(DIS)LIKE FACEBOOK? DIALECTICAL AND CRITICAL PERSPECTIVES ON SOCIAL MEDIA

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Abstract

Apart from a few exceptions, there are no studies combining critical theoretical and empirical research in the context of social media. The overall aim of my article is to study the constraints and emancipatory potentials of web 2.0 and to assess to what extent social media can contribute to strengthen the idea of the communication and network commons and a commons-based information society. I follow an emancipatory research interest being based on a critical theory and political economy approach in three sections: I provide some foundational concepts of a critical theory of media, technology and society in section one. The task of section two is to study the users' knowledge, attitudes, and practices towards the potentials and risks of social media. This section can be considered as a case study of the critical theory and dialectics of media, technology, and society. In section three, I raise the question if technological and/or social changes are required in order to bring about real social media. Section three furthermore discusses political implications and draws some conclusions.

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Introduction

We live in times of global capitalist crisis, widespread precarious labour, and rising inequality between the rich and the poor.[1] The Occupy movement can be considered as part of response to such developments questioning capitalist logics (Harvey 2012, 159). The Occupy movement has claimed that large corporations and the global financial system control the world that benefits a minority and undermines democracy. The movement used social media including social networking sites such as Facebook for communicating their protest on a global scale (see: http://occupywallst.org). But Facebook is one of these large corporations and part of the global financial system. Facebook's revenue has increased by a factor of 18.7 from 272 million USD in 2008 to 5.1 billion USD in 2012 (Securities and Exchange Commission 2013). In addition, 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). Zuckerberg is part of the 1 percent in contrast to the 99 percent being criticised by the Occupy movement.

The previous example indicates that the display of power and counter-power, domination and spaces of power struggles, and the commons and the commodification of the commons characterise modern society. 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. Social 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 social media that imply a logic of the commons and processes of commodification and enclosure that tend to jeopardise the commons and incorporate them into the logic of capital.

The overall aim of this paper is to study the objective and subjective aspects of social media and to deal with the limitations and prospects in terms of the expansion of the commons in the realm of social media. The main research questions thus are: How do the constraints and emancipatory potentials of social media look like and to what extent can social media strengthen the idea of the communication and network commons and a commons-based information society?

In the positivist dispute of German sociology about the methodology of the social sciences and the philosophy of science in the 1960s, Habermas (1976, 131–162) 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. Adorno (1976, 68–86) argued that 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.

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's 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" (Marx 2000, 77). 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 characterised by an interest in human emancipation, and conceives social reality as historical result of specific human practices and therefore as changeable (Marcuse 1988, 134–158; Horkheimer 2002, 188–243). Dialectical social criticism emphasises 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 (Marcuse 1955, 312–322).

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. 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 (Hofkirchner 2013, 48).

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 want to overcome social injustices and supports political processes and social transformations towards the commons and a commons-based information society (praxiology). The study at hand is thus structured according to this distinction. Section one strives for the development of theoretical foundations of the relationship between technology and society as well as privacy and surveillance (epistemology) in order to focus in section two on empirical results of social media in the context of advantages and disadvantages as well as emancipation and affirmation (ontology). Section three evaluates the prospects and limitations of the commons and commodification of the commons in the realm of social media and argues for the need

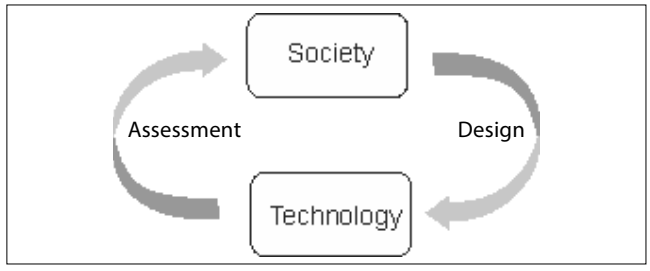
of a techno-social revolution in terms of achieving a commons-based information society (praxiology). Section one, two, and three of this study are interconnected and shape each other mutually. The recommendation to strengthen the idea of the communication and network commons and a real liberation of 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. Section three builds upon section two and section two builds upon section one.

Theoretical Foundations

Feenberg (2002, 5) distinguishes between instrumental and substantive theories of technology and rejects both of them for several reasons. This section is inspired from these important findings and argues for the need of a third approach, a critical and dialectical theory of technology that understands the technological developments and dynamics as progressive and regressive and entails a moment of techno-social change (for example: Bloch 1986; Marcuse 1998).

There is a mutual shaping of society and technology: Society constructs and shapes technology (design) on the one hand and technology impacts and transforms society (assessment) on the other (see Figure 1).

Figure 1: Mutual Shaping of Society and Technology



The mutual relationship of society and technology is a dynamic process with shaping effects onto each other (Feenberg 2002, 48; Fuchs 2008, 2–3). Humans are able to design and to control the employment of technology and technology reacts up on society.

Technology is the expression and form of social relations, corresponds to a certain historical period, is not neutral, and biased (Feenberg 2002, 63). Marx indicated that capitalist forms of machinery and technology incorporate elements of domination: "By machinery … domination of former over living labour preserves not only social – expressed in the relation between capitalist and worker – but so to say technological realization" (Marx 1982, 2059, my translation).[2] Social purposes and values of capital shape technology in its design and development (Feenberg 2002, 15, 48). The technological design must be rooted in capitalist interests and social forces. Technology is not designed in a vacuum isolated from the social context. Rather, the social context forms the technological product and the corresponding labour. The dynamics of technological development are embedded into social relations and are thus no neutral dynamics. Capitalist technology is in its foundational form also a technology of power and domination. The repressive elements of technology in

capitalist societies are not solely to its applications, but technology is inherently a mean of power and domination (Marcuse 1972, 129–131). Capitalist interests do not only shape the employment and purpose but the design of technology. Not just the ends, but also the means of production must be transformed (Feenberg 2001, 140). Technology is a form of organisation and maintenance of social relations and a means of control and domination. The objectives of capitalist technology; that is value creation, had been defined before the actual conception and construction of technology took place. Technological control is internal to their very structure (Feenberg 2002, 51).

At the same time, technology cannot be isolated from its application. For instance, employing automation in the capitalist mode of production reinforces competitive relationships between humans and machinery, the redundancy of human labour force, unemployment, poverty, alienation, exploitation, and the intensification of labour. Instead, employing technology in the automated process of production in a commons-based society could primarily help to intervene to reduce necessary labour time to a minimum in order to have time for the full development of the individual, to increase the wealth of society, and could contribute to a real liberation of humans. Modern technology has provided possible the satisfaction of needs and the reduction of toil (Marcuse 1969, 12). The technological development incorporates alternative potentials and possibilities and we do not have to "reinvent the wheel" in order to establish a real liberation of society being based on technological innovations. If we take a look at new information and communication technologies including the Internet and the corresponding struggles between competition and co-operation and the commons and the commodification of the commons, one can see the capitalist process of production has driven the productive forces forward to an extent also showing possibilities of transforming society. Technology incorporates potentials. The dynamic interaction between technological essence and appearance are the source of tensions that move the technological development in one direction or another and could bring technological potentials out. Real technological potentials could be brought to fruition having "not yet" been realised (Bloch 1986). In the appearance of capitalist technology (being-for-itself) are also technological potentials (being-in-itself) and it would be important to uncover and reveal those hidden and suppressed potentials for a real liberation of humans.

A dialectical view sees the development of technology as progressive and regressive, liberating and repressive, as potential and risk. It indicates different possibilities of technological dynamics between resignation and utopia (Feenberg 2002, 13, 15). This view is neither techno-deterministic, nor socio-constructivist, neither techno-optimistic, nor techno-pessimistic, and takes into consideration the design and assessment of technology.

The Internet is a techno-social system (Fuchs 2008, 121–123). It is a network of networks and consists of a technological infrastructure (technological subsystem; network of computer networks) and human actors (social subsystem; network of social networks). The technical structure enables and constrains human activities and is itself produced and reproduced by human agents. The technical structure is medium and outcome of human agency. The technological infrastructure is a materialised outcome of social action and social actions (cognition, communication, and cooperation) are based on this infrastructure. There is a mutual shaping of

technology on the one and society on the other hand, in which technologies and humans are connected in a complex way, produce and reproduce each other, and have relative autonomy.

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 (O'Reilly 2005; Beer and Burrows 2007; boyd and Ellison 2007). 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, and cultural content 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 12), and LinkedIn (rank 13) among the most frequently accessed websites worldwide, indicates the enormous popularity of these sites (Alexa Internet 2013).

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 social 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 privacy and surveillance.

It is often claimed that a critique of political economy, which is rooted in economic theory, focuses more on commodity critique and a critical theory, which is rooted in social theory and philosophy, more on ideology critique. In this context, Murdock and Golding (1997, 3–4, emphasis added) make the important point that "the obvious starting point for a critical political economy of mass communication is the recognition that the mass media are first and foremost industrial and commercial organizations which produce and distribute *commodities*." Murdock and Golding (1997, 4–5, emphasis added) also include the ideological level in their analysis by saying that "it is this second *ideological* dimension of mass media production which gives it its importance and centrality and which requires an approach in terms not only of economics but also of politics." Due to that ideology and commodification are interconnected core elements of capitalist society, a Marx-inspired contribution to media, technology, information, and communication should focus on the role of media in the context of commodity and ideology; or speaking more generally, in the context of base and superstructure.

Ideology and commodity are interrelated aspects of capitalism. Ideologies are a reflection of real life processes and are based on material foundations. Hence, commodities form ideologies. Values, an ideology refers to, including liberalism, freedom, and privacy enable the development and progress of modern capitalist societies and processes of commodity production and capital accumulation. Ideol-

ogies therefore form commodities in return. Ideological deceptions and processes of commodification shape each other mutually.

I will argue in the following that privacy is a modern concept of liberal democracy and is used in order to justify liberty from public intervention and that the debate of privacy advances the idea of possessive and self-protective individualism. The notion of privacy is an ideology of modern society. I will also demonstrate that surveillance is an important aspect for guaranteeing the production of surplus value and for accumulating profit in the spheres of production, circulation, and consumption. Surveillance actions are crucial in the process of commodity production in capitalism. Hence, privacy critique can be considered as ideology critique and surveillance critique as commodity critique.

Many authors have advanced critique of the concept of privacy in general (Gouldner 1976, 103; Lyon 1994, 179–198; Ogura 2006, 277–280). Privacy is a modern concept of liberal democracy and is used in order to justify liberty from public intervention (Lyon 1994, 185). In the liberal understanding of privacy, the sovereign individual should have freedom to seek his/her own interests without interference and those interests are primarily interpreted as property interests and private ownership rights (Lyon 1994, 186–188). Therefore, the concept of privacy fits neatly into the concept of private property (Ogura 2006, 278). The debate of privacy advances the idea of possessive and self-protective individualism (Lyon 2001, 21).

The existing (Internet) privacy concepts advance the idea of possessive individualism in order to define the private individual embedded in a system of a competitive market society (Gouldner 1976, 1976). In a market society, the commodification of privacy is important in order to enable targeted advertising being used for accumulating profit. Hence, economic actors undertake surveillance in order to threaten privacy. Privacy as ideological value enables surveillance actions and commodity production. There is a contradiction between privacy on the one hand and surveillance on the other hand in modern society. The privacy ideal thus comes into conflict with surveillance actions. The privacy concepts claim privacy as a crucial value within a society not being able to fulfil this value. One can imagine a commons-based society, where no substantial surveillance actions take place. In such a society, privacy as important value would not be necessary any more in this traditional way. It thus can be said that surveillance actions as commodity production enable privacy as ideological value. Only because of surveillance, privacy is needed in modern society.

The existing approaches of privacy seem to be not fruitful for studying privacy. Therefore, the following treatment wants to contribute to a critical theory of (online) privacy (for a more detailed discussion see Allmer 2011):

A critical theory of privacy (on the Net) strives for the development of theoretical and empirical research methods in order to focus on privacy in the context of domination, asymmetrical power relations and social struggles.

It asks who can obtain privacy and who benefits from the contradiction between privacy and surveillance in modern society. It critically analyses (a) the threats of privacy as important aspects for guaranteeing the production of surplus value and for accumulating profit on the one hand and (b) privacy protection of income inequality, property interests, as well as power and ownership structures on the other hand.

A critical theory of (Internet) privacy wants to overcome (a) privacy threats as well as (b) entrepreneurial privacy protection and privacy protection for other powerful actors in society in order to establish political processes and social transformations towards a participatory society.

Since Foucault published his book Surveiller et Punir in French in 1975 and in English in 1977, the amount of literature on surveillance has increased enormously and represents a diffuse and complex field of research. Foucault (1995) analyses surveillance in the context of the emergence of modern disciplinary societies. He understands disciplines as forms of operational power relations and technologies of domination in order to discipline, control, and normalise people. For Foucault, the Panopticon is an ideal symbol of modern surveillance societies. Foucault's understanding of surveillance and the Panopticon allows to distinguish panoptic (affirmation of Foucault's notion) and non-panoptic (rejection of Foucault's notion) approaches of defining (Internet) surveillance that can be used for constructing a typology of existing surveillance literature and for discussing commonalties and differences of definitions of surveillance. Non-panoptic notions use a neutral and general notion of surveillance (in cyberspace); they are represented by scholars such as Baudrillard (2007). In contrast, panoptic notions consider surveillance to be negative and being connected to coercion, repression, discipline, power, and domination; they are represented by scholars such as Deleuze (1992).

Non-panoptic notions understand (Internet) surveillance in a non-hierarchical and decentralised way, where everyone has the opportunity for surveillance. This argument overlooks the fact that corporations and state institutions are the most powerful actors in society and are able to undertake mass-surveillance, what private actors are not able to do. Neutral surveillance concepts tend to overlook power asymmetries of contemporary society and therefore tend to convey the image that private actors are equally powerful as corporations and state institutions. Although panoptic notions recognise the importance of the economy, they tend to focus only on one or two spheres as important aspects of contemporary surveillance societies. Furthermore, panoptic notions claim that there are particular forms of economic surveillance without a theoretical criterion for a certain typology.

In contrast, a typology of (Internet) surveillance in the modern economy, which is based on Marx' theory of the political economy, allows to systemise economic surveillance on the Internet and to distinguish online surveillance into the spheres of production, circulation, and consumption. A critical contribution to surveillance studies strives for the development of theoretical and empirical research methods in order to focus on surveillance in the context of resource control and exploitation. It critically analyses surveillance as important aspect for guaranteeing the production of surplus value and for accumulating profit. Based on the dialectically mediated spheres of the capitalistic economy (Marx 1986, 26–37), a critical perspective studies surveillance in the spheres of production (surveillance of employees), circulation (surveillance of applicants), and consumption (surveillance of consumers) (for a more detailed discussion see Allmer 2012).

Section one can be considered as epistemological approach, because it provides the theoretical research methods for this study. The economic and political logic shaping the strategies of profit-oriented social media platforms produces an antagonism between communicative opportunities, privacy, and surveillance threats. This points out the antagonistic structure of communication technologies in capi-

talism. The overall aim of the subsequent section is to study the users' knowledge, attitudes, and practices towards this antagonistic character and the potentials and risks of social media. Section two can be considered as a case study of the critical theory and dialectics of technology and society.

Empirical Case Study

The analysis of existing research literature shows that empirical studies of privacy on web 2.0 mostly focus on privacy-related issues on commercial social networking sites (Acquisti and Gross 2006). These studies pay attention to issues of users on social networking sites, namely individual knowledge and information about privacy, individual privacy-related attitudes, and individual behaviour towards privacy. Some authors have advanced critiques of this kind of studying privacy and have contributed filling the identified gap with critical arguments (Beer 2008). Also some authors have conducted critical empirical case studies of economic surveillance and targeted advertising and have thereby helped advancing a critique of the political economy of online/web 2.0 surveillance (Sandoval 2012). Some other theoretical studies have tried to situate the logic of web 2.0 surveillance in light of the social factory and free labour, alienation and exploitation, exception and dispossession (Terranova 2004). There is an on-going debate in academia about studying social and new media critically. Dallas Smythe's concept of "audience work" has recently gained importance in discussions about value creation and labour on the Internet. Research at different levels has been carried out touching the digital labour concept and (un)paid Internet labour that is also related to the context of surveillance (Fuchs and Sandoval 2014).

Most empirical studies of privacy on social networking sites pay attention to individual user aspects. The issue of surveillance is more a macro-topic requiring that usage behaviour is framed by societal context variables such as state surveillance, economic surveillance, and modernity. The analysis of surveillance and SNS therefore is in need of a research approach taking into account political contexts (Beer 2008). Surveillance has thus far, with single exceptions, been rather ignored as a topic in SNS studies. The absence of critical empirical studies of social media characterises the academic landscape. The existing empirical studies show that there is much more focus on the privacy topic than on surveillance. Advertising mechanisms and the connection between surveillance and privacy attitudes on the one hand and SNS advertising settings on the other hand have thus far hardly been studied. This is a task for the survey that is still missing in the state of the art. Given the fact that the majority of the most popular web 2.0 platforms are privately owned and commercially organised and that the business model of most web 2.0 platforms is based on personalised advertising, I find it more appropriate to study web 2.0 in the context of economic surveillance and targeted advertising. What is missing within the current research on privacy is a critique of the political economy and a critical theory of privacy and surveillance taking into account the larger societal context of class, ideology, commodity, and exploitation. Apart from a few exceptions, there are no studies combining critical theoretical and empirical research in the context of social media.

This was the task for the study in which we wanted to find out if (1) maintaining existing relationships over spatio-temporal distances and creating new social

relationships is considered the main advantage of SNS, and (2) the surveillance threat is considered the major disadvantage of SNS.

We conducted an online survey (Batinic, Reips, and Bosnjak 2002) that was focusing on Austrian students. We identified how important students consider the topic of surveillance in relation to SNS by analysing their answers to our questions. The survey was conducted in German, but the questionnaire was translated for the analysis into English. The questionnaire was implemented as an electronic survey with the help of the online survey tool SurveyMonkey (Babbie 2010, 286). The research was carried out from June 20 to November 23, 2011. We conducted the survey as part of the project "Social Networking Sites in the Surveillance Society" (see: http://sns3.uti.at).

There were 63.8 percent female and 36.2 percent male respondents. The mean age of our respondents was 24.3 years and the mean number of studied semesters was 6.6 (including summer term 2011).

In order to test if maintaining existing relationships over spatio-temporal distances and creating new social relationships are considered as the main advantages of SNS, we asked the students what in their opinion the greatest advantages of social networking sites such as Facebook and Myspace are (open question)? For analysing whether the surveillance threat is considered the major disadvantage of SNS, we asked what the greatest concerns of social networking sites such as Facebook and Myspace are (open question)? We received 3,531 textual replies to the question that addressed advantages and 3,534 replies to the question that addressed disadvantages. I identified 17 categories for the advantages and 14 categories for the concerns and analysed the answers to the questions by content analysis (Krippendorff 2004). On the one hand, the categories were adopted from theoretical and empirical studies about social networking sites and were revised and expanded regarding the provided answers by summarising, paraphrasing, abstracting, and generalising groups of answer texts to categories on the other hand; that is, a combination of inductive and deductive methods (Babbie 2010, 339). The respondents tended to list more than one major advantage. Many answers are therefore mapped with more than one category. Table 1 presents the major advantages of social networking sites that our respondents mentioned.

Table 1 shows that maintaining existing relationships and communication over distances are considered as the greatest advantage of social networking sites. More than 40 percent of our respondents stress the maintenance of existing contacts, friendships, and family relations as major opportunity of SNS. One third of respondents (33.8 percent) say that social relationships over spatial distances are very important. Almost a quarter (23.4 percent) see social networking platforms as a medium of information and news and 22.5 percent mention finding and renewing old contacts as major benefit. 7.5 percent of the participants state that an important aspect of a social networking site is that it enables free communication saving money. In addition, 7.4 percent mention sharing photos and other media with friends and accessing such media as major opportunity and 6.6 percent of the students say establishing new contacts is very important. 4.2 percent list communication and contacts in general with no further specification as greatest advantage. Also interesting is only 0.04 percent of our respondents mention flirting, sex, and love as important aspects of social media, which could be caused by social desirability.

Table 1: Greatest Perceived Advantages of Social Networking Platforms
("What are the greatest advantages of social networking platforms such as Facebook, Myspace, LinkedIn, etc. for you?" N=3531)

No.	Category	Percentage
1	Maintaining existing contacts, friendships, family relations, etc.	42.3
2	Communication and contacts over spatial distances (national and international)	33.8
3	Medium of information and news	23.4
4	Finding and renewing old contacts	22.5
5	Free communication that saves money	7.5
6	Sharing and accessing photos, music, videos	7.4
7	Establishing new contacts with unknown people or with people whom one hardly knows and can easier contact online	6.6
8	Communication and contacts in general (no further specification)	4.2
9	Communication in political groups and interest groups	2.5
10	Mobility, access from anywhere	2.1
11	Entertainment, fun, pastime, amusement	2.1
12	Overview and reminder of birthdays	1.3
13	Self-presentation to others (for non-business reasons)	0.6
14	I see no advantages	0.5
15	Business communication, finding jobs, self-presentation for potential employers	0.2
16	Browsing other profiles, "spying" on others	0.1
17	Flirting, sex, love	0.07

As a result, the hypothesis that maintaining existing relationships (category one) and communication over spatio-temporal distances (category two) is considered as the main advantage of SNS can be verified, but creating new social relationships (category seven) is not indicated as greatest opportunity.

Table 2 presents the major concerns of social networking sites that our respondents mentioned.

Table 2 shows that surveillance is considered as the greatest concern of social networking sites. Almost 60 percent of our respondents stress that economic, political, or cultural surveillance as a result of data abuse, data forwarding, or a lack of data protection is the main threat of SNS. One third (33.8 percent) say that it is problematic that personal affairs that should better be kept private and should not be known to others tend to become public. 7.7 percent state that it is a danger that also current and potential employers can access profiles, which could result in job-related disadvantages. In addition, 3.2 percent mention Internet addiction, and 3.0 percent of the participants stress data and identity theft as greatest risks of social media. 2.6 percent express concerns about advertising or spam. Also interesting is that 2.6 percent of the students do not see disadvantages in the usage of commercial social networking platforms. As a result, the hypothesis that the surveillance threat (category one) is considered as the major disadvantage of SNS can be verified.

Table 2: Greatest Perceived Concerns of Social Networking Platforms
("What are the greatest concerns of social networking platforms such as Facebook, Myspace, LinkedIn, etc. for you?" N=3534)

No.	Category	Percentage
1	Data abuse, data forwarding or lack of data protection that lead to surveillance by companies, state, or individuals	57.0
2	Private affairs become public and result in a lack of privacy and privacy control	33.8
3	Personal profile data (images, etc.) are accessed by employers or potential employers and result in job-related disadvantages (such as losing a job or not getting hired)	7.7
4	Internet addiction	3.2
5	Data and identity theft	3.0
6	Receiving advertising or spam	2.6
7	I see no disadvantages	2.6
8	Stalking, harassment, becoming a victim of crime	2.4
9	Commercial selling of personal data	2.3
10	Lack or loss of personal contacts, superficial communication and contacts, impoverishment of social relations	2.1
11	Virus, hacking and defacing of profiles, data integrity	2.0
12	It is a waste of time	1.3
13	Unrealistic, exaggerated self-presentation, competition for best self-presentation	0.5
14	Disadvantages at university because professors can access profiles	0.1

Section two can be considered as ontological approach, because it focuses on the analysis of social media and the concrete usage of social media. Based on some foundational concepts of a critical theory of technology and society of section one, the next section contains a theoretical interpretation of the empirical results. Section three can be considered as praxiological approach, because it discusses political implications and argues for the need of political interventions.

Techno–Social Revolution

I have argued in the first section that asymmetrical social relationships of power and domination are already embedded into the conception, construction, maintenance, as well as modification of technics and the technological design must be rooted in capitalist interests and social forces. Dominating the architecture of the Internet and social media platforms, the client–server computer network can be seen as an empirical evidence for this theoretical consideration.

The client–server computer network is a hierarchical and centralised architecture of a powerful server with data and files in the centre and relatively powerless clients at the edge. The client–server architecture structures the contemporary online world basically consisting of web servers operated by powerful political and economic actors such as Google and Facebook and clients used by individuals including social media users. The physical architecture of the Internet and the corresponding software entail hierarchical and structural forms of controls, which enable centralised processing and storage of user data and log files.

The dominant client–server technology fits well into the business model of corporate social media platforms being based on selling personal data (Moglen 2010). The client–server computer network model is a hierarchical organised technology, which includes the idea of the existence of proprietors of such data centres and incorporates the potential of centralised control. The client–server architecture dominating the Internet is designed and constructed as control and surveillance technology, which is embedded in the capitalist relations of production. This technology may increase the risks that people do not know where their data are stored and what is happening with them. It may strengthen non-transparency and uncontrollability of personal data and files (Moglen 2010). This is reflected in the perceived fears and risks of the survey participants when it comes to the greatest disadvantages of social networking sites. The vast majority of our respondents stress that economic, political, or cultural surveillance as a result of data abuse, data forwarding, or a lack of data protection is the main threat of social media. Following Marx one can argue that the current physical architecture of the Internet indicates that by technology domination preserves not only social but so to say technological realisation (Marx 1982, 2059). This example shows that capitalist technology may in its foundational form be also a technology of power and domination. The repressive elements of technology in capitalist societies are not solely to its applications, but technology may inherently be a mean of power and domination. Technology is a form of organisation and maintenance of social relations and a means of control and domination. Technological control is internal to their very structure (Feenberg 2002, 51) and therefore a transformation and redesign of technology is necessary in order to strengthen the idea of the commons and a real liberation of society.

In contrast, the peer-to-peer system is a computer network where each computer can act as a client or server for other computers sharing access to various digital contents such as audio, video, and data files. Peers are equally privileged participants and are both suppliers and consumers of resources. Every switch is an independent and free-standing entity, which makes digital data available to other network participants without the need for a central server or host.

In order to provide a mobile version of the peer-to-peer system, Moglen (2010) argues for personal webservers that everyone can put into his or her pocket. A mobile webserver could be plugged in at any place, synced up to any router, could be connected to the Internet, could keep your log files, and could store all your personal online data. Everyone would be the owner of his or her server and could control what to share online. Such technologies are hard to control and capital's and communities' interests collide resulting in social struggles and conflicts.

I have also claimed in the first section that technological effects depend on how technologies are used and technology cannot be isolated from its application. I will show exemplarily in the following that the effects of the Internet and social media depend on how they are used in society.

Social movements such as the Occupy movement and Anonymous and alternative media including Democracy Now! and Indymedia have potentials to establish a "counterpublic sphere" (Negt and Kluge 1993) and question capitalist logics. Or speaking in terms of autonomist Marxism, the multitude is able to undermine capitalist hegemony in order to strengthen the idea of a commons-based society.

The rise of the Internet has brought new opportunities for social movements and alternative media that often suffer from a lack of resources. Social movements are able to publish and spread alternative views and raise critical awareness cost-effectively on a global level. The Internet can support digital grassroots democracy and can give the powerless a say. Real technological potentials of cyberspace could be brought to fruition having "not yet" (Bloch 1986) been realised. The appearance of the World Wide Web and social media also contains potentials and it is important to uncover and reveal those hidden and suppressed potentials for a real liberation of humans. However, the multitude is confronted with problems of gaining visibility, attracting publicity, and getting attention on the web, which is characterised by capitalist logics, marketing strategies, information overflows, and a lost in cyberspace.

Powerful political and economic actors are very successful in raising visibility and attracting publicity in cyberspace. Due to capitalist structures of the Internet and asymmetrical distributions of material resources between the multitude and the empire on the one hand as well as the logic of one-dimensional thoughts (Marcuse), instrumental rationality (Horkheimer), manipulative culture industry (Adorno and Horkheimer), and global false consciousness of society (Marx) on the other hand, critical social movements and critical (social) media are confronted with marginalisation and disappearing attention (on the Internet).

The survey result that only 2.5 percent of the students list communication in political and interest groups as important aspect and beneficial characteristic of social media shows that such platforms are not a priori political and critical places. Although social networking is shaped by individualised communication and corporate interests, it also poses possibilities for group formation and cooperation might being channelled into collective political projects as the Occupy movement, the Indignados movement in Spain, or the Arab Spring showed last.

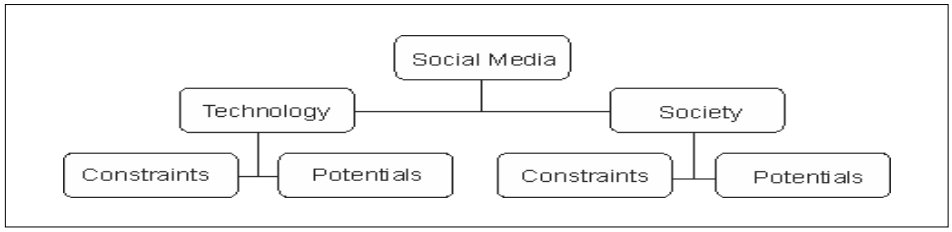
Corporate social media are ideological platforms, because they provide the illusionary impression that everyone now has the opportunity to present oneself to the public and to receive attention, while most people on web 2.0 are marginalised and invisible and cannot influence political decisions and define cultural values compared to powerful political and economic actors (Dean 2009, 31). The material resources of participation are asymmetrical and show the limitations of freedom of speech on social media. Structural inequalities and power relations stratify public visibility and participation online (Sandoval and Fuchs 2010, 144). New technologies such as social software are an ideology and an expression of "repressive tolerance" (Marcuse 1965) in capitalist society. This is not caused through technics by itself or by design, but rather results from the application of technology in society. Social media may be applied differently to another society.

In reference to the limitations and emancipatory prospects of social media that are addressed in the main research questions, Figure 2 can be outlined.

In summary, social media incorporate both technological as well as social constraints and potentials. Power and domination are embedded into the design of the Internet and social media and at the same time the effects of the Internet and social media depend on how such technologies are used.

In reference to the dialectics of technological design and assessment it has become clear that both technological and social changes are needed in terms of

Figure 2: Technological and Social Constraints and Potentials of Social Media



achieving commons-based social media. The challenge of the current century is to sublate (*aufheben*) technology and society in order to overcome the antagonistic characters of social media in particular and society in general and to point toward a commons-based information society. We need a techno–social revolution (Hofkirchner 2013, 246–247) for a different technology in a different society oriented on social needs and ethical dimensions far from bourgeois values. We must transform new information and communication technologies and begin to intervene in the design and assessment process of technology, instead of turning away from technology as technophobic groups, neo-Luddites, and some reactionary environmentalists suggest (Feenberg 1999, xiv). We must redesign technology and adapt it to the needs of a real liberation of humans.

Speaking in terms of dialectical philosophy, a qualitative change and a dialectical sublation (*Aufhebung*) of capitalist technology in general as well as ICT and social media in particular are necessary. That is to say, elimination of regressive elements (destructive productive forces), preservation of progressive elements (constructive productive forces), and elevation of new technological qualities on a higher level. This new emergent qualities are the negation of the negation, cannot be found on the lower level, and are a dynamic process of development. In advanced industrial societies, we do have "the change of turning quantitative technical progress into qualitatively different ways of life" (Marcuse 1969, 19). The technological transformation does not follow an automatic process and is not predetermined, but requires in praxis the human subject and points towards the need of class struggles and revolution.

Notes:

1. This article summarises the main arguments of my PhD dissertation that I defended at the University of Salzburg, Austria, on December 19, 2013. I will publish parts of my doctoral research as book, entitled "Critical Theory and Social Media: Between Emancipation and Commodification," with Routledge in 2015.

2. "Mit der Maschine … erhält die Herrschaft der vergangenen Arbeit über die lebendige nicht nur soziale – in der Beziehung von Kapitalist und Arbeiter ausgedrückte – sondern sozusagen technologische Wahrheit."

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