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Digital prosumption labour on social media in the context of the capitalist regime of time

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Abstract

So-called social media such as Facebook, Twitter, YouTube, Weibo and LinkedIn are an expression of changing regimes of time in capitalist society. This paper discusses how corporate social media are related to the capitalist organization of time and the changes this organization is undergoing. It uses social theory for conceptualizing changes of society and its time regime and how these changes shape social media. These changes have been described with notions such as prosumption, consumption labour, play labour (play-bour) and digital labour. The paper contextualizes digital labour on social media with the help of a model of society that distinguishes three subsystems (the economy, politics, culture) and three forms of power (economic, political, culture). In modern society, these systems are based on the logic of the accumulation of power and the acceleration of accumulation. The paper discusses the role of various dimensions of time in capitalism with the help of a model that is grounded in Karl Marx's works. It points out the importance of the category of time for a labour theory of value and a digital labour theory of value. Social media are expressions of the changing time regimes that modern society has been undergoing, especially in relation to the blurring of leisure and labour time (play labour), production and consumption time (prosumption), new forms of absolute and relative surplus value production, the acceleration of consumption with the help of targeted online advertising and the creation of speculative, future-oriented forms of fictitious capital.

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Keywords

Capitalism, digital labour theory of value, Facebook, Google, Karl Marx, social media, time, Twitter, YouTube, Weibo

Introduction

The terms social media and web 2.0 were established around 2005 in order to characterize world wide web (www) platforms like social networking sites (e.g. Facebook, LinkedIn), blogs (e.g. Wordpress), wikis (e.g. Wikipedia), microblogs (e.g. Twitter, Weibo) and user-generated content sharing sites (e.g. YouTube). Such platforms are among the 50 most accessed www-sites in the world:¹ Facebook (#2), YouTube (#3), Wikipedia (#6), Blogspot (#11), Twitter (#12), LinkedIn (#14), Wordpress (#21), VKontakte (#23), Weibo (#28), Tumblr (#32), Pinterest (#34), xvideos (#36), FC2 (#39), xHamster (#45). Although there are very different forms of sociality and all media involve some form of sociality, the online platforms that today are referred to as social media² have in common that they make intensive use of contributions from (content) producing consumers – ‘prosumers’. In this context, the notion of ‘digital labour’ (Burston et al., 2010; Scholz, 2013) has emerged. It is especially used for social media activities on for-profit platforms.

In 2012, users spent 175 million hours per day and 63.875 billion hours per year on Facebook.³ Given that in 2012 there were around 1 billion Facebook users in the world,⁴ the average Facebook user spent 65 hours per year and 18 minutes per day on the platform. The notion of digital labour signifies that the time spent on Facebook and other corporate platforms is not simple consumption or leisure time, but productive time that generates economic value.

Marx saw the importance of time as a resource in capitalism and wrote that under this regime of the organization of life and society, time ‘is everything, man is nothing; he is, at the most, time’s carcass. Quality no longer matters. Quantity alone decides everything; hour for hour, day for day’ (Marx, 1847: 47). The emergence of social media is an expression of the changes between labour time and leisure time that have been conceptualized with terms such as digital labour, prosumption, consumption labour and play labour. The task of this paper is to discuss how corporate social media are related to the capitalist organization of time and the changes this organization is undergoing. In doing so, the paper employs social theory for discussing the role of time in capitalist society (section 2) and the capitalist economy (section 3). The resulting theoretical conceptualizations are used in section 4 for discussing social media usage in the context of changing modes of the organization of time.

Time and capitalist society

Pierre Bourdieu (1986a, 1986b) has generalized the concepts of capital and accumulation and describes capitalism as a class system based on the accumulation of economic, political and cultural capital. Jürgen Habermas (1987) uses the distinction between the systems of the economy and the state and the lifeworld for critically analysing how the instrumental logic of capital accumulation and administrative state bureaucracy colonizes lifeworld communication and how social movements struggle against the colonization of the lifeworld for a communicative rationality. Anthony Giddens (1984) argues that there are economic, political, legal and symbolic institutions in society. Bourdieu and Habermas make a distinction between political, economic and cultural dimensions of society. If one combines political and legal institutions as interacting dimensions of the political system, then the same distinction of three dimensions of society can be found in Giddens' works. Distinguishing the political, economic and cultural system as three dimensions of society is therefore feasible.

John B Thompson (1995) distinguishes four forms of power: economic, political, coercive and symbolic power. It is, however, not clear why he reduces the notions of violence and coercion to one dimension of power. Johan Galtung (1990), in contrast, argues that there is not just direct violence (through physical intervention; an event), but also structural and ideological violence. Different forms of violence can be exerted in order to accumulate different forms of power. In modern society, economic, political and cultural power can be accumulated and tend to be asymmetrically distributed. Table 1 gives an overview of these three forms of power that are based on the threefold distinction of three dimensions of society. Direct, structural and cultural violence are in class societies regularly used for fostering the accumulation of power in all subsystems of society.

What is capitalism? Is it a mode of economic production or a form of the organization of society? For Marx (1867), capital is self-expanding value and accumulation is its inherent feature. Capital needs to permanently increase; otherwise companies, branches, industries or entire economies enter phases of crisis. Capitalism is therefore a dynamic and inherently expansive system, which has implications for the exploitation of nature, centralization, concentration, uneven development, imperialism, military conflicts, the creation of milieus of unpaid and highly exploited labour, the destruction of nature and the depletion of natural resources, etc. 'The employment of surplus-value as capital, or its reconversion into capital, is called accumulation of capital' (Marx, 1867: 725).

Table 1. Three forms of power.

| Dimension of society | Definition of power | Structures of power in modern society |
|----------------------|---|---|
| Economy | Control of use-values and resources that are produced, distributed and consumed | Control of money and capital |
| Politics | Influence on collective decisions that determine aspects of the lives of humans in certain communities and social systems | Control of governments, bureaucratic state institutions, parliament, military, police, parties, lobby groups, civil society groups, etc. |
| Culture | Definition of moral values and meaning that shape what is considered as important, reputable and worthy in society | Control of structures that define meaning and moral values in society (e.g. universities, religious groups, intellectual circles, opinion-making groups, etc) |

[The capitalist] shares with the miser an absolute drive towards self-enrichment. But what appears in the miser as the mania of an individual is in the capitalist the effect of a social mechanism in which he is merely a cog. Moreover, the development of capitalist production makes it necessary constantly to increase the amount of capital laid out in a given industrial undertaking, and competition subordinates every individual capitalist to the immanent laws of capitalist production, as external and coercive laws. It compels him to keep extending his capital, so as to preserve it, and he can only extend it by means of progressive accumulation. (Marx, 1867: 739)

Capitalism is a form of society that is grounded in and driven by the accumulation of capital and power.

Money capital is one specific form of power alongside decision-making power and definition power. All forms of power can be accumulated. The drive to accumulate in contemporary society is not limited to money capital. We also find accumulation imperative in the accumulation of political decision power and the accumulation of cultural distinction, reputation and definition power. Capitalism is not a purely economic system, but rather a society, in which the subsystems are driven by the accumulation imperative. Accumulation logic is multidimensional and shapes the modern economy, politics, culture, private life, everyday life and modern humans'

relationship to nature. The subsystems of modern society have their own specific forms of the accumulation logic, which means that they all have their own specific economies of production, circulation and distribution of power. Power takes on economic, political and cultural forms. The accumulation of power by the one results in disadvantages for others – exploitation, oppression and inequality. The logic of accumulation that is inscribed into modern society brings about fundamental inequalities. Capitalism is not only a society that is based on the logic of accumulation, but a society that features fundamental inequalities and power asymmetries. One of the important achievements of Marx is that he has uncovered the logic of accumulation immanent in capitalism and pointed out the immanent inequalities that this logic produces.

How is the modern logic of accumulation related to time? Historically, cyclical concepts of variable time determined by the rhythms of nature (tides, day and night, the seasons, length of the day, etc.) have dominated agricultural societies, whereas the linearity of clock time measured in constant temporal units (seconds, minutes, hours, days, weeks, months, years) is a more recent phenomenon. Postone (1993: 200f) distinguishes in this context between concrete and abstract time: in concrete time, time is a dependent variable determined by events. So, for example, in Europe, it was common until the 14th century that an hour had a different length depending on the season. Abstract time is independent of external events and consists of uniform segments that do not change, but are fixed. Abstract time is uniform, constant, continuous, homogenous, invariable, commensurable and interchangeable. This concept was introduced in Western Europe in the 14th century. Abstract time is clock time. It can be measured with modern mechanical or digital clocks.

In the 14th-century Western European cloth industry, work was conducted in workshops owned and controlled by master weavers who hired workers and bought wool from cloth merchants, to whom they also sold the final products. ‘The organizing principle, in other words, was an early form of the capital-wage relationship. . . . Implicit in this form of production is the importance of productivity’ (Postone, 1993: 210). Work bells were introduced that rang to indicate the start and end of the working day as well as breaks. They helped in disciplining, organizing and controlling the workers’ activities. The concern about productivity necessitated the measurement of output per unit of time, which in turn required abstract time. The mechanical watch and clock towers thereby obtained a specific social role in the economy. By ‘the end of the fourteenth century the sixty-minute hour was firmly established in the major urbanized areas of Western Europe, replacing the day as the fundamental unit of labor time’ (Postone, 1993, 212). Measuring labour time became a crucial aspect of capital accumulation

because capitalists strived to minimize the work time for a single commodity by speeding up production in order to increase profits. Acceleration is an imperative fundamentally built into capitalism.

Social time in modern society is divided into 'use and use-value on the one hand, and exchange and exchange-value on the other. On the one hand it is sold and on the other hand it is lived' (Lefebvre, 2004: 74). This differentiation results in modern society in the rhythm of working time and free time typical of everyday life. 'Mature industrial societies of all varieties are marked by time-thrift and by a clear demarcation between "work" and "life"' (Thompson, 1967: 93). So capitalism has brought about a fundamental organization of space and time: the zoning into homes, where leisure time and reproduction takes place, and the workplace, factory and office, where wage labour takes place: 'The development of modern capitalism ... brings about a differentiation between the home and the workplace' (Giddens, 1984: 122). 'In modern societies, for the majority of males at least, the home and workplace form the two main centres in which the day's activities tend to be concentrated' (Giddens, 1984: 131). This spatial differentiation is also a temporal one: employees spend parts of the day in the workplace, parts at home and parts on the move from their homes to the workplace and back.

The buying and selling of time, as labour time, is surely one of the most distinctive features of modern capitalism. ... The commodification of time, geared to the mechanisms of industrial production, breaks down the differentiation of city and countryside characteristic of class-divided societies. (Giddens, 1984: 144)

Giddens (1984) sees the importance of the commodification of labour time and the economic organization of time in modern society, but he underestimates the role of the economy of time and the temporality of the economy: capital accumulation is a permanent organization and re-organization of time. Corporations have to accumulate ever more capital in order to exist. Therefore they strive to increase productivity and decrease wage and investment costs in order to produce as many commodities per unit of time as possible. Time in capitalism has its specific economy: it is a precious and scarce resource that in the form of labour time organizes the economy. Accumulation is the need to increase productivity, and to possess more capital at moment 2 than at moment 1 is a specific temporality of the capitalist economy. Therefore, Marx stressed the importance of the economy of time:

The less time the society requires to produce wheat, cattle etc., the more time it wins for other production, material or mental. Just as in the case of an

individual, the multiplicity of its development, its enjoyment and its activity depends on economization of time. Economy of time, to this all economy ultimately reduces itself. (Marx, 1857/58: 172f)

The temporality of the capitalist economy also shapes modern society at large: modernity is not just based on the accumulation of money capital, but also on the accumulation of decision power and definition and meaning-making power. This results in a multidimensional class society, in which economic, political and cultural elites control economic, political and cultural power, which allows them to accumulate ever more power in time so that power at moment $x + 1$ tends to increase in comparison to moment x . Accumulation is organized in time and is a specific organization of power in time. But accumulation is not smooth, it is threatened by social struggles and economic, political and ideological crises that can interrupt or break down the reproduction of accumulation so that there is not an increase of the dominant class's power at moment $x + 1$. Accumulation is a mode of the organization of the economy of time that is not limited to the system of production, but in a broader understanding of the term economy shapes all systems and dimensions that constitute modern society.

Hartmut Rosa (2005, 2012) has elaborated a critical theory of modernity that, like the approaches of Jürgen Habermas and Axel Honneth, shares the Critical Theory framework, but does not see the concepts of communication or recognition as foundational categories, rather stressing that modernity is acceleration. The acceleration of (a) technology, (b) social change and (c) the tempo of life would be three dimensions of the acceleration of modernity that are driven by (a) economic accumulation, (b) functional differentiation and (c) cultural survival. The three forms of acceleration would intensify themselves in a cycle of acceleration.

In the capitalist economy, time is an inbuilt feature of accumulation: the need to accumulate more capital can be achieved by lengthening the working day and increasing productivity (which requires permanent innovations that bring about more productive technologies), which means decreasing production time, by decreasing the circulation and distribution time of commodities, by decreasing the life-span of commodities and increasing the subjective desire for new commodities. In addition, the credit and loan market, the stock market and financial derivatives operate with time as crucial category: money is exchanged with an entitlement to payments made in the future (future profits in the case of stocks, company credits and derivatives, future wages in the case of consumer credits and loans). The result is an economic acceleration logic that aims at the production, circulation and consumption of ever more commodities in ever less time.

Modern politics tend to have to act in a reactive manner to the dynamics of the global economy. Corporations are political actors themselves. They exert pressure on governments and governments have to worry about tax incomes and employment, and so when faced with the threat of losing investments in their countries they may implement company-friendly measures that deregulate markets and the welfare state and benefit companies at the expense of working conditions. Politics is also influenced by the logic of commerce and corporate mass media that focuses on sensationalism, short statements and advertising. Time for deliberation therefore tends to get lost and decisions tend to be made quickly, with short-term perspectives and without long and thorough deliberation. The result is a political acceleration logic that aims at taking and managing ever more decisions in ever shorter time.

In modern culture and everyday life, one finds a culture of speed shaped by the pressure for permanent activities, starting things that cannot get done due to lack of time, organized and commodified deceleration, high-performance sports and hobbies, fast food and fast life, short-lived consumer goods and technologies that require frequent updates and have short physical and moral depreciation times. The result is a cultural acceleration logic that aims at the production and management of ever more experiences in ever less time. Rosa (2005) argues that the culture of speed is also driven by human fears of death that in modern society result in 'panic flight reactions' (Rosa, 2005: 288) so that there is an 'increase and intensification of experience episodes per unit of time' (Rosa, 2005: 289). There is, however, also a specific capitalist form of the acceleration of culture: advertising and consumer culture can artificially create and accelerate the creation of new consumption needs.

All three logics are based on the principle of accumulating more (economic, political and cultural) power in less time. There is an inherent connection between the accumulation of economic, political and cultural power and the logic of speed that accelerates human activities in modern society. Figure 1 visualizes the logic of speed in modern society: acceleration is based on the economic principle 'time is money', the political principle 'time is strength and power', and the cultural principle 'life/time is short'. This results in the drive to accumulate ever more economic, political and cultural power in ever less time, that is, to speed the accumulation of power in order to destroy other competitors.

The three logics all result in relatively autonomous acceleration processes that are connected to each other. There are three interconnections:

- . Economy \Rightarrow politics: An acceleration of money accumulation tends to require politics to react to these changes with more and more quickly

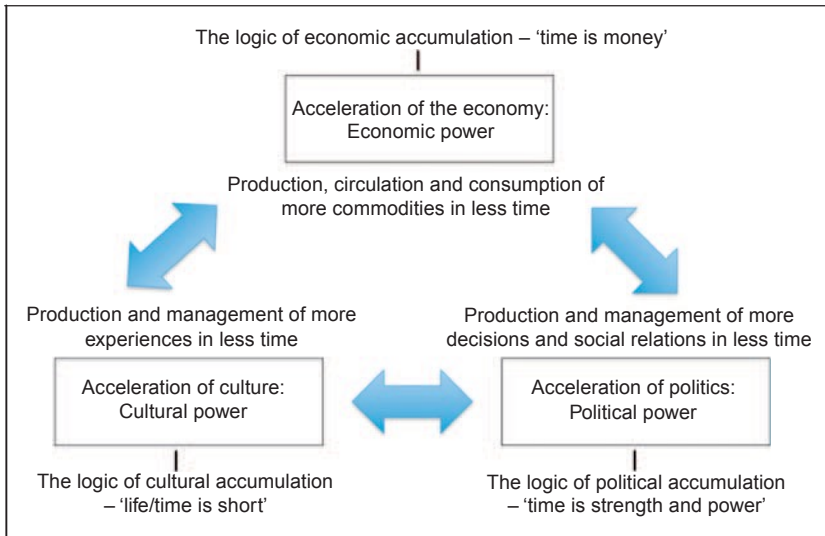


Figure 1. The logic of speed in the economic, political and cultural systems of modern society (based on Rosa, 2005, 2012).

taken decisions for more areas of life. These accelerated decisions in return shape and enable the acceleration of the capitalist economy.

- Politics \rightarrow culture: The acceleration of culture, that is, the intensification of experiences, makes society and everyday life more complex, which in turn requires more and more quickly taken political decisions that regulate this complexity. More rapidly taken decisions in politics bring about a need for people in everyday life to confront bureaucracy and its decisions in ever more situations.
- Economy \rightarrow culture: The acceleration of the economy results in more and more quickly produced commodities. This drives the extension and intensification of commodity- and consumer-culture. Individuals are encouraged to consume ever more commodities and to select from an increased offer of commodities. The differentiation and speeding up of human experiences drives commodity production because capitalist companies are interested in commodifying human experiences and offer commodities that fit the organization of everyday life.

Modernity is, on the one hand, adverse to idleness, rest, calmness, silence, slowness and detachment. On the other hand, there can be attempts to slow down modernity. John Urry (1994, see also Lash and Urry, 1994: Chapter 9) argues in this context that disorganized capitalism advances,

on the one hand, instantaneous time that focuses on acceleration in the form of, for example, the media, leisure, transport, tourism, travelling, and, on the other hand, glacial time that is oriented on long time periods and timelessness in the form of, for example, the environmental movement, museums, nostalgia, concerns for sustainability, heritage sites, areas of conservation (e.g. natural parks). The speed-up induced by capitalism can result in counter-attempts to install historicity, preservation and a sense of permanence into society.

Time and the capitalist economy

The capitalist economy is based on the formula $M - C.. P.. C^0 - M^0$: money is invested for buying commodities (labour power, means of production), labour produces (P) a new commodity C^0 that is sold on the market to create a money sum M^0 that is larger than the initially invested capital M (Marx, 1885).

The circulation time of capital is the time that it takes to buy investment goods, produce a new commodity and sell it (Marx, 1885: Chapter 5). It is the time of one cycle of capital accumulation. It is the sum of the production time and circulation time (Marx, 1885: Chapter 5). In Chapter 7 of *Capital*, Volume II, Marx (1885) says that capitalism has 'been characterized by continuous efforts to shorten turnover times, thereby speeding up social processes while reducing the time horizons of meaningful decision-making' (Harvey, 1990: 229).

Figure 2 outlines a model that visualizes the relationship of time and capitalism. The single elements of the model will now be briefly explained.

Labour time is a crucial variable of capitalism:

Just as motion is measured by time, so is labour measured by labour time. . . . Labour time is measured in terms of the natural units of time, i.e. hours, days, weeks, etc. Labour time is the living state of the existence of labour . . . it is the living quantitative aspect of labour as well as its inherent measure.] Regarded as exchange values all commodities are merely definite quantities of congealed labour time. (Marx, 1859: 271f)

The capitalist economy is driven by the need to accumulate ever more capital. Methods for achieving this are the increase of productivity, that is, the production of more in less time, and the lengthening of the working day. Labour time is on the one hand exerted in the production of commodities and on the other hand in the reproduction of labour power. Reproductive labour time is the time exerted in activities that recreate labour power. Labour time as a result is highly gendered in modern society:

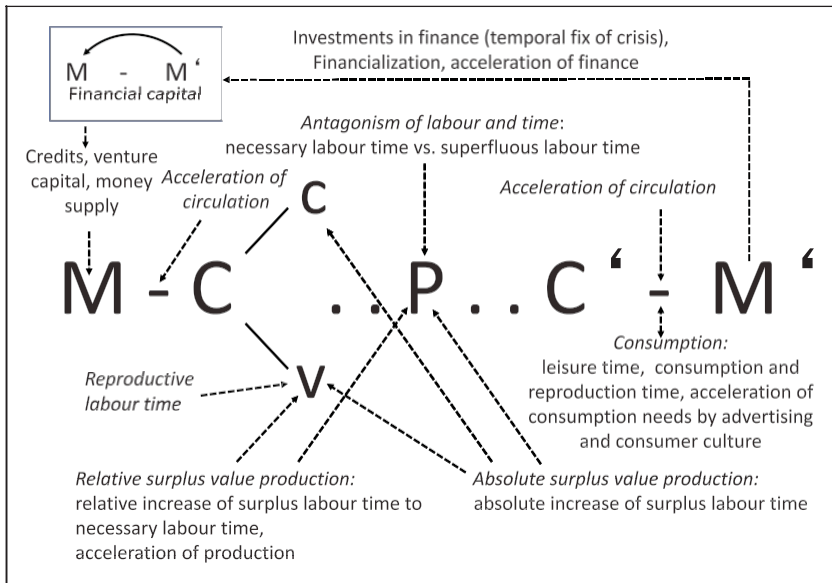


Figure 2. The role of time in the capitalist economy.

women tend to have little leisure time because they tend to have to take care of the household, children and the family.

The history of capitalism is a history of the struggle over time, expressed in the earliest stage of capitalist development as a struggle over the duration of the working day. As 'the new time-discipline is imposed, so the workers begin to fight, not against time, but about it' (Thompson, 1967: 85). What interests capital 'is purely and simply the maximum of labour-power that can be set in motion in a working day' (Marx, 1867: 376). 'The establishment of a normal working day is the result of centuries of struggle between the capitalist and the worker' (Marx, 1867: 382). The normal working day is 'the product of a protracted and more or less concealed civil war between the capitalist class and the working class' (Marx, 1867: 412). The lengthening of the working day that Marx terms the method of absolute surplus value production reaches the physical and psychological limits of the human body. Therefore capital also employs the strategy of increasing productivity, that is, the number of produced commodities per unit of labour time, for accumulating more profit. Relative surplus value production is mainly achieved by the mechanization and technification of production. Relative surplus-value production means

raising the productivity of the worker, and thereby enabling him to produce more in a given time with the same expenditure of labour. . . . It imposes on the

worker an increased expenditure of labour within a time which remains constant, a heightened tension of labour-power, and a closer filling-up of the pores of the working day, that is, a condensation of labour, to a degree which can only be attained within the limits of the shortened working day. This compression of a greater mass of labour into a given period now counts for what it really is, namely an increase in the quantity of labour. (Marx, 1867: 534)

Postone (1993: 193) observes that '[c]anges in average productivity do not change the total value created in equal periods of time': if in 1970 100,000 people had worked 4 million hours a week and produced 4 million commodities in this period and the productivity doubled in 1990 and the number of workers remained constant, then the number of hours worked per week was still 4 million. Some companies acquired the new level of productivity in 1990, whereas others still worked based on the old level of productivity. The first produced x commodities per hour, the second just half: $x/2$. Both, however, had to pay the same number of workers. The first company produced in line with the new socially necessary work time needed for the production of a commodity, the second at a level higher than this. The first company initially has extra profits. The second company has to sell its commodities at the same level as the first company, which means that it makes less profit. It will either have to adopt the new level of higher productivity or is facing the threat of bankruptcy. The new level of productivity will assert itself as a new norm and change the standards of temporality of capitalism: abstract time changes in the sense that the amount of units produced per hour changes. One hour of labour produces more units than previously.

Increased productivity increases the amount of value produced per unit of time – until this productivity becomes generalized; at that point the magnitude of value yielded in that time period, because of its abstract and general temporal determination, falls back to its previous level. This results in a new determination of the social labour hour and a new base level of productivity. What emerges, then, is a dialectic of transformation and reconstitution: the socially general levels of productivity and the quantitative determinations of socially necessary labour time change, yet these changes reconstitute the point of departure, that is, the social labour hour and the base level of productivity. (Postone, 1993: 289f)

The dialectic of labour and time in capitalism is a dialectic of the transformation of labour time standards and reconstitution of the new standards as norm of production. There is a dialectic of abstract and concrete time in

capitalism: one hour of labour is always a constant expenditure of human energy during 60 minutes. But the amount of units produced during these 60 minutes varies depending on the level of productivity and the speed of work. Concrete time is historical and variable, abstract labour is invariable. Concrete time is associated with concrete labour, abstract time with abstract labour. Abstract labour creates value: one hour of labour is always 60 minutes long and an expenditure of the combination of human physical and mental energy for 60 minutes. Concrete labour produces use-values in their physical and symbolic dimension of existence. Given the dialectic of labour and time, abstract labour of one hour tends historically to be associated with an increase of the amount of use-values generated by concrete labour during this one hour.

The consequences of the dialectic of labour and time are the increased technization of production and a progressively increasing importance of knowledge work in production. Marx (1857/58: 706) has described the rise of a knowledge economy with the concept of the General Intellect.

The contradiction of labour and time constitutive for capitalism results in the situation that productivity increases so that toil can potentially come to an end and creative work that creates common goods becomes a potential for all, but the need to accumulate capital and private property relations posit alienated work as standard. Capitalism produces potentials and germ-forms of communism and at the same time intensifies exploitation of labour in order to create ever more profit during one hour of labour.

Capital itself is the moving contradiction, [in] that it presses to reduce labour time to a minimum, while it posits labour time, on the other side, as sole measure and source of wealth. Hence it diminishes labour time in the necessary form so as to increase it in the superfluous form; hence posits the superfluous in growing measure as a condition – question of life or death – for the necessary. (Marx, 1857/58: 706)

Acceleration not only affects the production, circulation and consumption of commodities, but also finance, that is, the production and circulation of money. Bank accounts, bank transfers, credit and debit cards, electronic payments and finance markets that use networked and algorithmic trading are some examples of the acceleration of finance. For Marx (1894: 471, 515), all banking capital is based on the formula M (money) – M^0 (more money). Consumer credits, mortgages, stock, bonds and derivatives are all based on this financial type of accumulation. Finance capital does not itself produce profit, it is only an entitlement to payments that are made in the future and derive from profits or wages (the latter for example in the case of consumer credits). Marx therefore characterizes finance

capital as fictitious capital (Marx, 1894, 596). Financial investments in stocks and financial derivatives are transformed into operative capital, but they are not capital themselves, only ownership titles to a part of surplus value that is expected to be produced in the future. 'All these securities actually represent nothing but accumulated claims, legal titles, to future production' (Marx, 1894: 599). If the company collapses or has falling profit rates, then the invested money is not paid back, the investors lose money. The value of shares is therefore speculative and not connected to the actual profits of the company, but only to expectations about future profits that determine the buying and selling decisions of stock investors. Fictitious capital is an attempt to overcome problems of accumulation by a temporal fix (Castree, 2009; Harvey, 1990). ICT-supported high-speed and high-risk global finance have been embedded into a temporal contradiction between short-term financial gains and long-term profits that erupted in the global capitalist crisis that started in 2007/8 (Hope, 2011).

Social media and changing capitalist times

Marx stresses the importance of communication technologies in speeding up capitalism and globalizing production: 'the creation of the physical conditions of exchange – of the means of communication and transport – the annihilation of space by time – becomes an extraordinary necessity for it' (Marx, 1857/58: 524). Technology enables the reduction of the production and circulation time of capital. Communication technologies enable the temporal and spatial distancing and re-embedding of communication, which allows the speeding-up of accumulation. Increasing productivity by relative surplus value production reduces production time and thereby also the circulation time of capital. The phenomenon that capitalism needs to continuously speed up production, circulation and consumption has been reflected in the contexts of contemporary capitalism, networked computer technologies and the mass media with the help of concepts such as time-space compression (Harvey, 1990), time-space distancing (Giddens, 1990), polar inertia (Virilo, 1999), timeless time (Castells, 1996), fast capitalism (Agger, 2004) and instantaneous time (Urry, 1994).

Hartmut Rosa (2005: 269) argues that the rise of flexible production, the deregulation of labour, just-in-time production and project-based work in the knowledge industries influence the dedifferentiation of working time and leisure time. The combination of neoliberalism, the capitalist knowledge economy, digital media and networked production not only results in a flexible regime of accumulation (Harvey, 1990), but also in flexible humans (Sennett, 1998) that have to work intensively and for long hours and are, as a result of a new spirit of capitalism that is expressed in

management ideologies, expected to love and show passion for their companies and to fully identify with their goals (Boltanski and Chiapello, 2005), while at the same time facing precarious working conditions with high insecurity, uncertainty and unsafety (Bauman, 2000/2012).

A specific way of increasing profits is to transform paid into unpaid labour time. Unpaid labour time has traditionally been present in the household, where houseworkers in social, emotional, affective and physical labour reproduce labour power. Under neoliberalism and the flexible regime of accumulation, wage labour in the form of precarious labour has become more like housework – insecure, unpaid or badly paid. But in the realm of cultural consumption, unpaid labour has increasingly also become (just like wage-labour) commodity producing. The examples of fast food restaurants, IKEA furniture assembled at home and self-service gas stations show that prosumption (consumption that is productive and creating economic value and commodities) is not entirely new. This tendency has been amplified and extended by the rise of the internet and social media. This emergence has intensified the historical trend that the boundaries between play and labour, work time and leisure time, production and consumption, the factory and the household, public and private life tend to blur. Toffler (1980) introduced in this context the notion of a prosumer economy. Ritzer and Jurgenson (2010) have spoken of the emergence of a prosumer capitalism and the need for a sociology of prosumption. Fuchs (2010), based on Smythe's (1977) notion of audience labour, has spoken of internet- and social media-prosumer labour. Ursula Huws (2003) has talked of consumption work that is enabled by ICTs. Bruns (2008) introduced the concept of the produser (¼producer and user). Kü cklich (2005) was the first to speak of the emergence of playbour (play labour). Mark Deuze (2007) argued, based on Zygmunt Bauman (2000/2012), that media work has become liquid. The neoliberal and flexible current form of modernization means 'liquefaction, melting and smelting' (Bauman, 2000/2012: x). Although the circumstance that digital media are made out of minerals that are often extracted under slavery-like conditions, create a lot of eWaste and are assembled under disciplinary conditions, shows that we do not undergo a transition from a solid, heavy modernity to a fluid, light modernity, as Bauman (2000/2012) claims, the liquefaction of boundaries seems to be a crucial quality of contemporary capitalism that shapes digital media. Marx and Engels' (1848, 38) insights that capitalism sweeps away all 'fixed, fast-frozen relations' and 'all new-formed ones become antiquated before they can ossify' so that all 'that is solid melts into air' shape social media in the 21st century.

On social media, users create and reproduce content, profiles that contain personal data, social relations, affects, communications and

communities. Many corporate social media, such as Facebook, Twitter, YouTube, Weibo, Foursquare, LinkedIn or Pinterest, use targeted advertising as their capital accumulation model. In this model, all online activities on a specific platform and on connected platforms are stored, assessed and commodified. So users not only produce the just mentioned use-values, but also a data commodity that stores data about these use-values and is sold to advertising clients, who in return get access to the users' profiles, where they present advertisements tailored to user interests. Users are productive consumers who produce commodities and profit – their user labour is exploited. But this exploitation does not feel like toil, it is rather more like play and takes place during leisure time outside of wage labour – it is unpaid labour and play labour. As a consequence, labour time is extended to leisure time and leisure time becomes labour time. Ben Agger (2011) has introduced in this context the notion of *iTime* that features constant availability, the compulsion to connect, mobile time, the extension of working time into private time, iPhones and laptops as mobile work places and factories, the commodification of connection and internet traffic, as well as the emergence of new potentials for an alternative 'slowmodernity'. *iTime* can be seen as a specific stage of what Robert Hassan (2003, 2012) terms *network time*, a regime of time that in its specific capitalist organization is connected to a pragmatic logic that fosters inconsiderateness, instrumentality, competition, temporal cognitive dissonance and chronic distraction.

These transformations of society do not bring about an end of the capitalist time regime that separates leisure time and labour time, but rather signify an attempt to minimize leisure time by turning it into labour time. This circumstance shows how important it is for capital to increase unpaid labour time (surplus labour time) in absolute and relative terms. Corporate social media usage constitutes absolute surplus value production in the sense that the time spent per day on average under the logic of capital and commodification increases absolutely. Mario Tronti (1962) speaks in this context of the *social factory* and Antonio Negri (1971, 1982) of the *social worker*: surplus value production and surplus labour time extend beyond the factory and beyond paid labour time into the home, urban spaces and leisure time. The crowdsourcing of paid labour to unpaid digital labour does not, as claimed by management gurus and consultants, bring about a 'trend toward greater democratization in commerce' (Howe, 2008; 14), but rather the intensification of exploitation.

Facebook is a paradigmatic expression of contemporary forms of acceleration in culture, politics and the economy. It is a space for the accumulation of friends and the presentation of the self to others. Facebook's accumulation and presentation logic makes it necessary to manage ever more experiences in the same space. It speeds up culture. There are more

and more potential impressions to be experienced that can only be managed by spending more time on the platform, dividing one's attention among more profiles and groups and trying to communicate with more users simultaneously. Facebook and social media are used in more and more companies and organizations for advertising, public relations, customer relations and internal communication. The result is a convergence of labour so that knowledge workers have to take on additional tasks and become in addition to their regular profession also social media professionals. This can easily result in longer work times and/or the speeding up of work in order to manage the plethora of tasks. More and more companies invest capital in targeted advertisements on corporate social media. Targeted online advertising is a method of relative surplus value production in advertising: at one point in time, the advertisers show not only one advertisement to the audience as in non-targeted advertising, but they show different advertisements to different user groups depending on the monitoring, assessment and comparison of the users' interests and online behaviour. Corporate social media speed up capital accumulation. They are complex global spaces that bring about a lot of problems and new questions in terms of privacy, data protection, jurisdiction, labour, crime, policing, etc. The dynamic change of the internet requires politics to react to these developments quickly, which creates a demand for the speeding up of politics.

After the internet economy's crisis in 2000, new confidence needed to be restored in order to attract venture capital investments. The notions of web 2.0 and social media created the impressions that newer platforms are radically new and promise huge economic returns. Web 2.0 and social media are therefore also marketing ideologies aimed at attracting venture capital investments for newly founded internet companies.

Figure 3 shows the development of global advertising revenues in recent years. In 2007, internet advertising accounted for 8.7 per cent of the global advertising revenues of the media. In 2011 this share had risen to 16.1 per cent – nearly double. Radio, magazines, newspapers and outdoor advertising had negative annual growth rates, with print industries having dramatic declines of more than 6 per cent per year, which has not only reduced profits, but also increased layoffs. Cinema and television had modest annual growth rates in the years 2007–2011.

The total surveillance in targeted online advertising promises more effective and efficient advertising, which may be one of the reasons why in situations of crisis advertisers tend to invest more in forms of advertisement that they perceive to be more effective and efficient. The global capitalist crisis that started in 2008 seems to have resulted in an accelerated shift of advertising investment from print to targeted online advertising on

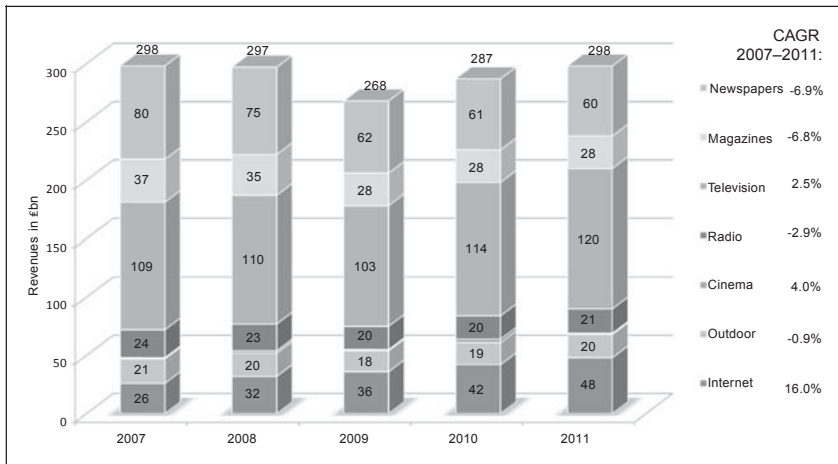


Figure 3. Global advertising revenue, by medium 2007–2011.

Source: Ofcom (2012: 21; data based on ZenithOptimedia), CAGR = compound annual growth rate.

social media. It is unclear, however, if high targeting of advertising results in more commodity sales because it is not self-evident that the presentation of targeted ads results (a) in clicks on these ads and (b) in purchases after users have been redirected to the advertisers' webpages. The promise of high returns has also resulted in high financial investments in social media corporations such as Google and Facebook. Such platforms are therefore spaces of financialization and fictitious capital formation: the high investments operate with options on future profits that have not yet been created. If it turns out that social media returns are not as high as expected, this can result in (a) the withdrawal of financial capital investments and (b) the decrease of advertising investments in social media. The ultimate effect would then be the burst of a new financial bubble and possibly the next financial crisis.

For Marx, exploitation is the dominant class's appropriation of the dominated class's unpaid labour time. Marx distinguished between two levels of analysis: values and prices. At the level of value he speaks of labour time and at the level of prices of money. In the capital accumulation process $M - C.. P.. C^0 - M^0$, capital transforms its form: it is first money M that is used for buying commodities C (labour power, means of production). We are here at the level of prices, where the capitalist uses money and buys commodities for a specific monetary price. Capital then leaves the circulation process and enters the production process P , where labour creates something new with the help of machines and raw materials. In the

production process, only value counts: the capitalist wants to make the workers produce as many commodities in as little time as possible. Capitalist production is therefore an economy of time. When the new commodities C^0 are sold on the market, time also plays a role because capital wants to speed up the sale and distribution of commodities, but here we are at a level where labour values are transformed into money via sales. If value is all about labour time, does Marx's labour theory of value play any role in corporate social media such as Facebook?

In a debate between Adam Arvidsson and me about the digital labour theory of value, Arvidsson argued that Marx's theory is outdated and cannot be used for understanding social media (Arvidsson and Colleoni, 2012; Fuchs, 2010, 2012a, 2012b; for a discussion of the labour theory of value and social media see also: Fuchs, 2014: Chapter 11). Adam Arvidsson does not conceive value in terms of labour time, but as value understood as 'the ability to create the kinds of affectively significant relations' (Arvidsson, 2005: 270). He assumes that everything in the contemporary economy has become affective. Arvidsson argues that the law of value does not apply to 'immaterial/intangible wealth' because this form of wealth would be produced in co-operation and its value would be determined by affects and intersubjective judgements so that an 'affect-based law of value' (Arvidsson and Colleoni, 2012: 142) would have emerged. On corporate 'social media', the 'time spent online viewing or interacting with a particular site is not the critical parameter for defining or measuring value in the online advertising environment', rather 'affective engagements' and 'user affect' (e.g. measured by social buttons, sentiment analysis, network analysis) would be the 'source of value' (Arvidsson and Colleoni, 2012: 144). Given that Marx's labour theory of value is a theory of the role of time in capitalism, Arvidsson's argument is nothing more than the claim that time has become an irrelevant factor in capitalism with the rise of social media.

Facebook constantly monitors interests, usage behaviour, browsing behaviour, demographic data, user-generated content, social relations, etc. These are individual, affective, social, economic, political, cultural data about users. The more time a user spends on Facebook, the more data is generated about him/her that is offered as a commodity to advertising clients. Exploitation happens in this commodification and production process, whereas the data commodities are offered for sale to advertising clients after the production/exploitation process. The more time a user spends online, the more data is available about him/her that can potentially be sold and the more advertisements can be presented to him/her. Time therefore plays a crucial role in corporate social media. Users employ social media because they strive to a certain degree for achieving what Bourdieu (1986a, 1986b) terms social capital (the accumulation of social relations),

cultural capital (the accumulation of qualification, education, knowledge) and symbolic capital (the accumulation of reputation). The time that users spend on commercial social media platforms for generating social, cultural and symbolic capital is in the process of prosumer commodification transformed into economic capital. Labour time on commercial social media is the conversion of Bourdieuan social, cultural and symbolic capital into Marxian value and economic capital.

Arvidsson and Colleoni (2012) ignore that the labour that generates content, affects, likes, social relations, networks, etc is organized in time and space and that Facebook usage time is productive labour time. All hours spent online by users of Facebook, Google and comparable corporate social media constitute work time, in which data commodities are generated, and potential time for profit realized. Arvidsson ignores the material realities and power of actual capital accumulation by substituting a materialistic concept of value and labour with a subjectivistic, idealistic concept of value. He substitutes the economic concept of value with a moral concept of value. This move is not a generalization of the value concept, but a subjectification of value that corresponds to neo-classical economic theories that question Marx's concept of value as substance that is constituted as a societal phenomenon in the production process. Arvidsson eliminates the notion of time from the explanation of value generation on corporate social media and thereby ignores that time is a crucial variable in any capitalist production process because 'time is money' in any capitalist economy, hence also in the corporate social media economy.

Value on Facebook means the average time that users spend on the platform. The law of value on Facebook means that the more time a certain group spends on the platform, the more valuable the corresponding data commodity gets. A group that on average spends a lot of minutes per day on Facebook (e.g. the group of those aged 15–25) compared to another group (e.g. the group of those aged 75–85) constitutes a more valuable data commodity because (a) it has a higher average labour/online time per day that generates more data that can be sold, and (b) it spends more time online, during which targeted ads are presented to this group. Figure 4 visualizes some details of Facebook's capital accumulation process.

Fixed constant capital (e.g. buildings, machines) is capital that the capitalist acquires and fixes in the production process for a longer time period (Marx, 1885: Chapter 8). Circulating constant capital is in contrast a raw material that is immediately used up in production and must be renewed (Marx, 1885: Chapter 8). Facebook's paid employees (v_1) produce the software platform that enters the production process as fixed capital that the users use in order to create data (profile data, communication data, content, social network data, browsing behaviour data). Whenever a user ($1/4$ unpaid

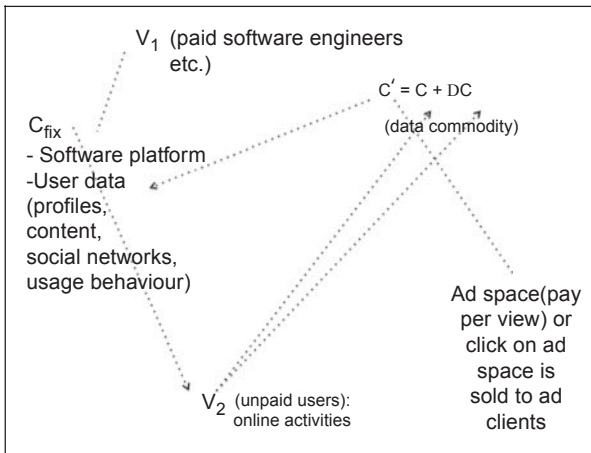


Figure 4. The commodity production process on Facebook (and other targeted advertising-based corporate social media).

worker, v_2) is online on Facebook, s/he transfer parts of the value of the platform and of the value of his/her existing personal data to a data commodity and s/he creates new value in the form of newly spent online time that creates additional data that enters the data commodity C^d in the formed of stored data. The users' labour ($1/4$ online activity) creates the value (the total time spent online by the user) and the new content (the newly generated and stored data) of the commodity. The whole commodity becomes part of Facebook's fixed capital that is reinvested in the production process: the existing data is used for organizing the user's Facebook profile and is re-used in the creation of an updated user profile. The user's profile is stored in a database and updated by the user whenever s/he logs into Facebook or whenever s/he visits a website that is connected to Facebook.

An advertising client selects a specific number of users when setting up targeted ads on Facebook. The client buys specific portions of the screen display of specific users that only exist while the user is on Facebook, which means that the user generates these spaces by his online behaviour and the data s/he generates and has previously generated. This means that users produce advertising spaces themselves. These spaces are either sold as a commodity when the users click on them (pay per click) or when they are online (pay per view). However, they are commodities in the moment that they are generated, that is, the moment a targeted ad is algorithmically generated and visualized on the screen. In the pay per click mode, the question is if this commodity can be sold or not, that is, in which share

of the presentations users click on ads. What is the value of a single ad space? It is the average number of minutes that a specific user group spends on Facebook divided by the average number of targeted ads that is presented to them during this time period. Facebook's ad clients fill the ads with their use-value promises that want to convince users to buy specific commodities. This means that the labour Facebook users perform enters the capital accumulation process of other companies in the realm of circulation, where commodities C^0 are transformed into money capital M^0 ($C^0 - M^0$). Facebook users' labour is an online equivalent of transport work – their online activities help transport use-value promises to themselves. Marx considered transport workers as productive circulation workers. Facebook users are productive online circulation workers who organize the communication of advertising ideologies on the internet.

Sut Jhally (1987: 78) argues that 'reorganizing the watching audience in terms of demographics' is a form of relative surplus value production. One can interpret targeted internet advertising as a form of relative surplus value production: at one point in time, the advertisers show not only one advertisement to the audience as in non-targeted advertising, but they show different advertisements to different user groups depending on the monitoring, assessment and comparison of the users' interests and online behaviour. On traditional forms of television, all watchers see the same advertisements at the same time. In targeted online advertising, advertising companies can present different ads at the same time. The efficiency of advertising is increased: the advertisers can show more advertisements that are likely to fit the interests of consumers in the same time period as in non-targeted advertising. Partly the advertising company's wage labourers and partly the internet users, whose user-generated data and transaction data are utilized, produce the profit generated from these advertisements. The more targeted advertisements there are, the more likely it is that users recognize ads and click on them.

The users' click-and-buy process is the surplus value realization process of the advertising company, in which surplus value is transformed into money profit. Targeted advertising allows internet companies to present not just one advertisement at one point in time to users, but rather numerous advertisements so that more total advertising time that presents commodities to users is produced. Relative surplus value production means that more surplus value is generated in the same time period as before. Targeted online advertising is more productive than non-targeted online advertising because it allows more ads to be presented in the same time period. These ads contain more surplus value than the non-targeted ads, that is, more unpaid labour time of the advertising company's paid employees and of users, who generate user-generated content and transaction data.

The preceding arguments aimed to show that time is a crucial category in corporate social media's capital accumulation process and that the law of value and the labour theory of value therefore fully apply to this realm.

Conclusion

Time is an important phenomenon that grounds the existence of the world, society and capitalist society. It has objective and subjective, absolute and relative, natural and social, abstract and concrete aspects. Modern society is based on the imperative to accumulate economic, political and cultural capital. The historically dominant form of modernity is therefore not just a capitalist economy, but a capitalist society. The accumulation imperative is connected to an acceleration imperative that makes the economy, politics and culture accumulate ever more power in ever less time.

Time is an important dimension of the capitalist economy:

1. Capitalists try to reduce the turnover time (circulation time, production time) of capital in order to increase profits.
2. They try to increase unpaid labour time (surplus labour time) by absolute and relative surplus value production so that capitalism means a struggle over time.
3. Capitalism sets up a specific relationship between labour time and leisure time.
4. Labour is enabled and reproduced by the reproductive labour time expended in the household and public and common services organized collectively in society.
5. Advertising and consumer culture accelerate the creation of artificial consumption needs.
6. Forms of fictitious capital (e.g. credits, loans, derivatives, stocks, bonds, mortgages) are ownership titles to a part of surplus value that one expects to produce in the future.

Corporate social media are connected to all five dimensions of time in capitalism:

1. Social media play a role in the acceleration of the economy, politics and culture.
2. The emergence of crowdsourcing, play labour and prosumption extends the working day to leisure time. This absolute surplus value production is complemented by relative surplus value production, in which more advertisements and more targeted ads are presented at the same time by making use of personalized advertising and economic surveillance.

3. Social media are an expression of the circumstance that the factory and the worker have become social and diffused into all realms of society. Exploitation in capitalism has always been extended into the household in the form of reproductive labour. Digital labour means that yet more of the time that is spent outside of the paid work conducted in factories and offices is becoming exploited. The amount and intensity of the exploitation of unpaid labour has increased.
4. Targeted online advertising tries to make users consume more commodities by presenting personalized ads to them.
5. Corporate social media are based on fictitious capital investments that hope that targeted advertising will result in high future profits. The actual success rate of targeted advertising in making users buy more commodities is, however, unknown, which makes social media highly prone to financial crisis.

Corporate social media prosumption is a form of continuous primitive accumulation of capital that turns non-commodified leisure time into productive labour time that generates value and profit for capital. It is a form of accumulation by dispossession (Harvey, 2005), in which consumption and leisure time become spaces of accumulation. Marx showed that the capitalist development of the productive forces increases disposable time:

The whole development of wealth rests on the creation of disposable time. The relation of necessary labour time to the superfluous (such it is, initially, from the standpoint of necessary labour) changes with the different stages in the development of the productive forces. (Marx, 1857/58: 398)

The emergence of social media is an expression of the tendency of capitalism to increase disposable time. Such media are expressions of a high level of the development of the productive forces that could enable the creation of a society, in which 'labour in the direct form has ceased to be the great well-spring of wealth, labour time ceases and must cease to be its measure, and hence exchange value [must cease to be the measure] of use value' (Marx, 1857/58: 705). The reduction of necessary labour 'then corresponds to the artistic, scientific etc. development of the individuals in the time set free, and with the means created, for all of them' (Marx, 1857/58: 706).

Realizing this potential requires however that 'production based on exchange value breaks down' (Marx, 1857/58: 705). Capitalism tries, however, to resist its own explosion. Turning leisure time into labour time is one attempt at prolonging capitalism and the contradiction between time and capitalism. More disposable time means more time for consumption,

creativity and leisure, to which capital is connected because consumption is a realization time of capital and reproduction time of labour power. What is relatively new is that consumption time becomes production time. Capital tries to commodify disposable time, which explains the emergence of play labour, digital labour and presumption. The cause is the imperialistic tendency of capitalism: 'But its tendency always, on the one side, to create disposable time, on the other, to convert it into surplus labour' (Marx, 1857/58: 708). The emergence of social media is an expression of the contradiction between time and capitalism. They posit new surplus labour under capitalist conditions and are at the same time germ forms of a society, in which necessary labour time is minimized, surplus labour time abolished and creative activities shape human lifetime.

Notes

1. <http://www.alexa.com/topsites> (accessed 13 April 2013).
2. Social media at the level of the productive forces advance sharing, collaborative work, communication and community-maintenance. This sociality is, however, not matched at the level of the relations of production, where these platforms are privately owned (Hassan, 2012).
3. <http://www.zdnet.com/blog/facebook/10-5-billion-minutes-spent-on-facebook-daily-excluding-mobile/11034>
4. <http://www.internetworldstats.com/stats1.htm> (accessed 13 April 2013): on 31 December 2012, there were an estimated 975,943,960 Facebook users.

References

- Adorno TW (1988) *Ontologie und Dialektik*. Frankfurt am Main: Suhrkamp.
- Agger B (2004) *Speeding Up Fast Capitalism: Cultures, Jobs, Families, Schools, Bodies*. Boulder, CO: Paradigm Publishers.
- Agger B (2011) iTime: Labor and life in a smartphone era. *Time & Society* 20(1): 119–136.
- Arvidsson A (2005) Brands: A critical perspective. *Journal of Consumer Culture* 5(2): 235–258.
- Arvidsson A and Colleoni E (2012) Value in informational capitalism and on the internet. *The Information Society* 28(3): 135–150.
- Bauman Z (2000/2012) *Liquid Modernity*. Cambridge: Polity Press.
- Boltanski L and Chiapello E (2005) *The New Spirit of Capitalism*. London: Verso.
- Bourdieu P (1986a) *Distinction: A Social Critique of the Judgement of Taste*. New York: Routledge.
- Bourdieu P (1986b) The (three) forms of capital. In: Richardson JG (ed.) *Handbook of Theory and Research in the Sociology of Education*. New York: Greenwood Press, pp. 241–258.
- Bruns A (2008) *Blogs, Wikipedia, Second Life and Beyond: From Production to Produsage*. New York: Peter Lang.

- Burston J, Dyer-Witheford N and Hearn A (eds) (2010) *Digital labour: Workers, authors, citizens*. Digital labour: Workers, authors, citizens. Special issue: *Ephemera* 10(3/4): 214–539.
- Castells M (1996) *The Rise of the Network Society*. Cambridge, MA: Blackwell.
- Castree N (2009) The spatio-temporality of capitalism. *Time & Society* 18(1): 26–61.
- Deuze M (2007) *Media Work*. Cambridge: Polity.
- Fuchs Christian (2010) Labor in informational capitalism and on the Internet. *The Information Society* 26(3): 179–196.
- Fuchs C (2012a) Dallas Smythe today – the audience commodity, the digital labour debate, Marxist political economy and critical theory. *Prolegomena to a digital labour theory of value*. *tripleC: Communication, Capitalism & Critique* 10(2): 692–740.
- Fuchs C (2012b) With or without Marx? With or without capitalism? A rejoinder to Adam Arvidsson and Eleanor Colleoni. *tripleC: Communication, Capitalism & Critique* 10(2): 633–645.
- Fuchs C (2014) *Digital Labour and Karl Marx*. New York: Routledge.
- Galtung J (1990) Cultural violence. *Journal of Peace Research* 27(3): 291–305.
- Giddens A (1984) *The Constitution of Society*. Berkeley, CA: University of California Press.
- Giddens A (1990) *The Consequences of Modernity*. Stanford, CA: Stanford University Press.
- Habermas J (1987) *Theory of Communicative Action*. Volume 2: *Lifeworld and System*. Boston, MA: Beacon Press.
- Harvey D (1990) *The Condition of Postmodernity*. Cambridge, MA: Blackwell.
- Harvey D (2005) *The New Imperialism*. Oxford: Oxford University Press.
- Hassan R (2003) Network time and the new knowledge epoch. *Time & Society* 12(2/3): 225–241.
- Hassan R (2012) *The Age of Distraction*. New Brunswick, NJ: Transaction Publishers.
- Hope W (2011) Crisis of temporalities: Global capitalism after the 2007–08 financial collapse. *Time & Society* 20(1): 94–118.
- Howe J (2008) *Crowdsourcing. Why the Power of the Crowd is Driving the Future of Business*. New York: Three Rivers Press.
- Huws U (2003) *The Making of a Cybertariat: Virtual Work in a Real World*. New York: Monthly Review Press.
- Jhally S (1987) *The Codes of Advertising*. New York: Routledge.
- Küclik J (2005) Precarious playbour. *Fibreculture Journal* 5, <http://five.fibreculturejournal.org/fcj-025-precious-playbour-modders-and-the-digital-games-industry> (accessed 13 February 2013).
- Lash S and Urry J (1994) *Economies of Signs and Space*. London: Sage.
- Lefebvre H (2004) *Rhythmanalysis*. London: Continuum.
- Marx K (1847) *The Poverty of Philosophy*. London: Lawrence.
- Marx K (1857/58) *Grundrisse*. London: Penguin.
- Marx K (1859) Contribution to critique of political economy. In: Marx Engels *Collected Works*, Volume 29. New York: International Publishers, pp. 257–417.

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- Marx K (1867) *Capital*. Volume 1. London: Penguin.
- Marx K (1885) *Capital*. Volume 2. London: Penguin.
- Marx K (1894) *Capital*. Volume 3. London: Penguin.
- Marx K and Engels F (1848) *Manifesto of the Communist Party*. In: *Selected Works in One Volume*. London: Lawrence & Wishart, pp. 35–62.
- Negri A (1971) *Crisis of the planner-state: Communism and revolutionary organisation*. *Revolution Retrieved: Selected Writings on Marx, Keynes, Capitalist Crisis and New Social Subjects 1967–83*. London: Red Notes, pp. 91–148.
- Negri A (1982) *Archaeology and Project: The mass worker and the social worker*. In: *Revolution Retrieved: Selected Writings on Marx, Keynes, Capitalist Crisis and New Social Subjects 1967–83*. London: Red Notes, pp. 199–228.
- Ofcom (2012) *International Communications Market Report 2012*. Available at: <http://stakeholders.ofcom.org.uk/binaries/research/cmr/cmr12/icmr/ICMR-2012.pdf> (accessed 5 April 2013).
- Postone M (1993) *Time, Labor, and Social Domination: A Reinterpretation of Marx's Critical Theory*. Cambridge: Cambridge University Press.
- Ritzer G and Jurgenson N (2010) *Production, consumption, presumption: The nature of capitalism in the age of the digital 'prosumer'*. *Journal of Consumer Culture* 10(1): 13–36.
- Rosa H (2005) *Beschleunigung. Die Veränderung der Zeitstrukturen in der Moderne*. Frankfurt am Main: Suhrkamp.
- Rosa H (2012) *Weltbeziehungen im Zeitalter der Beschleunigung. Umriss einer neuen Gesellschaftskritik*. Frankfurt am Main: Suhrkamp.
- Scholz T (ed.) (2013) *Digital Labor. The Internet as Playground and Factory*. New York: Routledge.
- Sennett R (1998) *The Corrosion of Character: The Personal Character of Work in the New Capitalism*. New York: W.W. Norton & Company.
- Smythe DW (1977) *Communications: Blindspot of Western Marxism*. *Canadian Journal of Political and Social Theory* 1(3): 1–27.
- Thompson EP (1967) *Time, work-discipline, and industrial capitalism*. *Past and Present* 38: 56–97.
- Thompson JB (1995) *The Media and Modernity: A Social Theory of the Media*. Cambridge: Polity.
- Toffler A (1980) *The Third Wave*. New York: Bantam.
- Tronti M (1962) *Arbeiter und Kapital*. Frankfurt am Main: Verlag Neue Kritik.
- Urry J (1994) *Time, leisure and social identity*. *Time & Society* 3(2): 131–149.
- Virilio P (1999) *Polar Inertia*. London: Sage.