaders here today, Derek Hooker, runs a group of locksmiths. Derek, where are you? Being a locksmith can be lonely, so your group gives them a sense of community. And when your members heard we were hosting a community summit, dozens of them wrote us saying we had to invite you. I’m glad you’re here with us.

As I’ve sat down with some of you, I keep hearing the same themes. You’ve all been thrust into unexpected leadership positions. You started a group you care about, and now thousands of people depend on you to keep that community strong.

I can relate to this. I started Facebook to connect my college. I always thought one day someone would connect the whole world, but I never thought it would be us. I would have settled for connecting my whole dorm. We were just college kids. But we cared so much about this idea -- that all people want to connect. So we just kept pushing forward, day by day, just like you.

Another thing that impressed me is you’re not running these groups because it’s going to look good on your resume. You’re doing it because you care about bringing people together.

A few weeks ago I met Lola Omolola. Where are you, Lola? Lola lives in Chicago and is originally from Nigeria. Two years ago, Lola founded a secret group called Female IN. She describes it as a "no-judgement support group" to give women a safe place to talk about everything from marriage to health issues to work problems. Today it has more than a million members around the world -- all women -- because one woman cared about giving them a voice.

You see, we’re all here trying to do the most good for our communities with what we’ve been given. We know how lucky we are and how much we owe it to our communities to give back.
And today I want to share with you that we’re close to a milestone for our community.

This morning I was talking to the woman in charge of growing our community, Naomi Gleit -- she’ll be here with us tomorrow. And talking about stories of leadership, Naomi joined us more than 10 years ago right out of college and has worked her way up to leading this big part of Facebook. This morning we’re talking and she says: “Mark, we’re getting close to our community reaching 2 billion people.” Can you believe that? It’s a great milestone, but it also means we now have an even greater responsibility.

Every day, I say to myself, I don’t have much time here on Earth, how can I make the greatest positive impact?

I know a lot of you ask yourselves the same question. It’s not always an easy question to answer. Some days I wake up and I just want to be with my daughter and teach her about the world. Some nights I go to bed and I’m not sure I made the right choices that day. I can tell you, those doubts don’t go away, no matter who you are. But every day you just get up and try to make the world a little better.

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Right now, I think the most important thing we can do is bring people closer together. It’s so important that we’re going to change Facebook’s whole mission to take this on.

For the past decade, we’ve focused on making the world more open and connected. We’re not done with that. But I used to think that if we just gave people a voice and helped them connect, that would make the world better by itself. In many ways it has. But our society is still divided. Now I believe we have a responsibility to do even more. It’s not enough to simply connect the world, we must also work to bring the world closer together.

We need to give people a voice to get a diversity of opinions out there, but we also need to build enough common ground so we can all make progress together. We need to stay connected with people we already know and care about, but we also need to meet new people with new perspectives. We need support from family and friends, but we also need to build communities to support us as well.

For the past 10 years, our mission has been to make the world more open and connected. We will always work to give people a voice and help us stay connected, but now we will do even more. Today, we’re expanding our mission to set our course for the next 10 years.

The idea for our new mission is: “bring the world closer together”.

Our full mission statement is: give people the power to build community and bring the world closer together. That reflects that we can’t do this ourselves, but only by empowering people to build communities and bring people together.

Our lives are all connected. In the next generation, our greatest opportunities and challenges we can only take on together -- ending poverty, curing disease, stopping climate change, spreading freedom and tolerance, stopping terrorism. No single group or even country can do that alone. We have to build a world where people come together to take on these big meaningful efforts.

This isn’t going to happen top down. There’s no one in the world who can snap their fingers and make this happen. People have to want it. Change starts local, when enough of us feel a sense of purpose and support in our own lives that we can start caring about broader issues too.

I always believed people are basically good. As I’ve traveled around, I’ve met all kinds of people from regular folks to heads of state, and I’ve found they almost all genuinely care about helping people.

But I’ve also found we all need to feel supported. We don’t want to feel afraid. But when we don’t feel good about lives here at home, it’s hard to care about people in other places.

Communities give us that sense that we are part of something bigger than ourselves, that we are not alone, that we have something better ahead to work for.
We all get meaning from our communities. Whether they’re churches, sports teams, or neighborhood groups, they give us the strength to expand our horizons and care about broader issues. Studies have proven the more connected we are, the happier we feel and the healthier we are. People who go to church are more likely to volunteer and give to charity -- not just because they’re religious, but because they’re part of a community.

That’s why it’s so striking that for decades, membership in all kinds of groups has declined as much as one-quarter. That’s a lot of of people who now need to find a sense of purpose and support somewhere else.

This is our challenge. We have to build a world where everyone has a sense of purpose and community. That’s how we’ll bring the world closer together. We have to build a world where we care about a person in India or China or Nigeria or Mexico as much as a person here. That’s how we’ll achieve our greatest opportunities and build the world we want for generations to come.

I know we can do this. We can reverse this decline, rebuild our communities, start new ones, and bring the whole world closer together.

... So how are we going to do this?

Today we’re going to talk about two parts of our product roadmap focused on building “Meaningful Communities”.

Most of us are part of a lot of groups in the physical world and online. The average person on Facebook is a member of about 30 groups, but if you're lucky you may have one or two that are really important to you.

The rest are casual groups like the Puli ones I’m in where I get some cute puppy photos. And those are important too, but they’re not exactly part of my social support structure.

We found more than 100 million people are members of what they call “meaningful communities”. These are groups that upon joining, quickly become the most important part of your social network experience and an important part of your real world support structure.

If you’re diagnosed with a rare disease, you can join a group and connect with people with that condition all around the world so you’re not alone. If you’re a new parent, you can join a group and get support from other new mothers and fathers. These communities don’t just interact online. They hold get-togethers, organize dinners, and support each other in their daily lives.

Online communities strengthen physical communities by helping people come together online as well as offline, even across great distances.

So I started asking the question: if 2 billion people use Facebook, then how come we’ve only helped 100 million of them join meaningful communities?

Well, it turns out most people don’t seek out communities in the physical world or online. Either your friends invite you or on Facebook we suggest them for you. So we started a project to see if we could get better at suggesting groups that will be meaningful to you. We started building artificial intelligence to do this. And it works! In the first 6 months, we helped 50% more people join meaningful communities. And there’s a lot more to do here.

So now we’re setting a goal -- to help one billion people join meaningful communities.

If we can do this, it will not only turn around the whole decline in community membership we’ve seen for decades, it will start to strengthen our social fabric and bring the world closer together.

... But AI can only get us so far because in order to suggest meaningful communities, there have to be communities for you to join in the first place. And that’s why you, the community leaders, are so important to this mission.

As I’ve traveled around and learned about different places, one theme is clear: every great community has great leaders.
Think about it. A church doesn’t just come together. It has a pastor who cares for the well-being of their congregation, makes sure they have food and shelter. A little league team has a coach who motivates the kids and helps them hit better. Leaders set the culture, inspire us, give us a safety net, and look out for us.

Every one of you does this for your communities. That’s why your groups mean so much to your members.

One of the most impressive communities I’ve seen is the military. On one of my visits, they shared a leadership principle I’ll never forget. They call it 100% ownership. If they have 5 people on a team, each person isn’t just responsible for one-fifth of the problem. Every person is responsible for 100% of the mission.

I’ve tried to bring this to Facebook. We have a saying: “nothing at Facebook is someone else’s problem”. If you see something wrong, you go fix it.

You all embody this spirit for your communities. You’ve said nothing is someone else’s problem when it comes to looking out for your members.

Laurie McMonigle is here. Where are you, Laurie? Laurie runs a group for disabled veterans that fills gaps our government misses. One veteran who was about to have his electricity shut off posted in the group asking for help and members came together to help him pay his bills.

Pamela Radisek is here too. Where are you, Pamela? Pamela runs a group called “I Am Adopted.” Your group helps adopted children find their birth parents, and the group members have helped reunite a number of families.

Great communities have great leaders. If we want the world to be filled with communities like the ones you’re all building, we need to give more leaders the power to build communities like you.

Historically, that’s not how we’ve set up groups on Facebook. Groups have been pretty flat where everyone is a peer — and that makes sense when you’re talking about a family group that doesn’t really have a leader. But it doesn’t make sense when you’re trying to run a group with thousands of people.

Matt Prestbury is here. Where are you, Matt? Matt runs a group for black fathers out of Baltimore. Matt, you told me you spend a couple hours a day starting discussions and approving or denying every post and membership request himself -- on top of your regular job as a preschool teacher.

One of you told me your husband often comes home from work and can tell you’ve been working on the couch in the living room since the morning -- which I can relate to, by the way.

All of you make sacrifices for your communities because you believe in what you’re doing. And I want you to know we believe in what you’re doing too.

So today we’re going to start rolling out new tools to make it easier for you to build communities. There’s a clear roadmap here, like what we’ve done with Page and Events admins.

First, we’re going to give you new tools that offer insights into who your members are and how they’re engaging -- insights into things like join requests and the time of day your members are most active.

So if you run a group for new moms, maybe that’s 1am, and 3am, and 5am. We’re about to have another daughter so I’m going to have to get back on that schedule.

And of course we have new tools for managing new member requests. You’re going to be able to sort and filter requests by location and gender, and group them together so you can accept or decline them all at once. That’s going to save you a lot of time!

And we’re going to help you remove bad actors and their content quickly to keep a positive and safe environment. This is really important.

In the next couple of days, you’re going to hear more about our roadmap and our research on what makes meaningful communities. Because if we’re going to bring
the world closer together, we need to support people like you who are already
doing it. And we need to give that power to more people too.

... When you bring people together, you never know where it will lead.
Remember when I told you about Lola’s women’s support group that now has 1 million
members around the world?
When I sat down with Lola, she told me for some girls growing up in Nigeria, if you
talk out of turn, your mom will pinch you and tell you to be quiet. You start to feel
like there’s something wrong with you if you speak up.
Now her community is helping break this culture of silence -- and it’s having
unexpected consequences on issues like domestic violence.
Lola told me that, for some Nigerian women like her, this silence results in them
enduring abuse. But now, when someone posts about it in the group, they get
thousands of messages of support, offers of places to stay and childcare within
minutes.
Lola didn’t start out trying to change the culture of domestic violence around the world.
She just wanted to give women a place to talk safely about what mattered to them.
That’s the power of the communities you’re building. You may think you’re just
creating a space for new moms, or bird watchers, or locksmiths. But when you give
people a way to connect and a sense of support, it can lead to important changes.
We all have the power to be leaders. And if enough of us work to build community
and bring people closer together, we just might change the world.
Thank you for coming out today. Thank you so much for all you do for your
communities and for the world. It’s an honor to be on this mission with you, and I’m
looking forward to doing this together.
Text 2

*Building Global Community*
Zuckerberg, Mark, February 16, 2017

To our community,

On our journey to connect the world, we often discuss products we’re building and updates on our business. Today I want to focus on the most important question of all: are we building the world we all want?

History is the story of how we’ve learned to come together in ever greater numbers -- from tribes to cities to nations. At each step, we built social infrastructure like communities, media and governments to empower us to achieve things we couldn’t on our own.

Today we are close to taking our next step. Our greatest opportunities are now global -- like spreading prosperity and freedom, promoting peace and understanding, lifting people out of poverty, and accelerating science. Our greatest challenges also need global responses -- like ending terrorism, fighting climate change, and preventing pandemics. Progress now requires humanity coming together not just as cities or nations, but also as a global community.

This is especially important right now. Facebook stands for bringing us closer together and building a global community. When we began, this idea was not controversial. Every year, the world got more connected and this was seen as a positive trend. Yet now, across the world there are people left behind by globalization, and movements for withdrawing from global connection. There are questions about whether we can make a global community that works for everyone, and whether the path ahead is to connect more or reverse course.

This is a time when many of us around the world are reflecting on how we can have the most positive impact. I am reminded of my favorite saying about technology: “We always overestimate what we can do in two years, and we underestimate what we can do in ten years.” We may not have the power to create the world we want immediately, but we can all start working on the long term today. **In times like these, the most important thing we at Facebook can do is develop the social infrastructure to give people the power to build a global community that works for all of us.**

For the past decade, Facebook has focused on connecting friends and families. With that foundation, our next focus will be developing the social infrastructure for community -- for supporting us, for keeping us safe, for informing us, for civic engagement, and for inclusion of all.

Bringing us all together as a global community is a project bigger than any one organization or company, but Facebook can help contribute to answering these five important questions:

- How do we help people build **supportive communities** that strengthen traditional institutions in a world where membership in these institutions is declining?
- How do we help people build a **safe community** that prevents harm, helps during crises and rebuilds afterwards in a world where anyone across the world can affect us?
- How do we help people build an **informed community** that exposes us to new ideas and builds common understanding in a world where every person has a voice?
• How do we help people build a **civically-engaged community** in a world where participation in voting sometimes includes less than half our population?

• How do we help people build an **inclusive community** that reflects our collective values and common humanity from local to global levels, spanning cultures, nations and regions in a world with few examples of global communities?

My hope is that more of us will commit our energy to building the long term social infrastructure to bring humanity together. The answers to these questions won’t all come from Facebook, but I believe we can play a role.

Our job at Facebook is to help people make the greatest positive impact while mitigating areas where technology and social media can contribute to divisiveness and isolation. Facebook is a work in progress, and we are dedicated to learning and improving. We take our responsibility seriously, and today I want to talk about how we plan to do our part to build this global community.

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**Supportive Communities**

Building a global community that works for everyone starts with the millions of smaller communities and intimate social structures we turn to for our personal, emotional and spiritual needs.

Whether they’re churches, sports teams, unions or other local groups, they all share important roles as social infrastructure for our communities. They provide all of us with a sense of purpose and hope; moral validation that we are needed and part of something bigger than ourselves; comfort that we are not alone and a community is looking out for us; mentorship, guidance and personal development; a safety net; values, cultural norms and accountability; social gatherings, rituals and a way to meet new people; and a way to pass time.

In our society, we have personal relationships with friends and family, and then we have institutional relationships with the governments that set the rules. A healthy society also has many layers of communities between us and government that take care of our needs. When we refer to our “social fabric”, we usually mean the many mediating groups that bring us together and reinforce our values.

However, there has been a striking decline in the important social infrastructure of local communities over the past few decades. Since the 1970s, membership in some local groups has declined by as much as one-quarter, cutting across all segments of the population.

The decline raises deeper questions alongside surveys showing large percentages of our population lack a sense of hope for the future. It is possible many of our challenges are at least as much social as they are economic – related to a lack of community and connection to something greater than ourselves. As one pastor told me: “People feel unsettled. A lot of what was settling in the past doesn’t exist anymore.”

Online communities are a bright spot, and we can strengthen existing physical communities by helping people come together online as well as offline. In the same way connecting with friends online strengthens real relationships, developing this infrastructure will strengthen these communities, as well as enable completely new ones to form.

A woman named Christina was diagnosed with a rare disorder called **Epidermolysis Bullosa** -- and now she’s a member of a group that connects 2,400 people around the world so none of them have to suffer alone. A man named Matt was raising his two sons by himself and he started the Black Fathers group to help men share advice and encouragement as they raise their families. In San Diego, more than 4,000 military family members are part of a group that helps them make friends with other spouses. These communities don’t just interact online. They hold get-togethers, organize dinners, and support each other in their daily lives.
We recently found that more than 100 million people on Facebook are members of what we call “very meaningful” groups. These are groups that upon joining, quickly become the most important part of our social network experience and an important part of our physical support structure. For example, many new parents tell us that joining a parenting group after having a child fits this purpose.

There is a real opportunity to connect more of us with groups that will be meaningful social infrastructure in our lives. More than one billion people are active members of Facebook groups, but most don’t seek out groups on their own -- friends send invites or Facebook suggests them. If we can improve our suggestions and help connect one billion people with meaningful communities, that can strengthen our social fabric.

Going forward, we will measure Facebook’s progress with groups based on meaningful groups, not groups overall. This will require not only helping people connect with existing meaningful groups, but also enabling community leaders to create more meaningful groups for people to connect with.

The most successful physical communities have engaged leaders, and we’ve seen the same with online groups as well. In Berlin, a man named Monis Bukhari runs a group where he personally helps refugees find homes and jobs. Today, Facebook’s tools for group admins are relatively simple. We plan to build more tools to empower community leaders like Monis to run and grow their groups the way they’d like, similar to what we’ve done with Pages.

Most communities are made of many sub-communities, and this is another clear area for developing new tools. A school, for example, is not a single community, but many smaller groups among its classes, dorms and student groups. Just as the social fabric of society is made up of many communities, each community is made of many groups of personal connections. We plan to expand groups to support sub-communities.

We can look at many activities through the lens of building community. Watching video of our favorite sports team or TV show, reading our favorite newspaper, or playing our favorite game are not just entertainment or information but a shared experience and opportunity to bring together people who care about the same things. We can design these experiences not for passive consumption but for strengthening social connections.

Our goal is to strengthen existing communities by helping us come together online as well as offline, as well as enabling us to form completely new communities, transcending physical location. When we do this, beyond connecting online, we reinforce our physical communities by bringing us together in person to support each other.

A healthy society needs these communities to support our personal, emotional and spiritual needs. In a world where this physical social infrastructure has been declining, we have a real opportunity to help strengthen these communities and the social fabric of our society.

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Safe Community

As we build a global community, this is a moment of truth. Our success isn’t just based on whether we can capture videos and share them with friends. It’s about whether we’re building a community that helps keep us safe -- that prevents harm, helps during crises, and rebuilds afterwards.

Today’s threats are increasingly global, but the infrastructure to protect us is not. Problems like terrorism, natural disasters, disease, refugee crises, and climate change need coordinated responses from a worldwide vantage point. No nation can solve them alone. A virus in one nation can quickly spread to others. A conflict in one country can create a refugee crisis across continents. Pollution in one place can affect the environment around the world. Humanity’s current systems are insufficient to address these issues.
Many dedicated people join global non-profit organizations to help, but the market often fails to fund or incentivize building the necessary infrastructure. I have long expected more organizations and startups to build health and safety tools using technology, and I have been surprised by how little of what must be built has even been attempted. There is a real opportunity to build global safety infrastructure, and I have directed Facebook to invest more and more resources into serving this need.

For some of these problems, the Facebook community is in a unique position to help prevent harm, assist during a crisis, or come together to rebuild afterwards. This is because of the amount of communication across our network, our ability to quickly reach people worldwide in an emergency, and the vast scale of people’s intrinsic goodness aggregated across our community.

To prevent harm, we can build social infrastructure to help our community identify problems before they happen. When someone is thinking of suicide or hurting themselves, we’ve built infrastructure to give their friends and community tools that could save their life. When a child goes missing, we’ve built infrastructure to show Amber Alerts -- and multiple children have been rescued without harm. And we’ve built infrastructure to work with public safety organizations around the world when we become aware of these issues. Going forward, there are even more cases where our community should be able to identify risks related to mental health, disease or crime.

To help during a crisis, we’ve built infrastructure like Safety Check so we can all let our friends know we’re safe and check on friends who might be affected by an attack or natural disaster. Safety Check has been activated almost 500 times in two years and has already notified people that their families and friends are safe more than a billion times. When there is a disaster, governments often call us to make sure Safety Check has been activated in their countries. But there is more to build. We recently added tools to find and offer shelter, food and other resources during emergencies. Over time, our community should be able to help during wars and ongoing issues that are not limited to a single event.

To rebuild after a crisis, we’ve built the world’s largest social infrastructure for collective action. A few years ago, after an earthquake in Nepal, the Facebook community raised $15 million to help people recover and rebuild -- which was the largest crowdfunded relief effort in history. We saw a similar effort after the shooting at the Pulse nightclub in Orlando when people across the country organized blood donations to help victims they had never met. Similarly, we built tools so millions of people could commit to becoming organ donors to save others after accidents, and registries reported larger boosts in signups than ever before.

Looking ahead, one of our greatest opportunities to keep people safe is building artificial intelligence to understand more quickly and accurately what is happening across our community.

There are billions of posts, comments and messages across our services each day, and since it’s impossible to review all of them, we review content once it is reported to us. There have been terribly tragic events -- like suicides, some live streamed -- that perhaps could have been prevented if someone had realized what was happening and reported them sooner. There are cases of bullying and harassment every day, that our team must be alerted to before we can help. These stories show we must find a way to do more.

Artificial intelligence can help provide a better approach. We are researching systems that can look at photos and videos to flag content our team should review. This is still very early in development, but we have started to have it look at some content, and it already generates about one-third of all reports to the team that reviews content for our community.

It will take many years to fully develop these systems. Right now, we’re starting to explore ways to use AI to tell the difference between news stories about terrorism and actual terrorist propaganda so we can quickly remove anyone trying to use our services to recruit for a terrorist organization. This is technically difficult as it requires
building AI that can read and understand news, but we need to work on this to help fight terrorism worldwide.

As we discuss keeping our community safe, it is important to emphasize that part of keeping people safe is protecting individual security and liberty. We are strong advocates of encryption and have built it into the largest messaging platforms in the world -- WhatsApp and Messenger. Keeping our community safe does not require compromising privacy. Since building end-to-end encryption into WhatsApp, we have reduced spam and malicious content by more than 75%.

The path forward is to recognize that a global community needs social infrastructure to keep us safe from threats around the world, and that our community is uniquely positioned to prevent disasters, help during crises, and rebuild afterwards. Keeping the global community safe is an important part of our mission -- and an important part of how we'll measure our progress going forward.

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Informed Community

The purpose of any community is to bring people together to do things we couldn’t do on our own. To do this, we need ways to share new ideas and share enough common understanding to actually work together.

Giving everyone a voice has historically been a very positive force for public discourse because it increases the diversity of ideas shared. But the past year has also shown it may fragment our shared sense of reality. It is our responsibility to amplify the good effects and mitigate the bad -- to continue increasing diversity while strengthening our common understanding so our community can create the greatest positive impact on the world.

The two most discussed concerns this past year were about diversity of viewpoints we see (filter bubbles) and accuracy of information (fake news). I worry about these and we have studied them extensively, but I also worry there are even more powerful effects we must mitigate around sensationalism and polarization leading to a loss of common understanding.

Social media already provides more diverse viewpoints than traditional media ever has. Even if most of our friends are like us, we all know people with different interests, beliefs and backgrounds who expose us to different perspectives. Compared with getting our news from the same two or three TV networks or reading the same newspapers with their consistent editorial views, our networks on Facebook show us more diverse content.

But our goal must be to help people see a more complete picture, not just alternate perspectives. We must be careful how we do this. Research shows that some of the most obvious ideas, like showing people an article from the opposite perspective, actually deepen polarization by framing other perspectives as foreign. A more effective approach is to show a range of perspectives, let people see where their views are on a spectrum and come to a conclusion on what they think is right. Over time, our community will identify which sources provide a complete range of perspectives so that content will naturally surface more.

Accuracy of information is very important. We know there is misinformation and even outright hoax content on Facebook, and we take this very seriously. We’ve made progress fighting hoaxes the way we fight spam, but we have more work to do. We are proceeding carefully because there is not always a clear line between hoaxes, satire and opinion. In a free society, it’s important that people have the power to share their opinion, even if others think they’re wrong. Our approach will focus less on banning misinformation, and more on surfacing additional perspectives and information, including that fact checkers dispute an item's accuracy.

While we have more work to do on information diversity and misinformation, I am even more focused on the impact of sensationalism and polarization, and the idea of building common understanding.
Social media is a short-form medium where resonant messages get amplified many times. This rewards simplicity and discourages nuance. At its best, this focuses messages and exposes people to different ideas. At its worst, it oversimplifies important topics and pushes us towards extremes.

Polarization exists in all areas of discourse, not just social media. It occurs in all groups and communities, including companies, classrooms and juries, and it’s usually unrelated to politics. In the tech community, for example, discussion around AI has been oversimplified to existential fear-mongering. The harm is that sensationalism moves people away from balanced nuanced opinions towards polarized extremes.

If this continues and we lose common understanding, then even if we eliminated all misinformation, people would just emphasize different sets of facts to fit their polarized opinions. That’s why I’m so worried about sensationalism in media.

Fortunately, there are clear steps we can take to correct these effects. For example, we noticed some people share stories based on sensational headlines without ever reading the story. In general, if you become less likely to share a story after reading it, that’s a good sign the headline was sensational. If you’re more likely to share a story after reading it, that’s often a sign of good in-depth content. We recently started reducing sensationalism in News Feed by taking this into account for pieces of content, and going forward signals like this will identify sensational publishers as well. There are many steps like this we have taken and will keep taking to reduce sensationalism and help build a more informed community.

Research suggests the best solutions for improving discourse may come from getting to know each other as whole people instead of just opinions -- something Facebook may be uniquely suited to do. If we connect with people about what we have in common -- sports teams, TV shows, interests -- it is easier to have dialogue about what we disagree on. When we do this well, we give billions of people the ability to share new perspectives while mitigating the unwanted effects that come with any new medium.

A strong news industry is also critical to building an informed community. Giving people a voice is not enough without having people dedicated to uncovering new information and analyzing it. There is more we must do to support the news industry to make sure this vital social function is sustainable -- from growing local news, to developing formats best suited to mobile devices, to improving the range of business models news organizations rely on.

Connecting everyone to the internet is also necessary for building an informed community. For the majority of people around the world, the debate is not about the quality of public discourse but whether they have access to basic information they need at all, often related to health, education and jobs.

Finally, I want to emphasize that the vast majority of conversations on Facebook are social, not ideological. They’re friends sharing jokes and families staying in touch across cities. They’re people finding groups, whether they’re new parents raising kids or newly diagnosed patients suffering from a disease together. Sometimes it’s for joy, coming together around religion or sports. And sometimes it’s for survival, like refugees communicating to find shelter.

Whatever your situation when you enter our community, our commitment is to continue improving our tools to give you the power to share your experience. By increasing the diversity of our ideas and strengthening our common understanding, our community can have the greatest positive impact on the world.

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Civically-Engaged Community

Our society will reflect our collective values only if we engage in the civic process and participate in self-governance. There are two distinct types of social infrastructure that must be built:
The first encourages engagement in existing political processes: voting, engaging with issues and representatives, speaking out, and sometimes organizing. Only through dramatically greater engagement can we ensure these political processes reflect our values.

The second is establishing a new process for citizens worldwide to participate in collective decision-making. Our world is more connected than ever, and we face global problems that span national boundaries. As the largest global community, Facebook can explore examples of how community governance might work at scale.

The starting point for civic engagement in the existing political process is to support voting across the world. It is striking that only about half of Americans eligible to vote participate in elections. This is low compared to other countries, but democracy is receding in many countries and there is a large opportunity across the world to encourage civic participation.

In the United States election last year, we helped more than 2 million people register to vote and then go vote. This was among the largest voter turnout efforts in history, and larger than those of both major parties combined. In every election around the world, we keep improving our tools to help more people register and vote, and we hope to eventually enable hundreds of millions of more people to vote in elections than do today, in every democratic country around the world.

Local civic engagement is a big opportunity as well as national. Today, most of us do not even know who our local representatives are, but many policies impacting our lives are local, and this is where our participation has the greatest influence. Research suggests reading local news is directly correlated with local civic engagement. This shows how building an informed community, supportive local communities, and a civically-engaged community are all related.

Beyond voting, the greatest opportunity is helping people stay engaged with the issues that matter to them every day, not just every few years at the ballot box. We can help establish direct dialogue and accountability between people and our elected leaders. In India, Prime Minister Modi has asked his ministers to share their meetings and information on Facebook so they can hear direct feedback from citizens. In Kenya, whole villages are in WhatsApp groups together, including their representatives. In recent campaigns around the world -- from India and Indonesia across Europe to the United States -- we’ve seen the candidate with the largest and most engaged following on Facebook usually wins. Just as TV became the primary medium for civic communication in the 1960s, social media is becoming this in the 21st century.

This creates an opportunity for us to connect with our representatives at all levels. In the last few months, we have already helped our community double the number of connections between people and our representatives by making it easier to connect with all our representatives in one click. When we connect, we can engage directly in comments and messages. For example, in Iceland, it’s common to tag politicians in group discussions so they can take community issues to parliament.

Sometimes people must speak out and demonstrate for what they believe is right. From Tahrir Square to the Tea Party -- our community organizes these demonstrations using our infrastructure for events and groups. On a daily basis, people use their voices to share their views in ways that can spread around the world and grow into movements. The Women’s March is an example of this, where a grandmother with an internet connection wrote a post that led her friends to start a Facebook event that eventually turned into millions of people marching in cities around the world.

Giving people a voice is a principle our community has been committed to since we began. As we look ahead to building the social infrastructure for a global community, we will work on building new tools that encourage thoughtful civic engagement. Empowering us to use our voices will only become more important.
Inclusive Community

Building an inclusive global community requires establishing a new process for citizens worldwide to participate in community governance. I hope that we can explore examples of how collective decision-making might work at scale.

Facebook is not just technology or media, but a community of people. That means we need Community Standards that reflect our collective values for what should and should not be allowed.

In the last year, the complexity of the issues we’ve seen has outstripped our existing processes for governing the community. We saw this in errors taking down newsworthy videos related to Black Lives Matter and police violence, and in removing the historical Terror of War photo from Vietnam. We’ve seen this in misclassifying hate speech in political debates in both directions -- taking down accounts and content that should be left up and leaving up content that was hateful and should be taken down. Both the number of issues and their cultural importance has increased recently.

This has been painful for me because I often agree with those criticizing us that we’re making mistakes. These mistakes are almost never because we hold ideological positions at odds with the community, but instead are operational scaling issues. Our guiding philosophy for the Community Standards is to try to reflect the cultural norms of our community. When in doubt, we always favor giving people the power to share more.

There are a few reasons for the increase in issues we’ve seen: cultural norms are shifting, cultures are different around the world, and people are sensitive to different things.

First, our community is evolving from its origin connecting us with family and friends to now becoming a source of news and public discourse as well. With this cultural shift, our Community Standards must adapt to permit more newsworthy and historical content, even if some is objectionable. For example, an extremely violent video of someone dying would have been marked as disturbing and taken down. However, now that we use Live to capture the news and we post videos to protest violence, our standards must adapt. Similarly, a photo depicting any child nudity would have always been taken down -- and for good reason -- but we’ve now adapted our standards to allow historically important content like the Terror of War photo. These issues reflect a need to update our standards to meet evolving expectations from our community.

Second, our community spans many countries and cultures, and the norms are different in each region. It’s not surprising that Europeans more frequently find fault with taking down images depicting nudity, since some European cultures are more accepting of nudity than, for example, many communities in the Middle East or Asia. With a community of almost two billion people, it is less feasible to have a single set of standards to govern the entire community so we need to evolve towards a system of more local governance.

Third, even within a given culture, we have different opinions on what we want to see and what is objectionable. I may be okay with more politically charged speech but not want to see anything sexually suggestive, while you may be okay with nudity but not want to see offensive speech. Similarly, you may want to share a violent video in a protest without worrying that you’re going to bother friends who don’t want to see it. And just as it’s a bad experience to see objectionable content, it’s also a terrible experience to be told we can’t share something we feel is important. This suggests we need to evolve towards a system of personal control over our experience.

Fourth, we’re operating at such a large scale that even a small percent of errors causes a large number of bad experiences. We review over one hundred million pieces of content every month, and even if our reviewers get 99% of the calls right, that’s still millions of errors over time. Any system will always have some mistakes, but I believe we can do better than we are today.

I’ve spent a lot of time over the past year reflecting on how we can improve our community governance. Sitting here in California, we’re not best positioned to identify
the cultural norms around the world. Instead, we need a system where we can all contribute to setting the standards. Although this system is not fully developed, I want to share an idea of how this might work.

The guiding principles are that the Community Standards should reflect the cultural norms of our community, that each person should see as little objectionable content as possible, and each person should be able to share what they want while being told they cannot share something as little as possible. The approach is to combine creating a large-scale democratic process to determine standards with AI to help enforce them.

The idea is to give everyone in the community options for how they would like to set the content policy for themselves. Where is your line on nudity? On violence? On graphic content? On profanity? What you decide will be your personal settings. We will periodically ask you these questions to increase participation and so you don’t need to dig around to find them. For those who don’t make a decision, the default will be whatever the majority of people in your region selected, like a referendum. Of course you will always be free to update your personal settings anytime.

With a broader range of controls, content will only be taken down if it is more objectionable than the most permissive options allow. Within that range, content should simply not be shown to anyone whose personal controls suggest they would not want to see it, or at least they should see a warning first. Although we will still block content based on standards and local laws, our hope is that this system of personal controls and democratic referenda should minimize restrictions on what we can share.

It’s worth noting that major advances in AI are required to understand text, photos and videos to judge whether they contain hate speech, graphic violence, sexually explicit content, and more. At our current pace of research, we hope to begin handling some of these cases in 2017, but others will not be possible for many years.

Overall, it is important that the governance of our community scales with the complexity and demands of its people. We are committed to always doing better, even if that involves building a worldwide voting system to give you more voice and control. Our hope is that this model provides examples of how collective decision-making may work in other aspects of the global community.

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This is an important time in the development of our global community, and it’s a time when many of us around the world are reflecting on how we can have the most positive impact.

History has had many moments like today. As we’ve made our great leaps from tribes to cities to nations, we have always had to build social infrastructure like communities, media and governments for us to thrive and reach the next level. At each step we learned how to come together to solve our challenges and accomplish greater things than we could alone. We have done it before and we will do it again.

I am reminded of President Lincoln’s remarks during the American Civil War: “We can succeed only by concert. It is not ‘can any of us imagine better?’ but, ‘can we all do better?’ The dogmas of the quiet past, are inadequate to the stormy present. The occasion is piled high with difficulty, and we must rise with the occasion. As our case is new, so we must think anew, act anew.”

There are many of us who stand for bringing people together and connecting the world. I hope we have the focus to take the long view and build the new social infrastructure to create the world we want for generations to come.

It’s an honor to be on this journey with you. Thank you for being part of this community, and thanks for everything you do to make the world more open and connected.

Mark

(emphasis in the original)
Good morning.

It is an honor to be here with you today in this grand hall...a room that represents what is possible when people of different backgrounds, histories, and philosophies come together to build something bigger than themselves.

I am deeply grateful to our hosts. I want to recognize Ventsislav Karadjov for his service and leadership. And it’s a true privilege to be introduced by his co-host, a statesman I admire greatly, Giovanni Buttafedi.

Now Italy has produced more than its share of great leaders and public servants. Machiavelli taught us how leaders can get away with evil deeds...And Dante showed us what happens when they get caught.

Giovanni has done something very different. Through his values, his dedication, his thoughtful work, Giovanni, his predecessor Peter Hustinx—and all of you—have set an example for the world. We are deeply grateful.

We need you to keep making progress—now more than ever. Because these are transformative times. Around the world, from Copenhagen to Chennai to Cupertino, new technologies are driving breakthroughs in humanity’s greatest common projects. From preventing and fighting disease...To curbing the effects of climate change...To ensuring every person has access to information and economic opportunity.

At the same time, we see vividly—painfully—how technology can harm rather than help. Platforms and algorithms that promised to improve our lives can actually magnify our worst human tendencies. Rogue actors and even governments have taken advantage of user trust to deepen divisions, incite violence, and even undermine our shared sense of what is true and what is false.

This crisis is real. It is not imagined, or exaggerated, or “crazy.” And those of us who believe in technology’s potential for good must not shrink from this moment.

Now, more than ever — as leaders of governments, as decision-makers in business, and as citizens — we must ask ourselves a fundamental question: What kind of world do we want to live in?

I'm here today because we hope to work with you as partners in answering this question.

At Apple, we are optimistic about technology’s awesome potential for good. But we know that it won’t happen on its own. Every day, we work to infuse the devices we make with the humanity that makes us. As I've said before, “Technology is capable of doing great things. But it doesn’t want to do great things. It doesn’t want anything. That part takes all of us.”

That’s why I believe that our missions are so closely aligned. As Giovanni puts it, “We must act to ensure that technology is designed and developed to serve humankind, and not the other way around.”

We at Apple believe that privacy is a fundamental human right. But we also recognize that not everyone sees things as we do. In a way, the desire to put profits over privacy is nothing new.

As far back as 1890, future Supreme Court Justice Louis Brandeis published an article in the Harvard Law Review, making the case for a “Right to Privacy” in the United States.

He warned: “Gossip is no longer the resource of the idle and of the vicious, but has become a trade.”
Today that trade has exploded into a data industrial complex. Our own information, from the everyday to the deeply personal, is being weaponized against us with military efficiency.

Every day, billions of dollars change hands, and countless decisions are made, on the basis of our likes and dislikes, our friends and families, Our relationships and conversations...Our wishes and fears...Our hopes and dreams.

These scraps of data...each one harmless enough on its own...are carefully assembled, synthesized, traded, and sold.

Taken to its extreme, this process creates an enduring digital profile and lets companies know you better than you may know yourself. Your profile is then run through algorithms that can serve up increasingly extreme content, pounding our harmless preferences into hardened convictions. If green is your favorite color, you may find yourself reading a lot of articles—or watching a lot of videos—about the insidious threat from people who like orange.

In the news, almost every day, we bear witness to the harmful, even deadly, effects of these narrowed worldviews.

We shouldn’t sugarcoat the consequences. This is surveillance. And these stockpiles of personal data serve only to enrich the companies that collect them.

This should make us very uncomfortable. It should unsettle us. And it illustrates the importance of our shared work and the challenges still ahead of us.

Fortunately, this year, you’ve shown the world that good policy and political will can come together to protect the rights of everyone. We should celebrate the transformative work of the European institutions tasked with the successful implementation of the GDPR. We also celebrate the new steps taken, not only here in Europe, but around the world. In Singapore, Japan, Brazil, New Zealand, and many more nations, regulators are asking tough questions and crafting effective reforms.

It is time for the rest of the world—including my home country—to follow your lead.

We at Apple are in full support of a comprehensive federal privacy law in the United States. There, and everywhere, it should be rooted in four essential rights: First, the right to have personal data minimized. Companies should challenge themselves to de-identify customer data—or not to collect it in the first place. Second, the right to knowledge. Users should always know what data is being collected and what it is being collected for. This is the only way to empower users to decide what collection is legitimate and what isn’t. Anything less is a sham. Third, the right to access. Companies should recognize that data belongs to users, and we should all make it easy for users to get a copy...of...correct...and delete their personal data. And fourth, the right to security. Security is foundational to trust and all other privacy rights.

Now, there are those who would prefer I hadn’t said all of that. Some oppose any form of privacy legislation. Others will endorse reform in public, and then resist and undermine it behind closed doors.

They may say to you, ‘our companies will never achieve technology’s true potential if they are constrained with privacy regulation.’ But this notion isn’t just wrong, it is destructive.

Technology’s potential is, and always must be, rooted in the faith people have in it...In the optimism and creativity that it stirs in the hearts of individuals...In its promise and capacity to make the world a better place.

It’s time to face facts. We will never achieve technology’s true potential without the full faith and confidence of the people who use it.

At Apple, respect for privacy—and a healthy suspicion of authority—have always been in our bloodstream. Our first computers were built by misfits, tinkerers, and rebels—not in a laboratory or a board room, but in a suburban garage. We introduced the Macintosh with a famous TV ad channeling George Orwell’s 1984—a warning of what can happen when technology becomes a tool of power and loses touch with humanity.
And way back in 2010, Steve Jobs said in no uncertain terms: “Privacy means people know what they’re signing up for, in plain language, and repeatedly.”

It’s worth remembering the foresight and courage it took to make that statement. When we designed this device we knew it could put more personal data in your pocket than most of us keep in our homes. And there was enormous pressure on Steve and Apple to bend our values and to freely share this information. But we refused to compromise. In fact, we’ve only deepened our commitment in the decade since.

From hardware breakthroughs...that encrypt fingerprints and faces securely—and only—on your device...To simple and powerful notifications that make clear to every user precisely what they’re sharing and when they are sharing it.

We aren’t absolutists, and we don’t claim to have all the answers. Instead, we always try to return to that simple question: What kind of world do we want to live in.

At every stage of the creative process, then and now, we engage in an open, honest, and robust ethical debate about the products we make and the impact they will have. That’s just a part of our culture.

We don’t do it because we have to, we do it because we ought to. The values behind our products are as important to us as any feature. We understand that the dangers are real—from cyber-criminals to rogue nation states. We’re not willing to leave our users to fend for themselves. And, we’ve shown, we’ll defend those principles when challenged. Those values...that commitment to thoughtful debate and transparency...they’re only going to get more important. As progress speeds up, these things should continue to ground us and connect us, first and foremost, to the people we serve.

Artificial Intelligence is one area I think a lot about. Clearly, it’s on the minds of many of my peers as well. At its core, this technology promises to learn from people individually to benefit us all. Yet advancing AI by collecting huge personal profiles is laziness, not efficiency. For Artificial Intelligence to be truly smart, it must respect human values, including privacy. If we get this wrong, the dangers are profound.

We can achieve both great Artificial Intelligence and great privacy standards. It’s not only a possibility, it is a responsibility. In the pursuit of artificial intelligence, we should not sacrifice the humanity, creativity, and ingenuity that define our human intelligence.

And at Apple, we will.

In the mid-19th Century, the great American writer Henry David Thoreau found himself so fed up with the pace and change of Industrial society that he moved to a cabin in the woods by Walden Pond. Call it the first digital cleanse. Yet even there, where he hoped to find a bit of peace, he could hear a distant clatter and whistle of a steam engine passing by. “We do not ride on the railroad,” he said. “It rides upon us.”

Those of us who are fortunate enough to work in technology have an enormous responsibility.

It is not to please every grumpy Thoreau out there. That’s an unreasonable standard, and we’ll never meet it. We are responsible, however, for recognizing that the devices we make and the platforms we build have real...lasting...even permanent effects on the individuals and communities who use them. We must never stop asking ourselves...What kind of world do we want to live in? The answer to that question must not be an afterthought, it should be our primary concern. We at Apple can—and do—provide the very best to our users while treating their most personal data like the precious cargo that it is. And if we can do it, then everyone can do it. Fortunately, we have your example before us.

Thank you for your work...For your commitment to the possibility of human-centered technology...And for your firm belief that our best days are still ahead of us. Thank you very much.
Facebook turns 15 next month. When I started Facebook, I wasn't trying to build a global company. I realized you could find almost anything on the internet -- music, books, information -- except the thing that matters most: people. So I built a service people could use to connect and learn about each other. Over the years, billions have found this useful, and we've built more services that people around the world love and use every day.

Recently I've heard many questions about our business model, so I want to explain the principles of how we operate.

I believe everyone should have a voice and be able to connect. If we're committed to serving everyone, then we need a service that is affordable to everyone. The best way to do that is to offer services for free, which ads enable us to do.

People consistently tell us that if they're going to see ads, they want them to be relevant. That means we need to understand their interests. So based on what pages people like, what they click on, and other signals, we create categories -- for example, people who like pages about gardening and live in Spain -- and then charge advertisers to show ads to that category. Although advertising to specific groups existed well before the internet, online advertising allows much more precise targeting and therefore more-relevant ads.

The internet also allows far greater transparency and control over what ads you see than TV, radio or print. On Facebook, you have control over what information we use to show you ads, and you can block any advertiser from reaching you. You can find out why you're seeing an ad and change your preferences to get ads you're interested in. And you can use our transparency tools to see every different ad an advertiser is showing to anyone else.

Still, some are concerned about the complexity of this model. In an ordinary transaction, you pay a company for a product or service they provide. Here you get our services for free -- and we work separately with advertisers to show you relevant ads. This model can feel opaque, and we're all distrustful of systems we don't understand.

Sometimes this means people assume we do things that we don't do. For example, we don't sell people's data, even though it's often reported that we do. In fact, selling people's information to advertisers would be counter to our business interests, because it would reduce the unique value of our service to advertisers. We have a strong incentive to protect people's information from being accessed by anyone else.

Some worry that ads create a misalignment of interests between us and people who use our services. I'm often asked if we have an incentive to increase engagement on Facebook because that creates more advertising real estate, even if it's not in people's best interests.

We're very focused on helping people share and connect more, because the purpose of our service is to help people stay in touch with family, friends and communities. But from a business perspective, it's important that their time is well spent, or they won't use our services as much over the long term. Clickbait and other junk may drive engagement in the near term, but it would be foolish for us to show this intentionally, because it's not what people want.

Another question is whether we leave harmful or divisive content up because it drives engagement. We don't. People consistently tell us they don't want to see this content. Advertisers don't want their brands anywhere near it. The only reason bad content remains is because the people and artificial-intelligence systems we use to
review it are not perfect -- not because we have an incentive to ignore it. Our systems are still evolving and improving.

Finally, there's the important question of whether the advertising model encourages companies like ours to use and store more information than we otherwise would.

There's no question that we collect some information for ads -- but that information is generally important for security and operating our services as well. For example, companies often put code in their apps and websites so when a person checks out an item, they later send a reminder to complete the purchase. But this type of signal can also be important for detecting fraud or fake accounts.

We give people complete control over whether we use this information for ads, but we don't let them control how we use it for security or operating our services. And when we asked people for permission to use this information to improve their ads as part of our compliance with the European Union's General Data Protection Regulation, the vast majority agreed because they prefer more relevant ads.

Ultimately, I believe the most important principles around data are transparency, choice and control. We need to be clear about the ways we're using information, and people need to have clear choices about how their information is used. We believe regulation that codifies these principles across the internet would be good for everyone.

It's important to get this right, because there are clear benefits to this business model. Billions of people get a free service to stay connected to those they care about and to express themselves. And small businesses -- which create most of the jobs and economic growth around the world -- get access to tools that help them thrive. There are more than 90 million small businesses on Facebook, and they make up a large part of our business. Most couldn't afford to buy TV ads or billboards, but now they have access to tools that only big companies could use before. In a global survey, half the businesses on Facebook say they've hired more people since they joined. They're using our services to create millions of jobs.

For us, technology has always been about putting power in the hands of as many people as possible. If you believe in a world where everyone gets an opportunity to use their voice and an equal chance to be heard, where anyone can start a business from scratch, then it's important to build technology that serves everyone. That's the world we're building for every day, and our business model makes it possible.
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