Introduction

We live in times of global capitalist crisis, widespread precarious labour, and rising inequality between the rich and the poor. According to the last Global Wage Report of the International Labour Organization (2013), economic productivity has increased and has vastly benefited corporate profits at the expense of wages in almost all parts of the world since the 1960s. The enormous increase of profits was achieved by a relative drop of wage rates. This asymmetrical development has even expanded since the housing and financial crisis being occurred in 2007. Figure 1 and Figure 2 compare the decrease of the wage share to the relative increase of annual profits in the United States.

![Wage Share in the United States (1960-2013)](image)

Figure 1: The development of the wage share in the United States (data source: European Commission’s Directorate General for Economic and Financial Affairs 2013)
Figure 2: The development of profits in the United States (data source: European Commission’s Directorate General for Economic and Financial Affairs 2013)

According to the Annual Macro-Economic Database (AMECO) of the European Commission’s Directorate General for Economic and Financial Affairs (2013), productivity has grown from an index value of 56,3 in 1960 to 104,5 in 2013 in the United States. During the same time, the wage share has fallen from 65,2% of GDP in 1960 to 58,2% of GDP in 2013 and total annual corporate profits has risen from an index value of 55,2 in 1960 to 106,3 in 2013. In Spain, productivity has increased from an index value of 45,1 in 1960 to 101,8 in 2013. During the same time, the wage share has increased from 61,7% of GDP in 1960 to 52,0% of GDP in 2013 and total annual corporate profits has dropped from an index value of 74,9 in 1960 to 94,7 in 2013 (all data: European Commission’s Directorate General for Economic and Financial Affairs 2013, index units: 2005 = 100). Much the same calculations can be worked out for other parts of the world.

The Indignados movement in Spain or the Occupy movement can be considered as part of response to such developments questioning capitalist logics (Harvey 2012, 159; Dean 2012, 207). The Indignados movement has protested against neoliberal cuts, social and economic inequality, rising costs of living and housing, increasing unemployment rate, etc. The
movement states in their manifesto that “the will and purpose of the current system is the accumulation of money, not regarding efficiency and the welfare of society. Wasting resources, destroying the planet, creating unemployment and unhappy consumers” (¡Democracia real YA! 2013). The Occupy movement has claimed that large corporations and the global financial system control the world that benefits a minority and undermines democracy. The movements used digital and social media including social networking sites, online video channels, micro-blogging services, online newspapers, Internet chats, online encyclopaedias, and Internet live video streaming platforms for organizing, coordinating, and communicating their protest (see: http://www.democraciarealya.es and http://occupywallst.org).

Facebook (2012) says that its “mission is to give people the power to share and make the world more open and connected”. Social media activities such as announcing personal messages on Twitter, uploading or watching videos on YouTube, writing personal entries on Blogger, and creating profiles and sharing ideas on Facebook enable the collection, analysis, and sale of personal data by commercial web platforms. With the help of legal instruments including privacy policies and terms of use, social networking sites have the right to store, analyse, and sell personal data of their users to third parties for targeted advertising in order to accumulate profit. The co-founder and CEO of Facebook, Mark Zuckerberg, is the 36th richest person of America with a net worth of 13.3 billion USD (Forbes 2013). Figure 3 shows the development of Facebook’s annual revenue from 2008 to 2012.
Facebook’s revenue has increased by a factor of 18.7 from 272 million USD in 2008 to 5.1 billion USD in 2012. At the same time, there was an enormous increase of monthly active users on Facebook from 360 million in December 2009, 608 million in December 2010, 845 million in December 2011, to 1.1 billion in December 2012. People are considered as monthly active users if they have used the service at least once in a calendar month. Facebook generates a substantial majority of its revenue from advertising (Securities and Exchange Commission 2013). Critics have highlighted that social media’s advertising practices create data protection problems. “Europe-v-Facebook” was founded by a group of Austrian students of law in order to raise awareness about Facebook’s privacy policy in terms of personal data abuse and forwarding. The group has reported Facebook for permanently violating the data protection right in the European Union and thereby undermining a fundamental human right. “Europe-v-Facebook’s” objectives are to claim data transfer transparency, launch opt-in systems on social platforms, and to create open social networks. Facebook is currently under investigation by the Irish Data Protection Commissioner after receiving 22 complaints by the group in August 2011 (Europe-v-Facebook 2013).
If we take a look at the global value chains of the ICT industry, one can see that the realm of digital and social media is also related to handcraft and industrial labour that poses global social and ecological problems (Dyer-Witheford 2001, 76; Fuchs 2014). Minerals such as cassiterite, wolframite, coltan, and gold are essential in the manufacture of a variety of electronic devices including mobile phones, tablets, music players, and laptops. The ICT-related minerals are especially extracted in mines in the eastern provinces of the Democratic Republic of the Congo raising slavish working conditions. The raw materials are mined in conditions of armed conflict and human right abuses. The profits from the sale of the resources finance continued fighting by the Congolese national army and various armed rebel groups. The control of lucrative mines becomes a focus of the fighting as well. A number of organizations are working to raise awareness of and find solutions for conflict minerals; examples include Conflictminerals.org, Conflict Free Tin Initiative, and Stand Canada (Le Monde diplomatique 2003).

The minerals are shipped to corporations such as Foxconn Electronics and Wintek Corporation in several Asian countries for the production of information and communication technologies that are sold by multinational electronics companies, to name but a few, Apple, Samsung Electronics, LG, Panasonic, Sony, and HP. Different media and corporate watchdog platforms have reported about the unacceptable and inhuman working conditions of the supply chain manufacturers of Apple and Co. (Sandoval 2014, 98-109). For instance, the assembly line workers at Foxconn are forced with strict disciplinary measures as well as harsh and humiliating management methods to work 10-12 hours shifts six days a week with regular overtime. The workers get wages being unable to cover basic living expenses and also risk their health by having to use toxic substances without adequate protection equipment. 18 workers at different Foxconn campuses attempted to commit suicide due to the unbearable working conditions. Some of them jumped from the top of the factory buildings that resulted in the installation of safety nets for preventing more suicides and more blows of the company's public image. The main reason of the relocation of digital media production to China, Malaysia, Thailand etc. is to reduce costs. Computer companies are able to accumulate a lot of profit with the sale of the products that are manufactured in Asian factories. For example, Apple is the world's 15th biggest company calculated on sales, profits, assets, and market value (Forbes 2013). Its profit (net income)
has enormously increased in the last years from 6.119 billion USD in 2008 to 41.733 billion USD in 2012 (Securities and Exchange Commission 2012). While the scope is limited, labour right groups and activists as well as corporate watchdog organizations fight against the inhuman treatment of workers in the IT industry. Make IT Fair is a project of a group of European corporate watchdog organizations that organized an international day of action in May 2011 in order to raise public awareness. Although strikes of electronics factory workers are not without risks, several thousand Foxconn workers protested against low wages in the Chinese city of Foshan in 2011 (Sandoval 2014, 107-108).

The previous examples indicate that the display of power and counter-power, domination and spaces of power struggles, and the commons and the commodification of the commons characterize modern society. Contradictions and antagonisms between the haves and the have-nots shape contemporary society. The Indignados and the Occupy movement have faced these contradictions with the help of digital and social media. An asymmetrical economic power relation characterizes social networks, because companies own the platform, the data of their users, and the profit, and decide on terms of use and privacy policies. While the users do not share ownership rights at all, do not control corporate social media platforms, have no right to decide on terms of use and privacy policies, and do not benefit from the profit being created out of user data produced for free. Corporate new media accumulate capital by dispossession (Harvey 2003) of personal information and data being produced in social and creative processes. This process can be considered as the accumulation by dispossession on web 2.0 (Jakobsson and Stiernstedt 2010). Though the example also shows that Facebook users have tried to exert counter-power against Facebook’s powerful and dominating role. Global social and ecological problems arise within new media production that also brings up protests, political actions, and strikes against such developments.

The Internet and social media are fields of conflict in this power struggle. The media are power structures and sites of power struggles and are able to support both the expansion and the commodification of the commons. New media are tools for exerting power, domination, and counter-power. Based on a critical and dialectical perspective it is possible to comprehend these contradictions occurring between emancipatory potentials of new and
digital media that imply a logic of the commons and processes of commodification and enclosure that tend to jeopardize the commons and incorporate them into the logic of capital.

Questions arising in this context are:

- What is the role of technology and media in capitalism?
- To what extent are media and technology able to support the enlargement of the commons?
- What are the limitations and potentials of new information and communication technologies?
- How is this linked to class relations and to forces and relations of production?
- How far are the productive forces rooted in capitalist interests and does the technological movement of the productive forces refer to opportunities of human liberation in the realm of digital and social media?

The germ form (Keimform) of capitalism is the commodity and the germ form of communism is the common (Dyer-Whiteford 2007, 81; Hardt and Negri 2009, 273). A commodity is a good produced for exchange and a common is a good produced by collectivities to be shared with all. The common is the dialectical sublation of private property and public goods. By the common Hardt and Negri (2009, viii) mean “the common wealth of the material world … and more significantly those results of social production that are necessary for social interaction and further production, such as knowledges, languages, codes, information, affects, and so forth”. That is to say, the commons are material/physical and immaterial/intellectual goods that are both incorporated in alternative projects and partially produced by capital. The capitalist command again and again privatizes economic, political, cultural, natural, and technological commons and strives to transform them into private property. But today’s network, communication, intellectual, cultural, and creative products are easily reproduced and tend toward being common and thereby question the capitalist logic of private property (Gorz 2010). The commons come into friction with capital’s hegemony. New information technologies appear as both instruments for the circulation of commodities and means for the circulation of struggles (Dyer-Witheford 1999,
121-122). Digital productive forces advance new forms and strategies of capital accumulation, and undercut the commodity character and point toward new forms of co-operation. Alternative and critical social media projects that strengthen the logic of the commons include diaspora*, N-1, Occupii, and TheGlobalSquare. Profit-oriented social media platforms transforming the commons into private properties are, to name but a few, Facebook, Google+, Twitter, and YouTube.

Many authors have recently argued that the Internet has been transformed from a system being mainly oriented towards informational elements into a system being more oriented on enabling communication and co-operation (Beer and Burrows 2007; boyd and Ellison 2007; Fuchs 2010a; Kolbitsch and Maurer 2006; O'Reilly 2005a; Saveri, Rheingold, and Vian 2008). The notions of “web 2.0”, “social software”, “social media”, “participative web”, and “social network(ing) sites” (SNS) have emerged in this context. Most approaches see the active involvement of users in the production of content as the main characteristic of web 2.0. There has been an intensification and extension of informational commodities being based on knowledge, ideas, communication, relationships, emotional artefacts, cultural content etc. in the last decades of capitalist production (Fuchs and Sevignani 2013, 257). The emergence of corporate social software can be seen in the context of the need to find new strategies of capital accumulation under post-Fordist conditions after the dot.com crisis around the turn of the millennium. The fact that one can find social media platforms such as Facebook (rank 2), YouTube (rank 3), Twitter (rank 14), and LinkedIn (rank 13) among the most frequently accessed websites worldwide, indicates the enormous popularity of these sites (Alexa Internet 2013). Apart from a few exceptions (e.g.: Fernback and Papacharissi 2007; Fuchs 2012b; Sandoval 2012), there are no studies combining critical theoretical and empirical research in the context of digital and social media. This is the task for the study at hand.

In the positivist dispute of German sociology about the methodology of the social sciences and the philosophy of science in the 1960s, Habermas (1976b, 131-162; 1976a, 198-225) drew the important epistemological insight that academic knowledge production is always embedded in social contexts and thus not able to be value-free, neutral, and apolitical. Empirical data are no objective observations of reality and both theoretical considerations
and descriptive statements are related to normative attitudes and moral concepts. “I should like to justify the view that the research process, which is carried out by human subjects, belongs to the objective context which itself constitutes the object of cognition, by virtue of cognitive acts” (Habermas 1976a, 220). Adorno (1976b, 27-32; 1976a, 68-86) argues that traditional social research tends to ignore objective conditions and relationships of society by deducing from the individual human subject to social processes. Positivistic and uncritical research limits itself to empirical facts and to the analysis of the mere appearance and thereby celebrates society as it is and neglects complex and transcendental thoughts. The claim that academia should remain value-free frequently results in an affirmative and ideological agenda legitimating the status quo and undermines critical and dialectical thinking. Traditional social research “supports what exists in the over-zealous attempt to say what exists” and “becomes ideology in the strict sense—a necessary illusion” (Adorno 1976a, 76).

The study at hand is based on these insights and follows a critical and emancipatory research interest. I suggest a normative and partial approach giving voice to the voiceless and supporting the oppressed classes of society. Point of departure for such a critical approach is the work of Karl Marx. Marx (2000a, 77) notion of critique derives from the humanist insight that “man is the highest being for man, that is, with the categorical imperative to overthrow all circumstances in which man is humiliated, enslaved, abandoned, and despised”. Marxist critique is opposed to all forms of human exploitation, domination, and oppression. Critical theory studies the dialectics of essence and appearance, considers social phenomena in the context of societal totality, is characterized by an interest in human emancipation, and conceives social reality as historical result of specific human practices and therefore as changeable (Horkheimer 2002, 188-243; Marcuse 1988, 134-158). Based on Hegel’s dialectical philosophy, critical theory defines categories in relation to other things. Categories emerge in a dual way, cause, contradict, and negate each other; hence, it is a negation. Furthermore, raising quantity causes new qualities in dialectical categories at a certain critical point; hence, it is a turnover from quantity to quality. Finally, dialectical categories sublate each other. New qualities emerge, old ones are eliminated but are kept in a new form and on a higher level; hence, it is a negation of negation (Marcuse 1955, 312-322; Bhaskar 2008, 162-190). Dialectical social criticism
emphasize negations in society and supports a negation of negation for a “future society as a community of free men” (Horkheimer 2002, 217). Critical and dialectical analysis means to identify the contradictory, open, and dynamic tendencies of social phenomena that incorporate certain risks and potentials.

Philosophy is the general scientific reflection about the human existence in the world. According to Hofkirchner (2013, 47-55), basically three fundamental questions constitute philosophy and philosophical thinking, namely the question of the ability to comprehend the world, the question of the composition of the world, and the question of the reasons to intervene in the world. The epistemological domain traditionally is concerned with the first, the ontological domain deals with the second, and the praxiological domain of philosophy considers the third question. Epistemology can be described as the philosophical theory of method, ontology as the philosophical theory of reality, and praxiology as the philosophical theory of praxis. The epistemological perspective includes knowledge and understanding, the ontological perspective comprises the being, and the praxiological perspective involves norms, values, ethics, and aesthetics. But the epistemological, ontological, and praxiological spheres are not independent and exclusive; rather, they are interconnected and mutually shape each other. “Explicitly taking a human stance, we can reformulate the fundamental questions of philosophy by starting with the praxiological question and subsequently introducing the ontological question and the epistemological question, each one being the presupposition for the question before: (1) How should humans act, or better, what should the world be like? (2) How can humans intervene in the world, or better, how can humans make the world be as it should be? (3) How can humans comprehend the world, or better, how can humans know how to make the world be as it should be?” (Hofkirchner 2013, 48). Hence, there is an inclusive relationship between the epistemological, ontological, and praxiological level. Praxis builds upon reality and reality builds upon method; or speaking more generally, praxiology builds upon ontology and ontology builds upon epistemology (see Figure 4).
Critical and Marxian-inspired media and information studies therefore strives for the development of theoretical research methods (epistemology) in order to focus on the analysis of media, information, and communication in the context of domination, asymmetrical power relations, resource control, social struggles, exploitation, and alienation (ontology). Critical media and communication studies wants to overcome social injustices and supports political processes and social transformations towards the “communicative commons” (Murdock 2013, 160) and a commons-based information society (praxiology). The study at hand is thus structured according to this distinction. Part one strives for the development of theoretical foundations of the relationship between technology and society, productive forces and relations of production, as well as privacy and surveillance (epistemology) in order to focus in part two on empirical results of social media in the context of advantages and disadvantages as well as emancipation and affirmation (ontology). Part three evaluates the prospects and limitations of the commons and commodification of the commons in the realm of new media and argues for the need of a techno-social revolution in terms of achieving a commons-based information society (praxiology). Part one, two, and three of this study are interconnected and shape each other mutually. The recommendation to strengthen the idea of the communication and network commons and a real liberation of society is based on an empirical case study of social media in the context of emancipation and affirmation being grounded in the theoretical foundations of media, technology, and society. Part three builds upon part two and part two builds upon part one.
The work advances a theoretical approach combined with an empirical study, moving from the abstract to the concrete level. The overall aim of the work at hand is to study the objective and subjective aspects of new media and to deal with the limitations and prospects in terms of the expansion of the commons in the realm of digital and social media.

The main research questions thus are:

**How do the constraints and emancipatory potentials of new media look like and to what extent can digital and social media strengthen the idea of the communication and network commons and a commons-based information society?**

For approaching an answer to these main questions, the subsequent specific research questions are required to be addressed in part one, two, and three:

**PART I: THEORETICAL FOUNDATIONS**

Before turning to new information and communication technologies and the Internet, it is important to come to a more general understanding of media, technology, and society and to raise more philosophical questions about the prospects and limitations of technology and media in society. This is also linked to the economic question how the relationship between forces and relations of production look like. The following research question is thus the subject of chapter Error! Reference source not found.:

**How can the role of the dialectics of productive forces and relations of production be conceptualized by a critical theory of media, technology, and society?**

**Chapter** Error! Reference source not found. provides some foundational concepts of a critical theory of media, technology, and society, continues with the dialectics of productive forces and relations of production, and concludes with describing the means of communication as means of production.

Based on these findings, it becomes possible to conduct a well-founded analysis of new media in terms of theorizing the Internet and bringing up the question what social about social media is. When it comes to the risks of new information and communication
technologies, we must look at the other side of the coin as well. There has been an extension and intensification of privacy threats and surveillance risks in economic, political, and cultural contexts in recent years being also based on the employment of various surveillance technologies. The Internet and new media are one of these technologies. Before moving on to the empirical analysis, the work at hand must thus be theoretically situated in the context of the state of art in the fields of the web, privacy, and surveillance. The question guiding this analysis therefore is:

Which theoretical foundations are needed for studying the Internet, privacy, and surveillance critically?

The aim of chapters is to clarify how the web, privacy, and surveillance are defined in the academic literature, what the different concepts have in common, what distinguishes them from one another, and which advantages and disadvantages such definitions have in order to clarify if there is a gap in the existing literature. Based on a critical theory and political economy approach, I argue that the existing literature is insufficient for studying the Internet, privacy, and surveillance. In contrast, a critical theory avoids pitfalls of the existing literature and strives for the development of theoretical and empirical research methods in order to focus on the web, privacy, and surveillance in the context of domination, asymmetrical power relations, resource control, social struggles, and exploitation.

Part one can be considered as epistemological approach, because it provides the theoretical research methods for this study.

PART II: CASE STUDY

The economic and political logic shaping the strategies of profit-oriented social media platforms produces an antagonism between communicative opportunities and privacy and surveillance threats. This points out the antagonistic structure of communication technologies in capitalism. The overall aim of part two is to study the users’ knowledge,
attitudes, and practices towards this antagonistic character and the potentials and risks of social media. This part can be considered as a case study of the critical theory and dialectics of media, technology, and society. I will analyse which advantages and disadvantages students consider in the context of social networking sites. The provided results are based on a survey that was conducted in Austria (N=3558). Social networking sites users are primarily young and educated people. So for example, 45% of the users of Myspace are aged 18-34, 42% of the users of Facebook are aged 18-34, 53% of Facebook users have attended college or graduate school (all data: Quantcast 2013). We can thus assume that young people are early adopters of new technologies. It is therefore important to consider their usage behaviour because they might anticipate future trends. Due to their education standards, students tend to be very sensitive towards new issues confronting society. Given that students are early adopters and sensitive citizens, it is important to analyse their usage of social media. The main research question for the empirical study is:

Which major advantages and disadvantages of social networking platforms do Austrian students see?

In chapter Error! Reference source not found., a discussion of some of the most cited studies should give a representative overview of typical empirical research approaches that assess privacy on social networking sites. I will show that there is a predominance of traditional and uncritical research in the context of privacy on web 2.0. This research does not reflect structural power asymmetries in capitalism. Some critical theoretical studies about surveillance on digital and new media are thus examined. I will highlight the need for a critical empirical study of privacy and surveillance on social media. The task of chapter Error! Reference source not found. is to answer what students consider as being the main potentials and risks of social media. For doing so, the general characteristics of the respondents as well as perceived advantages and disadvantages of social networking sites will be outlined.

Part two can be considered as ontological approach, because it focuses on the analysis of digital media and the concrete usage of social media.
PART III: TECHNO-SOCIAL REVOLUTION

Part three unites the theoretical foundations and the empirical case study and asks what the results of the empirical study mean and how they can be interpreted with the help of a dialectical and critical theory of social media. In addition, part three raises the question if technological and/or social changes are required in order to bring about real social media and to change the information society to the better. The specific research question thus is:

**How can the dialectics of social media be conceptualized by critical theory and what are its political implications?**

Based on some foundational concepts of a critical theory of media, technology, and society and the dialectics of productive forces and relations of production of chapter Error! Reference source not found., chapter Error! Reference source not found. contains a theoretical interpretation of the empirical results. This chapter deals with the dialectics of technological design and assessment and the (dis)advantages of social media. It also treats the dialectical relationship of productive forces and relations of production of social media. Chapter Error! Reference source not found. summarizes the results of this work and draws some political conclusions. It evaluates the prospects and limitations of the objective and subjective characteristics in the realm of digital and social media in terms of achieving a commons-based information society.

Part three can be considered as praxiological approach, because it discusses political implications and argues for the need of political interventions.

In summary, the media are power structures and sites of power struggles and are able to support both the commons and the commodification of the commons. New information technologies appear as both instruments for the circulation of commodities and means for the circulation of struggles. Based on a critical and dialectical approach it is possible to comprehend contradictions occurring between emancipatory potentials of new and digital media that imply a logic of the commons and processes of commodification and enclosure that tend to jeopardize the commons and incorporate them into the logic of capital. The overall aim of the work at hand is to study the constraints and emancipatory potentials of
new media and to assess to what extent digital and social media can contribute to strengthen the idea of the communication and network commons and a commons-based information society. I follow a critical and emancipatory research interest and suggest a normative and partial approach. This book is based on a theoretical approach combined with an empirical study, advancing from the abstract to the concrete level.¹

¹ The research presented in this publication was conducted in the project “Social Networking Sites in the Surveillance Society”, funded by the Austrian Science Fund (FWF): Project number P 22445-G17. Project co-ordination: Prof. Christian Fuchs. For a summary of the main arguments of this book, see Allmer (2014).