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Social Networking Sites
in the Surveillance Society

Foundations of the Critique of the Political Economy of Surveillance

Christian Fuchs

Abstract: *The task of this paper is to help grounding foundations for connecting the general notion of surveillance to Marxian categories. Existing theories of surveillance have thus far not been linked systematically to Marx's works. The contribution of this paper is that it discusses the relation of the Marxian concept of the cycle of accumulation and the notion of surveillance. It is shown that for Karl Marx, surveillance was a fundamental aspect of the capitalist economy and the modern nation state. Surveillance is considered as an integral negative and antagonistic feature of capitalist society. The Marxian concept of the cycle of capital accumulation allows to systematically distinguish six forms of economic surveillance: applicant surveillance, workplace surveillance, workforce surveillance, property surveillance, consumer surveillance, and surveillance of competition. The Marxian notion of accumulation is suited for grounding a general critical understanding of surveillance.*

Keywords: surveillance, surveillance studies, surveillance society, Karl Marx, capitalism, cycle of capital accumulation, critique of the political economy

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1. Introduction

Recently, public and academic discourse has witnessed an increasing interest in the works of Karl Marx. So for example, after the beginning of the financial crisis, Time Magazine (February 2, 2009) put Marx on its cover and asked: "What would Marx think?" The social sciences saw a significant increase in works focused on Marxian concepts: Whereas there were 73 papers published in 2007 that contained the word Marx in their title and are indexed in Scopus Social Sciences & Humanities, there were 91 in 2008 and 139 in 2009 (Scopus Social Sciences & Humanities, accessed on March 18, 2010). This circumstance is an indicator for a rising interest in Marxian concepts and approaches in the social sciences.

There are numerous reasons for this surging interest in Marx and Marxian-inspired analysis. David Harvey says that "questioning the future of capitalism" is an adequate reaction to the new global economic crisis (Harvey 2010b, 217). Slavoj Žižek (2008) says that the antagonisms of contemporary capitalism in the context of the ecological crisis, intellectual property, biogenetics, new forms of apartheid and slums show that we still need the Marxian notion of class and "a proletarian position, the position of the 'part of no-part'" (Žižek 2008, 428). This would be the only way for breaking the "sound barrier" that presents global capitalism as fate without alternatives (459). Göran Therborn argues that the "new constellations of power and new possibilities of resistance" in the 21st century require retaining the "Marxian idea that human emancipation from exploitation, oppression, discrimination and the inevitable linkage between privilege and misery can come only from struggle by the exploited and disadvantaged themselves" (Therborn 2008, 61). "Since neither capitalism nor its polarizations of life courses appear very likely to disappear in the foreseeable future, there is a good chance that the spectre of Marx will continue to haunt social thought" (Therborn 2008, 110).

If we believe these analyses that come from scholars who belong to the most influential thinkers in the social sciences and humanities, then we are living in new Marxian times. Contemporary society has also seen the rise of increasing state surveillance after 9/11, consumer surveillance on the Internet (for example: Facebook, Google), CCTV as ubiquitous phenomenon, or lateral surveillance as mode of entertainment and popular culture (Big Brother and other reality TV shows that operate based on the principle of constant monitoring, location-based services on mobile phones and in cars, webcam-based video chats, 24 hour live transmission via webcams, etc) – i.e. the extension and intensification of surveillance in the economy, the political system, and everyday life. If we are indeed witnessing new Marxian times, then it makes sense to ask the question if Marx's concept of capitalist accumulation can be systematically connected to the analysis of surveillance. The analysis presented in this paper operates on a meta-level, its task is not to analyze single surveillance phenomena with the help of Marxian analysis, but to help grounding foundations for connecting the general notion of surveillance to Marxian categories.

The contribution that is made by this paper to help advancing the integration of the surveillance concept and categories of the Marxian critique of the political economy is conducted in four steps: First, the role of Marx in selected important surveillance studies approaches is discussed (section 2). This discussion is necessarily exemplary and incomplete, but nonetheless allows drawing some conclusions by focusing on key thinkers. Second, it is shown how Marx utilized the surveillance concept (section 3). Third, the Marxian cycle of capital accumulation is introduced (section 4). Fourth, a typology of forms of economic surveillance is introduced by connecting the concept of surveillance to the cycle of capital accumulation (section 5). Finally, some conclusions are drawn (section 6).

2. The Role of Karl Marx in Surveillance Studies

The study of surveillance has in the past decades gained momentum in the academic debate. Therefore some scholars argue that we have witnessed the rise of surveillance studies as a distinct field of interdisciplinary analysis (Hier and Greenberg 2007, Lyon 2007, Zurawski 2007). I will now discuss the role of Marx's concepts in the approaches of key critical surveillance thinkers in order to draw conclusions about the importance of Marx in surveillance studies. It must again be stressed that the limited length of a research paper only allows presenting a selection of authors. But by focusing on influential critical thinkers, we nonetheless get an idea of the role that Marxian concepts have in critical surveillance studies. The order of presentation of approaches will be chronological.

The selection of the discussed authors is based on two criteria: 1) the authors are frequently cited, 2) they are important for surveillance studies, 3) they explicitly mention Marx. I have selected works of these authors that focus on surveillance or control and reference Karl Marx or refer to Marxian concepts. I then conducted a textual analysis by looking up all passages in these works, where Marx is mentioned. The results are presented by discussing typical passages.

Harry Braverman's (1974) study of the organization of work processes in capitalism is thoroughly grounded in Marx's writings. Braverman shows that the assembly line, management, Taylorism, mechanization, automation, and computerization have functioned as means for destroying all control of the workers in the production process and establishing capital's "control and dictation of each step of the process" (Braverman 1974, 69). Braverman operates with concepts such as control and de-skilling, whereas he mentions the notion of surveillance only once in the book in a quotation by Thorsten Veblen (see: Braverman 1974, 185). Therefore Braverman's approach cannot be considered as being a theory of surveillance.

Michel Foucault quoted Marx for stressing that surveillance has become "a decisive economic operator both as an internal part of the production machinery and as a specific mechanism in the disciplinary power" (Foucault 1977, 175). In Foucault's main surveillance study *Discipline & punish*, the focus is on crime and imprisonment, the topic of economic surveillance is only touched upon cursorily.

Anthony Giddens argues that surveillance and control of the means of violence are “phenomena that largely escape the purview of the most influential schools of social theory, including Marxism, both in the nineteenth century and today” (Giddens 1985, 2). He says that surveillance is an influence on the development of modernity that is independent from capitalism and class conflict (Giddens 1985, 2). He concludes: “critical theory must come to terms with those aspects of modern institutions associated with surveillance as a medium of power” (Giddens 1985, 341).

Oscar H. Gandy (1993, 3-13) argues that the analysis of the political economy of surveillance requires multiple theoretical perspectives: the theories of Jacques Ellul, Karl Marx, Max Weber, Michel Foucault, and Anthony Giddens. Gandy (1993, 5) acknowledges the importance of “Marx’s labor theory of value and through that his explication of the core concept of surplus value and capitalist exploitation” for analyzing the political economy of personal information. Gandy shows how corporations monitor and assess personal information for discriminating between consumers in order to advance advertising and marketing for accumulating capital. He speaks in this context of the panoptic sort. However, this concept is not systematically connected to Marxian categories such as surplus value, class, rate of surplus value, or exploitation.

David Lyon stresses the importance of Marx for conceptualizing economic surveillance: “Karl Marx focuses special attention on surveillance as an aspect of the struggle between labour and capital. Overseeing and monitoring workers is viewed here as a means of maintaining managerial control on behalf of capital. [...] Marx observed how control was maintained through the enclosed space of the factory” (Lyon 1994, 7, 34; see also 25). Lyon characterizes Marxian surveillance concepts as modern because they rely on “nation-state, bureaucracy, techno-logic and political economy”, whereas postmodern approaches focus on how “digital technologies ‘make a difference’” (Lyon 2006, 10). Lyon argues that Marxian theory (just like postmodernism and the theory of Max Weber) cannot “account adequately for surveillance”, yet offers “helpful insights” (Lyon 2001, 9).

David Lyon acknowledges the importance of Marx’s attempt, but also stresses the importance of Weber and Foucault for theorizing surveillance: “I argue that while going ‘beyond’ Marx, Weber and others may be required for an adequate theory of contemporary surveillance practices, ‘going beyond’ does not entail forsaking in toto the modes of analysis inspired by them” (Lyon 2001, 118). “The character of surveillance has rather different connotations in the hands of Marxists and Weberians. The question boils down to whether surveillance power operates along the axis of class relations, or in relation to bureaucratic divisions, including those relating to occupation and employment. [...] From the Marxian viewpoint, surveillance extends the reach of capitalist social relations, whereas, from the Foucauldian, surveillance places ‘individuals’ in the grip of ubiquitous power” (Lyon 1994, 35). “Surveillance, in other words, is again shown to be more complex than a purely Marxist - class power - reading might lead one to expect” (Lyon 1994, 36).

David Lyon has created an influential and admirable critical theory of surveillance. However, his work does not show how Marx’s work can be explicitly used for theoriz-

ing surveillance in a way that is indebted to Marx and at the same time goes beyond Marx. One gets the impression that many contemporary surveillance approaches have gone too far beyond Marx. I do agree that Marx alone cannot explain the complex role of surveillance in contemporary society. But, as I will show in this paper, Marx not only commented on economic surveillance, but also on the role of political surveillance. Furthermore I do not find it sufficient to construct a multidimensional analysis that stresses the importance of Marx, Weber, and Foucault. The question is also how the concepts of these theorists can best be related. In my view, Marx's notion of accumulation as central process of contemporary society plays an important role here because modern society is based on the competition between actors for accumulating ever more money capital, political power, and ideological power and for controlling the resulting resources. Marx is therefore not only important in one respect, but also in a more general sense because he has pointed out a general law of movement of modern society that originated in the capitalist economy, but has shaped all subsystems of society so that relatively autonomous systems have emerged that are based on the logic of accumulation. Surveillance in modern society is always a competitive and instrumental process oriented on accumulating money, power, and hegemony.

Thomas Mathiesen (1997, 2004) shows that physical violence and ideological violence are combined for silencing opposition within capitalism. He speaks in this context of the combination of the panopticon and the synopticon and combines a Foucauldian analysis with Marxian-inspired ideology critique in the tradition of the Frankfurt school. Mathiesen's notion of the synopticon can be interpreted as a contemporary interpretation of Horkheimer's and Adorno's culture industry hypothesis, which is inspired by the Marxian critique of reification and commodity fetishism. Although Mathiesen's analysis can therefore be read as being implicitly Marxian in character, he does not explicitly acknowledge this connection.

Kevin Robins and Frank Webster (1999) build on Marx's notion of commodity fetishism for constructing the concept of technology fetishism (Robins and Webster 1999, 50-52) that is used as background for conceptualizing contemporary surveillance. Marx is, besides Foucault, Giddens, and others, one important influence for Robins and Webster.

Mark Andrejevic has argued that consumers who are surveillance in contemporary media systems are exploited by capital. He has in this context coined notions such as the work of being watched (Andrejevic 2002), the virtual enclosure (Andrejevic 2007), or exploitation 2.0 (Andrejevic 2009). Andrejevic's approach is influenced by Marxian class analysis, but he has not systematically elaborated a connection of his concepts to Marxian concepts such as class or surplus value.

Toshimaru Ogura (2006) says that there are five roles of surveillance in capitalism: 1) workplace surveillance, 2) population management, 3) control of the human mind, 4) consumer surveillance, 5) computerized surveillance. Ogura's approach is implicitly grounded in Marxian ideology critique and the Marxian critique of machine fetishism, but he does not attempt to establish a connection to Marx's works in a more systematic manner.

In sum: First, there are approaches that claim that Marx ignored the phenomenon of surveillance and thereby reduced modern society to its class structure and overlooked important mechanisms of modernization. Anthony Giddens is the most prominent representative of this view. Second, there are critical approaches such as the ones by Oscar Gandy and David Lyon that acknowledge the importance of Marx besides Weber, Foucault, and others as one of several important theorists needed for conceptualizing surveillance. Third, there are critical approaches that make implicit usage of Marxian concepts such as exploitation, class, fetishism, ideology critique, or culture industry, without systematically outlining this connection to Marx and without integrating Marx's concept of the cycle of capital accumulation that is at the heart of the critique of the political economy. Fourth, there are Marxist approaches, such as the one by Harry Braverman, that elaborate concepts such as workforce control that are relevant for surveillance studies, but do not use the notion of surveillance in this context.

The result of this discussion is that the role of Marx's works for conceptualizing surveillance has thus far not been adequately discussed. The following sections will try to contribute to elevate this gap by showing what Marx had to say about surveillance and connecting the notion of economic surveillance to Marx's concept of the cycle of capital accumulation. My aim is not to argue that Marx is the only theorist relevant for conceptualizing surveillance or that Marxian analysis alone is able to explain all qualities of the complexity of surveillance, but rather to suggest that there is more in Marx than surveillance scholars have thought thus far and that it is worth to systematically engage with Marxian works in order to connect them to the notion of surveillance. This requires to first take a look at what Marx wrote about surveillance in order to find out if Giddens' claim that Marx ignored surveillance in his analysis is right or not.

3. Karl Marx on Surveillance

For being able to give an overview how Marx used the notion of surveillance, I searched for the terms "Überwachung", "überwachen", and related keywords (in the form of a search query that has the form "überwach*") in the German works of Karl Marx. Characteristic usages are presented with the help of examples. The quotations are presented from English language sources. The search was conducted in the German publication versions because most texts by Marx were written originally in German, so that a better authenticity of the usage of the notion of Überwachung (surveillance) can be guaranteed.

For Karl Marx, surveillance was a fundamental aspect of the capitalist economy and the modern nation state.

"The work of directing, superintending and adjusting becomes one of the functions of capital, from the moment that the labour under capital's control becomes cooperative. As a specific function of capital, the directing function acquires its own specific characteristics" (Marx 1867, 449). Marx argues that the supervision of labour in the production process is "purely despotic" (450) and that this despotism is not di-

rectly exerted by the capitalist. “He hands over the work of direct and constant supervision of the individual workers and groups of workers to a special kind of wage-labourer. An industrial army of workers under the command of a capitalist requires, like a real army, officers (managers) and N.C.O.s (foremen, overseers), who command during the labour process in the name of capital. The work of supervision becomes their established and exclusive function” (450).

But surveillance was not only an economic concept for Marx. He also pointed out political dimensions: Marx argued that in the United States, population growth in the 19th century resulted in the surveillance of states and regions (MEW 7, 434). He said that nation states engage in the surveillance of passenger traffic (MEW 6, 127), the surveillance of the execution of laws (MEW 19, 30), spying (MEW 8, 437), police surveillance (MEW 2, 78; 7, 313; 9, 511; 17, 401; 18, 387). Like Foucault, Marx talked about disciplinary surveillance power by saying that the state “enmeshes, controls, regulates, superintends and tutors civil society from its most comprehensive manifestations of life down to its most insignificant stirrings” (Marx and Engels 1968, 123).

Marx also used the notion of surveillance in the sense of counter-surveillance (watching the watchers) when he said for example that “the press not only has the right, it has the duty, to keep the strictest eye on the gentlemen representatives of the people” (Marx 1974, 116).

Other than suggested by Giddens (1985), these quotations show that Marx considered surveillance as process that shapes modern society. The concept describes for Marx on the one hand coercive and technological methods for controlling and disciplining workers, but he did not, as claimed by some surveillance scholars, reduce the understanding to an economic meaning. Rather Marx on the other hand also saw the role of surveillance as political process of domination and political and cultural potentials for counter-surveillance, i.e. processes of watching the dominative watchers that allow exerting counter-power in political struggles. The two main actors of surveillance that Marx identified are capital and the nation state. He saw the economy and politics as the two main surveillance spheres. This idea is reflected in contemporary approaches that analyze political economy of surveillance: Toshimaru Ogura (2006, 272) argues for example that “the common characteristics of surveillance are the management of population based on capitalism and the nation state”. Oscar Gandy says that the “panoptic sort is a technology that has been designed and is being continually revised to serve the interests of decision makers within the government and the corporate bureaucracies” (Gandy 1993, 95).

It is impossible to give a full interpretation of the relevance of Marx for conceptualizing contemporary surveillance in a short paper. What can be done is to start the analysis in the economic sphere because Marx’s notion of accumulation stems from economic analysis, although it can be generalized for other subsystems of society. So what will follow in the two subsequent sections is an elaboration of the argument that especially the Marxian cycle of capital accumulation that was elaborated in the three volumes of *Capital*, allows us to systematically understand economic surveillance.

This requires introducing as the next step of analysis the concept of the cycle of capital accumulation.

4. The Cycle of Capital Accumulation

In the three volumes of Capital, Marx analyzes the accumulation process of capital. This process, as described by Marx, is visualized in figure 1. Introducing some important categories that Marx employs can summarize this account.

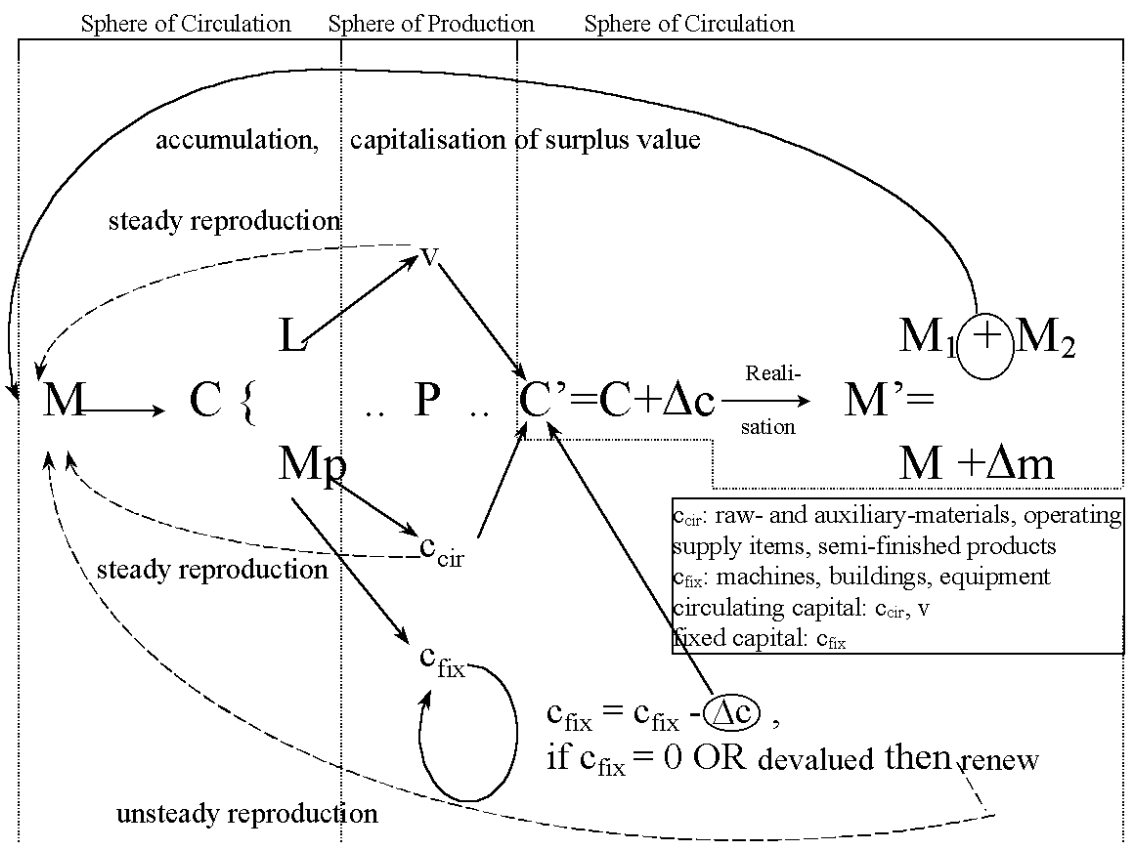


Figure 1: The accumulation/expanded reproduction of capital

Marx's theory is a labour theory of value, which is a theory that draws conclusion from the analysis of the total labour time that is needed for the production of goods. It is also a critique of value, which means that the forms that value takes in capitalism and the practices and ideologies that are based on this form are questioned. The value of a good is the total time that is needed for its production. The more value a good has, the longer its production takes. At the level of prices, this can be observed by the fact that labour-intensive goods are frequently more expensive than goods with low labour intensity. Marx argues that the cell form of capitalism is the commodity, goods that are exchanged in a certain quantitative relationship with money (x amount of commodity A = y units of money). He says that in societies that are based on the economic principle of exchange, goods have a use value and an exchange value. The use

value is the qualitative aspect of a good; it is a utility that satisfies certain human needs. In exchange-based societies, humans can only get hold of such goods by exchanging other goods (such as money or their labour power) with the needed goods in certain quantitative relationships (x commodity A = y commodity B). Concrete labour is a category that is used for describing the creation of the use value of a good by humans. Abstract labour is a category employed for signifying the creation of the value of a good, i.e. the objectified labour time needed for its production. Marx sees money as the general equivalent of exchange; it simplifies the exchange of commodities and is therefore a general commodity.

In the accumulation of capital, capitalists buy labour power and means of production (raw materials, technologies, etc) in order to produce new commodities that are sold with the expectation to make money profit that is partly reinvested. Marx distinguishes two spheres of capital accumulation: the circulation sphere and the sphere of production. In the circulation sphere, capital transforms its value form: First money M is transformed into commodities (from the standpoint of the capitalist as buyer), the capitalist purchases the commodities labour power L and means of production M_p . $M-C$ is based on the two purchases $M-L$ and $M-M_p$. In capitalism, labour power is separated from the means of production, "the mass of the people, the workers, [...] come face to face with the non-workers, the former as non-owners, the latter as the owners, of these means of production" (Marx 1885, 116). This means that due to private property structures workers do not own the means of production, the products they produce, and the profit they generate. Capitalists own these resources.

In the sphere of production, a new good is produced: the value of labour power and the value of the means of production are added to the product. Value takes on the form of productive capital P . The value form of labour is variable capital v (which can be observed as wages), the value form of the means of production constant capital c (which can be observed as the total price of the means of production/producer goods).

That part of capital, therefore, which is turned into means of production, i.e. the raw material, the auxiliary material and the instruments of labour, does not undergo any quantitative alteration of value in the process of production. For this reason, I call it the constant part of capital, or more briefly, constant capital. On the other hand, that part of capital which is turned into labour-power does undergo an alteration of value in the process of production. It both reproduces the equivalent of its own value and produces an excess, a surplus-value, which may itself vary, and be more or less according to circumstances. This part of capital is continually being transformed from a constant into a variable magnitude. I therefore call it the variable part of capital, or more briefly, variable capital. (Marx 1867, 317).

Constant capital consists of two parts: circulating constant capital $ccir$ (the value of the utilized raw materials, auxiliary materials, operating supply items and semi-finished products) and fixed constant capital $cfix$ (the value of the utilized machines, buildings and equipment) (Marx 1885, chapter 8). $ccir$ and v together form circulating capital: They transfuse their value totally to the product and must be constantly re-

newed. c_{fix} remains fixed in the production process for many turnovers of capital. The turnover time of capital is the sum of its circulation time and its production time (Marx 1885, 236). Circulation time is the time that capital takes to be transformed from its commodity form into the money form and later from its money form to its commodity form. Production time is the time that capital takes in the sphere of production.

Fixed constant capital decreases its value in each turnover of capital. Its value is decreased by the amount of Δc , which is a flexible value. Fixed constant capital like machinery does not create value and its value is never entirely transfused to capital at once. It is depreciated by wear and tear, non-usage, and moral depreciation (i.e. the emergence of new machinery with increased productivity).

A part of the capital value advanced is fixed in this form, which is determined by the function of the means of labour in the process. As a means of labour functions and is used up, one part of its value passes over to the product, while another part remains fixed in the means of labour and hence in the production process. The value fixed in this way steadily declines, until the means of labour is worn out and has therefore distributed its value, in a longer or shorter period, over the volume of products that has emerged from a series of continually repeated labour processes. (Marx 1885, 237f)

In the sphere of production, capital stops its metamorphosis so that capital circulation comes to a halt. New value V' of the commodity is produced, V' contains the value of the necessary constant and variable capital and surplus value Δs of the surplus product. Surplus value is generated by unpaid labour. Capitalists do not pay for the production of surplus, therefore the production of surplus value can be considered as a process of exploitation. The value V' of the new commodity after production is $V' = c + v + s$. The commodity then leaves the sphere of production and again enters the circulation sphere, in which capital conducts its next metamorphosis: By being sold on the market it is transformed from the commodity form back into the money form. Surplus value is realized in the form of money value. The initial money capital M now takes on the form $M' = M + \Delta m$, it has been increased by an increment Δm . Accumulation of capital means that the produced surplus value is (partly) reinvested/capitalized. The end point of one process M' becomes the starting point of a new accumulation process. One part of M' , M_1 , is reinvested. Accumulation means the aggregation of capital by investment and exploitation in the capital circuit $M-C..P..C'-M'$, in which the end product M' becomes a new starting point M . The total process makes up the dynamic character of capital. Capital is money that is permanently increasing due to the exploitation of surplus value.

Commodities are sold at prices that are higher than the investment costs so that money profit is generated. For Marx, one decisive quality of capital accumulation is that profit is an emergent property of production that is produced by labour, but owned by the capitalists. Without labour no profit could be made. Workers are forced to enter class relations and to produce profit in order to survive, which enables capital to appropriate surplus. The notion of exploited surplus value is the main concept

of Marx's theory, by which he intends to show that capitalism is a class society. "The theory of surplus value is in consequence immediately the theory of exploitation" (Negri 1991, 74) and, one can add, the theory of class and as a consequence the political demand for a classless society. David Harvey (2010a, 125) stresses that it is Marx's "fundamental theorem [...] that surplus value originates from the difference between what labor gets for its labor-power as a commodity and what the laborer produces in a labor process under the command of capital".

Enrique Dussel argues that in his work on the Grundrisse, Marx had "for the first time in his work [...] discovered the category of surplus value" (Dussel 2008, 77) in December 1857. "if the worker needs only half a working day in order to live a whole day, then, in order to keep alive as a worker, he needs to work only half a day. The second half of the day is forced labour; surplus labour" (Marx 1857/58, 324). Surplus value also means that workers are compelled to work more than necessary for satisfying their immediate needs, they produce an excess for free that is appropriated by capitalists: "What appears as surplus value on capital's side appears identically on the worker's side as surplus labour in excess of his requirements as worker, hence in excess of his immediate requirements for keeping himself alive" (Marx 1857/58, 324f).

The surplus value which capital obtains through the production process consists only of the excess of surplus labour over necessary labour. The increase in productive force can increase surplus labour – i.e. the excess of labour objectified in capital as product over the labour objectified in the exchange value of the working day – only to the extent that it diminishes the relation of necessary labour to surplus labour, and only in the proportion in which it diminishes this relation. Surplus value is exactly equal to surplus labour; the increase of one [is] exactly measured by the diminution of necessary labour (Marx 1857/58, 339).

The capitalist wants to produce a commodity greater in value than the sum of the values of the commodities used to produce it, namely the means of production and the labour-power he purchased with his good money on the open market. His aim is to produce not only a use-value, but a commodity; not only use-value, but value; and not just value, but also surplus value (...) The cotton originally bought for £100 is for example re-sold at £100 + £10, i.e. £110. The complete form of this process is therefore M-C-M', where $M' = M + \Delta M$, i.e. the original sum advanced plus an increment. This increment or excess over the original value I call 'surplus-value'. (Marx 1867, 293, 251)

Capital is not money, but money that is increased through accumulation, "money which begets money" (Marx 1867, 256). Marx argues that the value of labour power is the average amount of time that is needed for the production of goods that are necessary for survival (necessary labour time), which in capitalism is paid for by workers with their wages. Surplus labour time is all labour time that exceeds necessary labour time, remains unpaid, is appropriated for free by capitalists, and transformed into money profit.

Surplus value "is in substance the materialization of unpaid labour-time. The secret of the self-valorization of capital resolves itself into the fact that it has at its disposal a

definite quantity of the unpaid labour of other people" (Marx 1867, 672). Surplus value "costs the worker labour but the capitalist nothing", but "none the less becomes the legitimate property of the capitalist" (Marx 1867, 672). "Capital also developed into a coercive relation, and this compels the working class to do more work than would be required by the narrow circle of its own needs. As an agent in producing the activity of others, as an extractor of surplus labour and an exploiter of labour-power, it surpasses all earlier systems of production, which were based on directly compulsory labour, in its energy and its quality of unbounded and ruthless activity" (Marx 1867, 425). Surplus value also means that workers are compelled to work more than necessary for satisfying their immediate needs, they produce an excess for free that is appropriated by capitalists: "What appears as surplus value on capital's side appears identically on the worker's side as surplus labour in excess of his requirements as worker, hence in excess of his immediate requirements for keeping himself alive" (Marx 1857/58, 324f).

Marx argues that capitalists are unproductive, they do not produce value, and that profit stems from the production of value by workers that is exploited and appropriated by capitalists. He uses the term productive labour in this context: Productive labour "produces surplus-value for the capitalist, or in other words contributes towards the self-valorization of capital" (Marx 1867, 644). For Marx, capitalism is based on the permanent theft of unpaid labour from workers by capitalists. This is the reason why he characterizes capital as vampire and werewolf. "Capital is dead labour which, vampire-like, lives only by sucking living labour, and lives the more, the more labour it sucks" (Marx 1867, 342). The production of surplus value "forms the specific content and purpose of capitalist production" (Marx 1867, 411), it is "the differentia specifica of capitalist production", "the absolute law of this mode of production" (Marx 1867, 769), the "driving force and the final result of the capitalist process of production" (Marx 1867, 976). The production and exploitation of surplus value is according to Marx the heart of class structuration and capitalism.

The next step in the analysis will be to show that Marx's distinction between the sphere of production and the sphere of circulation and between constant capital and variable capital allows to systematically distinguishing different forms of economic surveillance.

5. Surveillance and the cycle of capital accumulation

Following Ogura's (2006) and Gandy's (1993) argument that a common characteristic of surveillance is the management of population based on capitalism and/or the nation state, we can distinguish between economic and political surveillance as the two major forms of surveillance. Surveillance by nation states and corporations aims at controlling the behaviour of individuals and groups, i.e. they should be forced to behave or not behave in certain ways because they know that their appearance, movements, location, or ideas are or could be watched by surveillance systems (Fuchs 2008, 267-277). In the case of political electronic surveillance, individuals are threatened by the potential exercise of organized violence (of the law) if they behave in cer-

tain ways that are undesired, but watched by political actors (such as secret services or the police). In the case of economic electronic surveillance, individuals are threatened by the violence of the market that wants to force them to buy or produce certain commodities and help reproduce capitalist relations by gathering and using information on their economic behaviour with the help of electronic systems. In such forms of surveillance violence and heteronomy are the *ultimo ratio*.

Marx did neither describe all forms of surveillance, nor all kinds of economic surveillance. He especially could not theorize consumer surveillance and the role of information technologies in surveillance because these developments were not part of the times he lived in. "Contemporary surveillance must be understood in the light of changed circumstances, especially the growing centrality of consumption and the adoption of information technologies" (Lyon 1994, 225). Capitalism has changed, at the time of Marx consumer surveillance and electronic surveillance were hardly important. Economic surveillance was focused on the control of the production process. Nonetheless, the Marxian framework of political economy that describes the cycle of capital accumulation, can be used today for systematically locating forms of economic surveillance in the production and circulation process.

The following table discusses the role of surveillance at the various points in the capital accumulation process. 6 different forms of electronic surveillance are suggested.

Sphere of the accumulation process	Surveillance target	Description	Methods (examples)
Circulation	potential variable capital (v)	applicant surveillance: potential work forces	access to criminal records, health databases, bank data, employment histories, and other databases; talks with former employers and supervisors, information search on the Internet
Production	variable capital (v)	workplace surveillance: surveillance of labour forces at the work place	managers, supervisors, work place surveillance technologies, databases, corporate identities, integrative management strategies, participatory management, identification systems, electronic work flow systems, e-mail surveillance, surveillance

				of employees' Internet activities; fixation of workers' knowledge, answers to problems, and best practices in databases
Production	variable capital (v)	workforce surveillance: surveillance of productivity	surveillance of	Taylorism: in order to increase productivity, data on the activities of workers are collected, recorded, measured, stored, and analyzed
Production	constant capital (c)	property surveillance: surveillance of private property (commodities, capital, means of production) in order to circumvent theft and sabotage	surveillance of	security guards, alarm systems, CCTV, access control systems, invisible security labelling or electronic tagging of commodities
Circulation	$W' \Rightarrow G'$	consumer surveillance: consumption interests and processes are systematically observed and analyzed in order to guarantee the selling of as much commodities as possible and the realization of profit	surveillance: consumer surveillance	marketing research, consumer research, electronic consumer surveillance (especially on the Internet: cookies, targeted advertising mechanisms, spyware, profiling of Internet usage behaviour, data gathering by intelligent Internet spiders, spam mail databases, data mining, clickstream monitoring, collaborative filtering), loyalty cards, product testing
Circulation	$W' \Rightarrow G'$	surveillance of competition: corporations have the interest to minimize competition by	surveillance of	marketing research, industrial espionage, information gathering on the Internet

<p>other firms in order to maximize market shares and profits, therefore they are interesting in collecting and analysing data about the technologies, labour force, organizational structures, commodities, economic performance, etc of their competitors</p>

Table 1: the role of surveillance in the cycle of capital accumulation

Table 1 shows that surveillance is a central method of control and discipline in the capital accumulation process. Corporations conduct a systematic gathering of data about applicants, employees, the labour process, private property, consumers and competitors in order to minimize economic risks, discipline workers, increase productivity, circumvent theft, sabotage, and protests, control consumers through advertising, and adapt to changing conditions of competition. The overall aim of the employment of multiple surveillance methods and technologies in the capital accumulation process is the maximization of profit and the increased exploitation of surplus value. Surveillance is a method that capital employs for controlling the production and circulation process and for controlling and disciplining the workforce. Economic surveillance is a way of minimizing the risk of making losses and maximizing the opportunities for making profits. “Businesses seek to maximize profits by minimizing risk. They do this by identifying individuals, who, by virtue of their profiles, ratings, or comparative scores, should probably be ignored, avoided or treated with the utmost deference and respect” (Gandy 2003, 30).

6. Conclusion

The rise of capitalism has resulted in the idea that the private sphere should be separated from the public sphere and not accessible for the public and that therefore autonomy and anonymity of the individual is needed in the private sphere. The rise of the idea of privacy in modern society is connected to the rise of the central ideal of the freedom of private ownership. Private ownership is the idea that humans have the right to own as much wealth as they want, as long as it is inherited or acquired

through individual achievements. There is an antagonism between private ownership and social equity modern society. How much and what exactly a person owns is treated as an aspect of privacy in contemporary society. To keep ownership structures secret is a measure of precaution against the public questioning or the political and individual attack against private ownership. Capitalism requires anonymity and privacy in order to function. But at the same time in modernity strangers enter social relations that require trust or enabling exchange. If a stranger can be trusted is checked with the help of surveillance procedures. The ideals of modernity (such as the freedom of ownership) also produce phenomena such as income and wealth inequality, poverty, unemployment, precarious living and working conditions. These socio-economic differences pose problems for the maintenance of order and private ownership (crime, political protests, violent conflicts) that need to be contained if modernity wants to survive. As a result, state surveillance is a necessary component of modern societies. Corporations have the aim of accumulating ever more capital. For doing so, they have an interest in knowing as much as possible about the interests, tastes, and behaviours of their customers. This results in the surveillance of consumers. Accumulating capital also requires the direct and ideological control of employee behaviour. Therefore various personal and technological forms of surveillance in the production process are necessary elements of the capitalist economy.

The establishment of trust, socio-economic differences, and corporate interests are three qualities of modernity that necessitate surveillance. Therefore modernity on the one hand advances the ideal of a right to privacy, but at the same time it must continuously advance surveillance that threatens to undermine privacy rights. An antagonism between privacy ideals and surveillance is therefore constitutive for capitalism.

Surveillance studies is an interdisciplinary field of analysis, in which one can find many critical approaches that connect the notion of surveillance to economic, political, and cultural forms of domination. At the end of the first decade of the 21st century, capitalist society has entered global economic crisis and is facing numerous global problems. The continuous extension and intensification of surveillance may be interpreted as the reaction to and attempt to manage continuous crises. The decade started with burst of the dot.com bubble that resulted in the new economy crisis in 2000. Crisis management saw the emergence of new accumulation strategies that resulted in the emergence of Internet platforms that focus on the combination of multimedia, user-generated content, community-building, and communication (e.g. Facebook, Twitter, YouTube). These platforms are advertising-based and accumulate profit by targeted advertising that requires the massive surveillance and commodification of user data and user behaviour data for economic ends. In 2001, the attacks on the World Trade Center triggered a new global war that resulted in a vicious cycle of reinforcing mutual violence that constitutes a permanent political crisis. One of the results of this crisis was that nation states have tried to manage the crisis by extending and intensifying state surveillance of citizens for the pre-emptive identification of terrorists. Notwithstanding the question if such a surveillance strategy can actually

reduce terrorism, the consequence has been a climate of general fear, mistrust, suspicion, and the reduction of citizens to the status of potential terrorists that need to be kept under permanent political supervision and control. The end of the first decade of the 21st century has seen the emergence of a finance crisis in the housing market that triggered the worst global economic crisis in 80 years. The continuous crisis and intensification of misery has resulted in a renewed interest in the categories of Marxian analysis. As surveillance is an important phenomenon of the contemporary age, it was the task of this paper to contribute to the systematic conceptualization of surveillance with the help of Marxian categories.

The analysis of the approaches of key critical surveillance scholars showed that a systematic analysis of surveillance with the help of Marxian concepts is missing. Surveillance scholars either claim that Marx ignored the phenomenon of surveillance or acknowledge to a certain degree the importance of Marx for surveillance studies, but at the same time relativize this statement by either conducting multidimensional analyses that miss causal connections, or by implicitly or metaphorically using certain Marxian concepts without connecting the analysis of contemporary surveillance phenomena systematically to Marx's works.

An analysis of Marx's works showed that Anthony Giddens' claim that Marx ignored the analysis of the role of surveillance in modern society could not be substantiated. It was shown that the Marxian concept of the cycle of capital accumulation allows to systematically distinguish six forms of economic surveillance: applicant surveillance, workplace surveillance, workforce surveillance, property surveillance, consumer surveillance, and surveillance of competition.

It is an important task to provide systematic analyses of surveillance in contemporary society because surveillance has become an ubiquitous phenomenon. Marxian analysis helps to show that capitalist society is based on the instrumental and competitive logic of accumulation that stratifies society and as a result creates economic, political, cultural, social, and ecological problems. Surveillance is a phenomenon that is connected to these ongoing stratification processes of society. Based on the Marxian notion of accumulation, surveillance can be understood as the collection of data on individuals or groups that are used so that control and discipline of behaviour can be exercised by the threat of being targeted by violence. Surveillance is an expression of instrumental reason and competition because it is based on the idea that others are watched and data on their behaviour, ideas, look, etc. are gathered so that they can be controlled and disciplined and choose certain actions and avoid others that are considered as undesirable. Competitive interests and behaviours are involved, the controlling group, class or individuals try to force the surveilled to avoid certain actions by conveying to the latter that information on them is available that could be used for actions that could have negative influences on their lives. Surveillance operates with threats and fear; it is a form of psychological and structural violence that can turn into physical violence. surveillance is a specific kind of information gathering, storage, processing, assessment, and use that involves potential or actual harm, coercion, violence, asymmetric power relations, control, manipulation, domination, disciplinary

power. It is instrumental and a means for trying to derive and accumulate benefits for certain groups or individuals at the expense of other groups or individuals. It tries to bring about or prevent certain behaviours of groups or individuals by gathering, storing, processing, diffusing, assessing, and using data about humans so that potential or actual physical, ideological, or structural violence can be directed against humans in order to influence their behaviour. This influence is brought about by coercive means and brings benefits to certain groups at the expense of others.

An important future task is to systematically analyze surveillance phenomena such as targeted advertising on the Internet, political surveillance after 9/11, contemporary consumer surveillance, CCTV, surveillance in ubiquitous computing and on the mobile Internet, new electronic forms of consumer surveillance, Internet surveillance on Facebook and Google, etc. I am convinced that if such analyses should be conducted in a critical manner, that this requires connecting them to Marxian categories such as accumulation, class, and surplus value. This paper aimed at contributing to grounding the theoretical foundations for such analyses. The Marxian notion of accumulation is suited for grounding a general critical understanding of surveillance. Establishing such a concept is still in a childhood phase and will require further works.

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