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CHAPTER 4

Karl Marx in the Age of Big Data Capitalism

Christian Fuchs

1. Introduction

Computers operate based on digital data. They convert information into streams of bits (zeros and ones) in order to store, process and transmit it. The logic of capitalist and bureaucratic administration has driven the development of computing. As a result of political-economic interests and needs and technological development, the volume, velocity and variety of data (Kitchin 2014, 68) have increased to a degree where quantity turns into a new quality. In short, we have seen the rise of Big Data. Increasingly, algorithms and digital machines are generating, collecting, storing, processing and assessing Big Data, and making decisions that sideline humans in economic, political and everyday life. This development has resulted in the emergence of a specific quality of digital capitalism: Big Data capitalism. Big Data capitalism requires that we assess how thought systems, forms of knowledge, political economy, governmentalities, materialities, infrastructures, practices, organisations, institutions, subjectivities, spaces (Kitchin 2014, 25), temporalities, and discourses and ideologies are

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changing. The task of this chapter is to show how Karl Marx's theory matters for understanding and criticising Big Data capitalism's political economy.

The chapter first engages with why Marx matters today (Section 2), then introduces the notion of Big Data capitalism (Section 3), analyses digital labour's contradictions (Section 4), digital capitalism's crisis (Section 5), ideology today (Section 6), and concludes with some thoughts on alternatives to Big Data capitalism (Section 7).

2. Why Marx Matters Today

There are at least fourteen reasons why we need Marx today. As long as capitalism and class exist, his analysis remains absolutely crucial for understanding, criticising and changing society. Just as Marx analysed capitalism and society as historical, based on a dialectic of continuity and change, so his own approach is also subject to such a dialectic.

A first aspect of Marx's works that we need today is the analysis of the commodity form and capital. 'The wealth of societies in which the capitalist mode of production prevails appears as an "immense collection of commodities"' (Marx 1867/1976, 125). Neoliberal capitalism has resulted in the commodification of almost everything, including communication. In the world of digital commodities, we find the commodification of digital labour–power, digital content, digital technologies and online audiences. Information is non-rivalrous in consumption (as a resource, information is not used up when consumed). It is difficult to exclude others from access. Information can be easily copied. It is therefore an antagonistic commodity type that can be turned into a commodity, but that can also relatively easily resist commodification and be turned into a common good. Digital capitalism faces a contradiction between digital capital and the digital commons.

Second, Marx can inform our understanding of the exploitation of labour today. 'The proletarian is merely a machine for the production of surplus-value, the capitalist too, is merely a machine for the transformation of this surplus-value into surplus capital' (Marx 1867/1976, 742). The proletariat today takes on new forms, including precarious labour – such as the unpaid labour of interns and shadow workers, whose labour may not resemble more familiar forms of labour, but which nevertheless produces value – and workers in the international division of digital labour (IDDL) (Fuchs 2014; 2015).

Third, Marx analysed the globalisation of capitalism. Capital 'must nestle everywhere, settle everywhere, establish connexions everywhere' (Marx and Engels 1848/2010, 486–487). Since the late twentieth century, capitalism has become more global in comparison to its Fordist development stage, and has entered a new stage of imperialist capitalism.

Fourth, Marx matters today for understanding capitalism's crisis. He stressed that the capitalist economy and capitalist society's contradictions again and

again produce crises. ‘The fact that the movement of capitalist society is full of contradictions impresses itself most strikingly on the practical bourgeois in the changes of the periodic cycle through which modern industry passes, the summit of which is the general crisis’ (Marx 1867/1976, 103).

Fifth, Marx’s stress on the dialectic of technology and society helps us to understand contemporary technologies. He worked out this analysis in *Capital Vol. 1*’s Chapter 15 (*Machinery and Large-Scale Industry*) and *The Grundrisse*’s *Fragment on Machines* (Fuchs 2016c, Chapter 15 & appendix 2). Marx’s analysis of technology is based on Hegel’s dialectic of essence and existence. In the machinery chapter in *Capital Vol. 1*, he argues that ‘machinery in itself shortens the hours of labour, but when employed by capital it lengthens them; [...] in itself it lightens labour, but when employed by capital it heightens its intensity; [...] in itself it is a victory of man over the forces of nature but in the hands of capital it makes man the slave of those forces; [...] in itself it increases the wealth of the producers, but in the hands of capital it makes them into paupers (Marx 1867/1976, 568–569). Figure 1 visualises some of the dialectics of technology in capitalism.

Sixth, Marx’s analysis of the general intellect matters today. The notion of general intellect indicates that ‘general social knowledge has become a direct force of production’ (Marx 1857/1858/1973, 706). Universal labour produces the general intellect. ‘Universal labour is all scientific work, all discovery and invention’ (Marx 1894/1981, 199). Knowledge, communication and technology thereby become common goods.

Marx anticipated the emergence of the information economy. The capitalist profit imperative creates the need to increase productivity. Technological

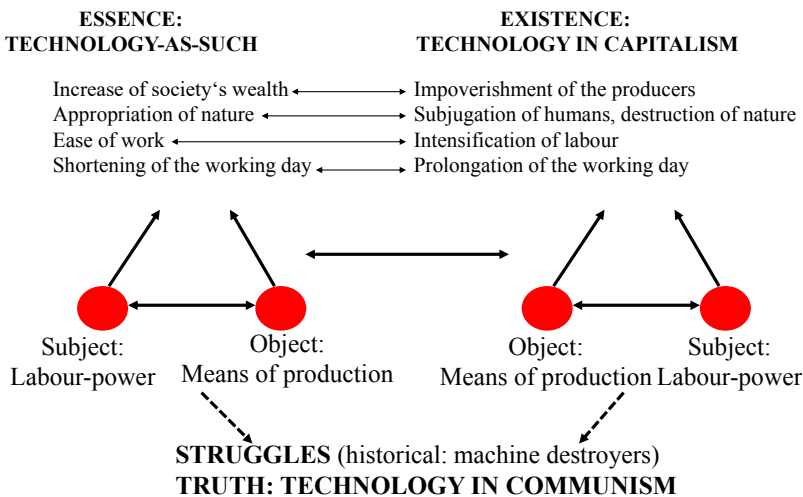


Figure 1: Marx’s analysis of the dialectics of technology in capitalism.

progress progressively increases the relevance of science, technology and knowledge in production. At one stage of capitalist development, quantity turns into the new quality of informational capitalism.

Seventh, Marx matters for understanding digital capitalism. In the *Grundrisse*, he conceptually anticipated the Internet, arguing that institutions 'emerge whereby each individual can acquire information about the activity of all others and attempt to adjust his own accordingly [...] Interconnections [...] [are established] through the mails, telegraphs etc.' (Marx 1857/1858/1973, 161). This formulation anticipates the Internet as a global system of information, communication and social networking.

The eighth dimension of Marx's works that is crucial for understanding contemporary capitalism's political economy is the antagonism between productive forces and relations of production. 'The contradiction between the general social power into which capital develops and the private power of the individual capitalists over these social conditions of production develops ever more blatantly, while this development also contains the solution to this situation, in that it simultaneously raises the conditions of production into general, communal, social conditions. This transformation is brought about by the development of the productive forces under capitalist production and by the manner and form in which this development is accomplished' (Marx 1894/1981, 373).

In digital capitalism, there is an antagonism between networked digital productive forces and class relations. Networked digital technologies create new forms of commodification and exploitation, and new problems for accumulation. However, digital information as a commodity also has features that resist commodification. Digital capitalism is grounded in an antagonism between digital commons and digital commodities. Digitalisation shapes, and is shaped by, the 'antagonism between the social cooperation of the proletariat and the (economic and political) command of capital' (Negri 2017, 25).

The ninth reason why Marx matters today is that his theory, along with various approaches in the tradition of Marxist theory, allows us to ground a critical theory of communication and language (Fuchs 2016a, 2016c). He says, for example, that 'Peter only relates to himself as a man through his relation to another man, Paul, in whom he recognizes his likeness' (Marx 1867/1976, 144). Communication is the way that humans relate to each other symbolically in order to interpret the social world, make sense of each other, construct joint meaning and transform social reality. Lukács' *Ontology of Social Being*, Raymond Williams's cultural materialism, and other Marxist theory approaches allow the construction of dialectical critical theories of communication that pose alternatives to Habermas's dualist theory of communication and Luhmann's instrumental systems theory of communication (Fuchs 2016a).

Tenth, Marx makes us think about the notions of the base and the superstructure, which pose the question of how to reflect on the role of communication in capitalism. Marx reminds us that it is crucial to think about how economy/

society, work/communication, capital/power, labour/ideology, body/mind, physical/mental work, production/reproduction are related. The dualities of society and capitalism are simultaneously identical and non-identical. They form dialectics. Raymond Williams has 'solved' the base/superstructure problem in a materialist and dialectical manner. Williams (1977) argues that there is an identical economic moment of all social systems and subsystems of society: humans produce sociality through the communication processes. Communication is the process of the social production and reproduction of sociality and society. At the same time, each societal subsystem and social system also features a non-identical moment: these are emergent, non-economic qualities.

Ideology and fetishism form the eleventh dimension of Marx's relevance today. In commodity fetishism, the 'definite social relation between men themselves' assumes 'the fantastic form of a relation between things' (Marx 1867/1976, 165). In political fetishism, the nation is a fetish: nationalism is the ideology that constructs fictive ethnicity (Balibar and Wallerstein 1991, 49, 96–100). In the realm of the media, advertising fetishises the commodity form and ideological tabloid journalism fetishises domination and exploitation. We have experienced the rise of new nationalisms and xenophobia directed against immigrant workers and refugees. Nationalism distracts from class contradiction by portraying capital and labour as non-contradictory and united in 'one nation'. Marx, in his analysis of authoritarianism, coined the notion of 'Bonapartism' that entails the ideological project 'to unite all classes by reviving for all the chimera of national glory' (Marx 1871/2010, 330).

Twelfth, Marx is a role model for critical journalism and critical public intellectuals. Thirteenth, Marx stresses the importance of social struggles for a better society. His humanism was practical. He speaks of 'the categorical imperative to overthrow all relations in which man is a debased, enslaved, forsaken, despicable being' (Marx 1844/2010, 182). Today, there are discussions about the role of digital technologies as tools for social struggle. Practical humanism is related to the fourteenth dimension: Marx foregrounds the need for alternatives, namely social systems that transcend the profit imperative and focus on human cooperation.

3. Big Data Capitalism

The rise of Big Data capitalism stands in a broader societal – economic, political, ideological – context. In the economy, we have experienced the neoliberal commodification and privatisation of (almost) everything, including data and communication(s). In the political system, a surveillance-industrial complex has emerged. This political–economic complex has been accompanied by an ideology that promotes the idea that surveillance technologies will prevent and detect crime and terrorism. Surveillance ideology has helped create a culture

of control, fearmongering, scapegoating, suspicion, competition and individualisation.

The collection, storage, control and analysis of Big Data stands in the context of political-economic interests that aim at the economic and political control and targeting of individuals. They are targeted as consumers and as potential terrorists and criminals. Edward Snowden has revealed the existence of a global communication surveillance system that secret services use to monitor and analyse communication flows in real time. The companies implicated in this surveillance system include AOL, Apple, Facebook, Google/YouTube, Microsoft, Paltalk, Skype/Microsoft, and Yahoo!.

C. Wright Mills argued in 1956 that there is an 'ever-increasing interlocking of economic, military, and political structures' (Mills 1956, 8). In this context, he spoke of the existence of a power elite. Today, the power elite makes use of a surveillance-industrial complex in order to exert control. In the surveillance-industrial complex, users make data public or semi-public on the Internet. Corporations commodify this data and users' activities to accumulate capital. Secret services and the police aim to gain access to the Big Data flows in order to securitise data and society. In doing so, they partly outsource surveillance to private security services, for whom surveillance is a profitable business. The NSA subcontracts surveillance to more than 2,000 private security companies. In the surveillance-industrial complex, surveillance capital and the surveillance state are fused together. Big Data means Big Brother power and big capitalist business.

Marx speaks of surveillance labour as how the 'work of directing, superintending and adjusting becomes one of the functions of capital' (1867/1976, 448). Foucault, who states that 'we live in a society where panopticism reigns' (Foucault 1994, 58), goes on to argue that the 'panoptic mechanism basically involves putting someone in the center – an eye, a gaze, a principle of surveillance – who will be able to make its sovereignty function over all the individuals [placed] within this machine of power' (Foucault 2007, 93–94). The surveillance-industrial complex shows that around 'the concept of power [...], Marx and Foucault coincide' (Negri 2017, 184) and that 'capital and power [...] become unified [...] and constitute a chiasm between two contradictory actions that are forced to join together and yet are intransitive' (Negri 2017, 12).

Some scholars in the field of surveillance studies claim that surveillance has become post-panoptic, and that digital surveillance has not resulted in a digital panopticon. They stress that surveillance has become decentralised, and argue that Foucault's panopticism should be theoretically smashed. Such approaches disregard the emergence of surveillance technologies' decentralised centralism. Decentralised surveillance technologies collect Big Data in many places. This data is networked and controlled by two central panoptic collective actors: capital and the state.

Big Data capitalism and algorithmic power could result in the world turning into a huge shopping mall in which humans are targeted by ads almost

everywhere, and where commercial logic colonises society. In the world of Big Data, algorithms that use instrumental logic for calculating human needs can automate human activities and decision-making in order to meet those needs. The problem is that algorithms and machines do not have ethics and morals. Data commodification means the emergence of new social inequalities, and intensifies the exploitative tendencies of the Internet. Big Data entails a 'Big Data divide' (Andrejevic 2014) in respect to data ownership and data control. Big Data also features new types of rational discrimination and cumulative disadvantage (Gandy 2009). Big Data's logic of digital positivism overlooks that technology is no fix for social and political problems. Big Data surveillance's logic of categorical suspicions abolishes the presumption of innocence; instead, a presumption of guilt emerges, based on the principle 'You're a criminal and terrorist until proven innocent' – this despite the fact that most terrorists do not communicate their plans online. Günther Anders (1980, 221) stresses surveillance's totalitarian character: 'As surveillance devices are used routinely, the main premise of totalitarianism is already created and, with it, totalitarianism itself'. Surveillance and surveillance ideology are often embedded into law and order politics, resulting in fascist potentials being advanced. Big Data means that massive amounts of data are stored on servers and transmitted over the Internet, which under the current energy regime means an exacerbation of environmental problems. E-waste is being dumped into developing countries.

In 2012, data centres used electricity equalling the output of 30 nuclear power plants (Glanz 2012). Running the Internet accounts for about 10% of all electricity produced globally (De Decker 2015). Outsourcing data and software use, and crowdsourcing labour to the Cloud, can increase unemployment and precarious labour.

The rise of Big Data in research has resulted in new approaches such as computational social science and digital humanities. These are forms of Big Data positivism. Such research obtains large amounts of funding, and is obsessed with quantification. Big Data analytics entails the danger that the 'convergence of social-scientific methods toward those of the natural sciences is itself the child of a society that reifies people' (Pollock and Adorno 2011, 20). Big Data positivism is an 'immunization of the [Internet] sciences against philosophy' (Habermas 1971, 67). Computer science colonises the social sciences and humanities. The danger is that computational social science brings about the death of theory and roots out critical qualitative, theory-oriented research. Georg Lukács (1971, 88) warned in this context that mathematics and positivism reduce qualities to quantities that 'can be calculated' and reify human activities. The digital machine that organises Big Data creates a new form of reification that destroys qualities, dialectics, critique and non-instrumental action. We need alternatives to Big Data analytics; we need critical digital media studies instead of computational social science.

4. Digital Labour's Contradictions

In 2016, Google made profits of US\$19.5 billion and was the world's twenty-seventh largest transnational company. In the same year, Facebook registered profits of US\$ 10.2 billion and was the world's 188th largest global corporation¹. But not all social media corporations are as profitable. Twitter reported losses of US\$ 456.9 million in 2016². In the US economy, the share of profits in the GDP was 24.8% and the share of the wage sum 53.1% (Fuchs 2015, Chapter 5). Facebook's wage share (i.e. the share of the wages it paid from its revenues) was 11.0%. Why are the company's wages so low in comparison to the total US economy, and its profits so high? The social media economy is based on the exploitation of users' unpaid digital labour. Marx (1885/1978) described the capital accumulation cycle in the form $M - C \dots P \dots C' - M'$. In the social media economy, this cycle changes into $M - C \dots P1 (v1, c) \dots P2 (v2=0) \dots C' - M'$. The platforms are products (P1) that are not commodities, but a 'free lunch'. Personal data (P2) is a commodity generated by users' digital labour that is sold to advertising clients who are enabled to present targeted ads on users' profiles.

Toni Negri argues that we need 'a new theory of labour value as a common potentiality' (Negri 2017, 29). Marx stresses that technological and capitalist development has resulted in the emergence of the collective worker: 'With the progressive accentuation of the cooperative character of the labour process, there necessarily occurs a progressive extension of the concept of productive labour, and of the concept of the bearer of that labour, the productive worker. In order to work productively, it is no longer necessary for the individual himself to put his hand to the object; it is sufficient for him to be an organ of the collective labourer, and to perform any one of its subordinate functions' (Marx 1867, 643–644). Marx also speaks of the collective worker as an 'aggregate worker': 'An ever increasing number of types of labour are included in the immediate concept of productive labour, and those who perform it are classed as productive workers, workers directly exploited by capital and subordinated to its process of production and expansion' (Marx 1867, 1039).

Marx argues that the cooperative character of labour requires an extension of the concept of productive labour. It is not just the unpaid labour time connected to wage-labour that is exploited and productive, but also the unwaged labour that contributes to the production of commodities and capital accumulation. Expressions of this insight have been made independently of each other in, among other fields, autonomist theory, socialist feminism, and audience labour theory.

In autonomist theory, the concept of the social worker, 'a new working class' that is 'now extended throughout the entire span of production and reproduction' (Negri 1988, 209) creates an 'interconnection between productive labour and the labour of reproduction' (Negri 1988, 209). Socialist feminism stresses orthodox Marxism's common assumption that 'women in domestic labor are not productive' (Dalla Costa and James 1973, 31). This assumption denies

‘women’s potential *social power*’ (6). Domestic and reproductive labour ‘produces not merely use values, but is essential to the production of surplus value’ (31). It produces a commodity ‘unique to capitalism: the living human being – ‘the labourer himself’ (6). Dallas Smythe’s audience labour theory argues that audiences of advertising-funded media are unpaid audience workers conducting labour that creates an audience commodity. The ‘material reality under monopoly capitalism is that all non-sleeping time of most of the population is work time. [...] Of the off-the-job work time, the largest single block is time of the audiences, which is sold to advertisers’ (Smythe 1977, 3).

Digital labour on commercial social media is in certain respects different from audience labour on commercial broadcast media. Social media uses targeted advertising that is based on a Big Data commodity. Audiences make meanings out of content. Social media users also create social relations, content and data. Users’ digital labour on social media is based on prosumption (productive consumption), constant surveillance of personal data, targeted and personalised advertising, predictive algorithms and algorithmic auctions. Facebook and Google are the world’s largest advertising agencies utilizing such labour and the harvesting of the Big Data commodity of audience information.

Digital labour is alienated digital work organised in an international division of digital labour that entails the slave-labour of miners extracting minerals that form the physical foundations of digital tools, Taylorist assemblage labour, e-waste labour, software engineering, various forms of online labour, users’ labour, and so on. (Fuchs 2014, 2015, 2017b).

In the United States, the average reproductive labour time per week per person was 44.53 hours in 2015 (for detailed data on the following calculations, see Fuchs 2017a). The average annual hours of wage-labour were 1,778. 232 billion total hours of wage-labour were performed, of which 113 billion were surplus labour hours, and 119 billion were necessary labour time. The traditional rate of surplus value is calculated as the relationship of the surplus labour time of wage labour (s) to its necessary labour time (v). In monetary terms, it is calculated as the relationship of total annual profits (p) to total wages (v). In the case of the US economy, the traditional rate of surplus value in 2015 was 0.942. But the classical formula does not take unwaged labour into account. According to statistics, 579 billion hours of unpaid reproductive labour hours were performed in the USA in 2015. The organic composition of labour (the corrected rate of surplus value) can be calculated in the following formula (Fuchs 2017a):

Organic composition of labour =

$$\frac{\text{Wage labour's unpaid labour time} + \text{Unwaged labour's unpaid labour time}}{\text{Paid labour time}}$$

Such an effect of capital is not just to increase wage labour’s unpaid labour time, but also to increase the unpaid labour time of unwaged labour. Reproductive

labour is productive because it is a form of unpaid, surplus labour time. Capital exploits wage labour and reproductive labour. The organic composition of labour in the USA in 2015 was $(579 + 113) / 119 = 5.8$ (Fuchs 2017a). Per waged hour of labour, 5.8 hours of unpaid reproductive labour were performed. Reproductive labour made up 83.7% of all unpaid labour time, and 16.3% of labour's surplus labour time.

In the same year of 2015, the average reproductive labour time in the USA was 44.5 hours per week per person. On average, 4.9 hours were spent watching advertisements, and 12.4 hours using commercial social media (Fuchs 2017a). Audience labour and users' digital labour constitute significant shares of reproductive labour time. Moreover, reproductive labour is gendered. In the US, women on average conduct 60% of reproductive labour (Fuchs 2017a). Facebook's algorithm uses racist and sexist logic segmenting market data using crude distinctions, generalisations and assumptions. Users in poorer countries, and poorer users in general, are treated as being less valuable consumers, i.e. as being less likely to purchase advertised commodities when clicking on ads (Fuchs 2017a).

Digital capitalism deepens exploitation while at the same time creating new foundations for autonomous realms that transcend the logic of capitalism. It creates the foundations for new relations of production that germinate within capitalism. With digitalisation, 'the commodity becomes increasingly transparent' (Negri 2017, 25) and 'there begin to emerge sectors that are increasingly sensitive to the autonomy of social cooperation, to the self-valorisation of proletarian subjects' (Negri 2017, 25). Digital capitalism is founded on an antagonism between the digital commodity created by digital labour on the one side, and the digital commons on the other.

Open access publishing is a good example of digital antagonism. Open access is to a certain degree a reaction to the high profit rates of academic publishing corporations, and the monopolisation tendencies in this industry. In 2016, Reed Elsevier achieved a net profit before tax of £1.934 billion and revenues of £6.895 billion. Thus its profit rate was $1.934 / (6.895 - 1.934) = 39.0\%$. In the same year, Springer made profits of €296.4 million and revenues of €833.1 million. Its profit rate was $296.4 / (833.1 - 296.4) = 55.2\%^3$. Such profit rates are extremely high. They are achieved by the sale of expensive bundles of article subscriptions, databases and journals to libraries, and content access to individuals.

Universities and the academic system use public funding to a significant degree. Academic knowledge is a commons that is 'brought about partly by the cooperation of men now living, but partly also by building on earlier work' (Marx 1894, 199). Monopoly capital privatises and commodifies the academic commons. Open access is a counter-reaction to monopoly publishing capital.

'Open access (OA) literature is digital, online, free of charge, and free of most copyright and licensing restrictions' (Suber 2012, 4). The majority of open access projects are non-profit and run by academics or academic associations. A minority of open access projects are for-profit. They achieve profits by article

and book processing charges (APCs, BPCs). Authors pay high publishing charges (sometimes thousands of €/£/\$) for publication of their works. APCs and BPCs are like going to a restaurant where you pay for being allowed to cook and eat your own meal. In the Diamond Open Access Model, not-for-profit, non-commercial organisations, associations or networks publish material that is made available online in digital format, is free of charge for readers and authors and does not allow commercial and for-profit re-use (Fuchs and Sandoval 2013).

On March 20, 2017, the Directory of Open Access Journals listed 9,423 open access journals. 1,866 of these used the CC-BY-NC-ND licence, 1,328 CC-BY-NC, 522 CC-BY-NC-SA. A total of 3,716 (39.4%) did not allow commercial re-use. 5,134 (54.5%) did not use APCs⁴. These data indicate the existence of digital academic commons that are autonomous of capital.

There is a variety of political positions on open access (Fuchs and Sandoval 2013). The policy and industry perspective argues that 'open access is a great new business model'. The trade union perspective holds that 'open access is constituted by voluntary non-resource projects that destroy the jobs of publishing workers'. The radical open access perspective says that 'non-profit open access requires struggles against capitalist publishing that mobilises resources'.

Radical open access can only work properly by achieving material support in the form of funds from foundations and the public, help from volunteers, universities acting as open access publishing houses, and universities and research councils establishing policies that favour publishing in OA journals.

Lawrence & Wishart (L&W) is the publisher of *Marx and Engels Collected Works*. The Marxists Internet Archive (MIA, <https://www.marxists.org>) is an open access library of classical Marxist texts, including Marx and Engels's writings. In 2014, a conflict arose between L&W and MIA about whether or not Marx and Engels's works should be available online in open access format.

L&W argued that 'infringement of this copyright has the effect of depriving a small radical publisher of the funds it needs to remain in existence. [...] [MIA] is reproducing the norms and expectations not of the socialist and communist traditions, but of a consumer culture which expects cultural content to be delivered free to consumers, leaving cultural workers such as publishers, editors and writers unpaid'. MIA disagreed, and said that the Internet '*is a new media for information*. Specifically, the history of the workers movement should in fact be 'free'. [...] The point of any communist publishing house, which the MIA lives up to, is to assure the widest distribution of these works, not, again, to restrict them. That is the opposite of communist publishing'.

The conflict is one between the digital commons-Left and the copyright-Left. It is an expression of the antagonism between networked digital productive forces and alternative projects' operation within capitalism. Making Marx's and Engels's works available online is not simply an economic, but also a political question. These works should be accessible online without payment for political reasons. Wide accessibility is a good foundation for making Marxist ideas a

material force, and the Internet is an excellent medium for this task. Because of the ‘Streisand effect’, copyright enforcement is counterproductive on the Internet. Competition between left-wing projects is self-defeating. The Left should concentrate on cooperation that challenges for-profit corporate publishing. Cooperation could also entail the struggle for and development of alternative forms of funding (public funding, donation models, charges for commercial re-use, making works available open access once a specific level of donations is achieved, and so forth).

5. Digital Capitalism’s Crisis

Paul Mason (2015) connects Marx’s theorem of the Law of the Tendency of the Rate of Profit to Fall, Schumpeter’s long wave theory, and the analysis of digital media. The result is a breakdown theory of capitalism, a new version of Henryk Grossmann’s breakdown theory of capitalism in the digital age. Grossmann (1992, 119) argued that ‘the capitalist system inevitably breaks down due to the relative decline in the mass of profit’ (Grossmann 1992, 119). Mason writes that information technology results in zero marginal costs of information. As a result, the rate of profit would fall until capitalism breaks down and post-capitalism emerges (see Fuchs 2016b).

Such analyses disregard how class struggle influences the rate of profit and surplus value. The Marxian rate of profit is calculated the following way:

$$\text{Rate of profit} = \frac{s}{c + v}$$

s ... surplus value, profit

c ... constant capital

v ... variable capital

By dividing the fraction’s numerator and the denominator by variable capital, we get the following transformation:

$$\text{Rate of profit} = \frac{\frac{s}{v}}{\frac{c}{v} + 1}$$

s/v ... Rate of surplus value

c/v ... Organic composition of capital

The rate of surplus value measures the intensity of labour exploitation, and the organic composition of capital measures the technology and resource intensity of production. Since the 1970s, computerisation has had ambivalent, contradictory effects on the rate of profit. It has increased both the organic composition of capital and the rate of surplus value. These two ratios have contradic-

tory effects on the rate of profit. A rise of the organic composition decreases the rate of profit, a rise of the rate of surplus value increases it. Capitalist class struggle against the working class has decreased the wage share (the share of wages in the GDP). The total effect has been that in many countries, and at the global level, the general profit rate has fluctuated. The fluctuation has encouraged financialisation, which increases the volatility of the economy. The relative drop in wages has resulted in an increase of household debts and a weakening of purchasing power. The 2008 crisis was an expression of neoliberal finance capitalism's accumulated contradictions. Ever since, the economic crisis in many parts of the world has also turned into an ideological crisis of liberalism, giving rise to authoritarian ideology, nationalism and, to a certain degree, authoritarian capitalism.

6. Ideology Today

Commodity producers do not relate to each other directly. Exchange value means the exchange of particular quantities of commodities in the form x commodity A = y commodity B (e.g. 1 banana = £0.15). The social relations of production are not visible in the produced and purchased commodities, which is what Marx terms commodity fetishism. A commodity is 'a social hieroglyphic' (Marx 1867/1976, 167). 'The emergence and diffusion of ideologies appears as the general characteristic of class societies' (Lukács 1986, 405, translation from German).

Nationalism is an ideology that treats the nation as a political fetish object. Nationalism veils class relations. It presents capital and labour as united by a (fictive) national interest. '[N]ation and nationhood are central components of fascist political discourse' (Woodley 2010, 185). '[F]ascism must *itself* be understood as a political commodity: [...] fetishization of communal identities which conceal the true nature of the commodity' (Woodley 2010, 17–18). Fascism is 'a populist ideology which seeks, through a mythology of unity and identity, to project a 'common instinctual fate' (uniform social status) between bourgeois and proletarianized groups, eliding the reality of social distinction in differentiated class societies' (Woodley 2010, 17). Capitalist crisis can produce fascism, which is why we cannot rule out that the new nationalisms will turn into new fascisms and a new world war.

Figure 2 shows a model of right-wing authoritarianism (see Fuchs 2018 for more details). This model uses authoritarian leadership, nationalism, the friend/enemy-scheme, patriarchy and militarism to distract attention from class structures.

Donald Trump is a typical example of right-wing authoritarianism. He is not just a politician and a capitalist, but also a media personality who uses Twitter and reality TV to spread ideology and brand himself. Social media is a realm



Figure 2: A model of right-wing authoritarianism.

of symbolic, communicative and ideological struggle. In the information age, the realm of online communication is an important domain of class struggle. With more than 30 million followers on Twitter, more than 20 million likes on Facebook, and more than 7 million followers on Instagram, Trump uses social media as a tool for spreading right-wing authoritarian ideology.

On 5 September 2016, US-Americans celebrated Labor Day. Trump posted a video on Twitter and Facebook, in which he addressed American workers (see

<http://twitter.com/realDonaldTrump/statuses/772798809508372480>, <https://t.co/RNl7cfzkmN>). In the video, he says:

The American worker built the foundation for the country we love and have today. But the American worker is getting crushed. Bad trade deals like NAFTA and TPP, such high and inexcusable taxes and fees on small businesses that employ so many good people. This Labor Day, let's honour our American workers, the men and women who proudly keep America working. They are the absolute best anywhere in the world. There is nobody like 'em. I'm ready to make America work again and to make America great again. That's what we are going to do on November 8.

This passage contains several ideological elements. It presents US-Americans as a mythic collective. It constructs a unified national interest of capital and labour. He presents the US nation as being under attack by foreign enemies. Social conflict is portrayed as a conflict between nations, which deflects attention from class conflicts. Trump's use of Twitter makes evident how nationalism works as political fetishism. Rosa Luxemburg argues in this context that nationalism is a 'misty veil' that 'conceals in every case a definite historical content' (Luxemburg 1976, 135). '[B]lood, community, folk, are devices for hiding the real constellation of power' (Neumann 1994/2009, 464).

7. Alternatives

The twenty-first century is reaching a historical bifurcation point characterised by turbulence and an intensification of political polarisation. The future is uncertain. We could head towards hyper-neoliberal capitalism, authoritarian capitalism, fascism, the total destruction of the Earth and the annihilation of humanity in a nuclear world war, or an alternative society of the commons.

In their tetraology *Empire*, *Multitude*, *Commonwealth*, *Assembly* Michael Hardt and Antonio Negri (2000, 2004, 2009, 2017) describe a stage in capitalist development in which global capital (the Empire) faces a new working class (the multitude). New common potentials emerge that could become the foundation of a society of the commons, the commonwealth. Commonwealth is, however, just one possible outcome of twenty-first-century society's development. There could also be negative developments such as a new fascism or the end of humanity. Which option prevails depends on how social struggles will develop. The truth of what Rosa Luxemburg wrote in 1918 has today again become very urgent: 'In this hour, socialism is the only salvation for humanity' (Luxemburg 1971, 367).

Right-wing authoritarian movements advance particularistic politics of nature, of the social, and of communication. In respect to nature, they fetishise national identity, the family, and conservative traditions, and see immigrants and global identity as environmental problems disrupting the nation. Right-wing

The Hegelian Dialectical Triad of Multitude, Capital (Empire), & Commonwealth

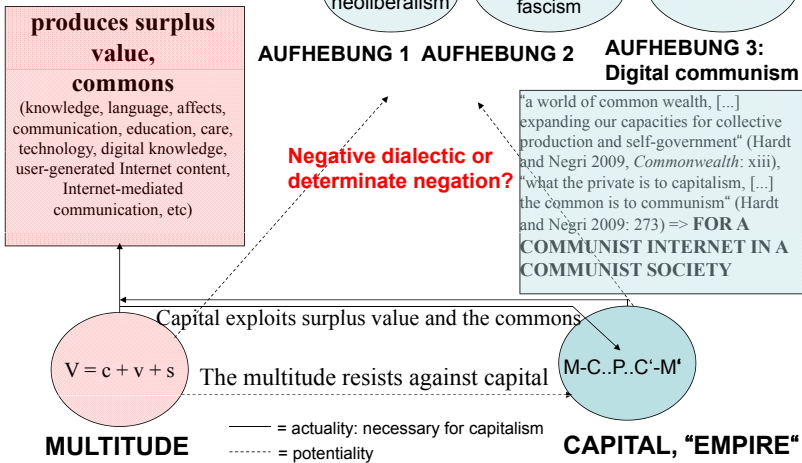


Figure 3: The contradictory development options of society resulting from the antagonism between the capitalist empire and the multitude.

authoritarianism's social policies are a combination of neoliberal ideology that propagates survival of the fittest and a national-'socialist' rhetoric that reserves welfare for the autochthonous, national population. In respect to communication, right-wing authoritarianism combines conservative techno-pessimism that sees traditional values under threat on the Internet and argues in favour of law-and-order control of the Internet, with a neoliberal techno-capitalist ideology that celebrates the corporate media and the corporate Internet.

Progressive forces are today often split and fragmented. The commons consist of social, natural and communicative commons. All of these commons have become increasingly commodified and privatised. Left-wing parties and movements predominantly struggle for the defence of the social commons, Green movements for the defence of the natural commons, and tech movements for the defence of the communicative commons. In order to challenge right-wing authoritarianism, progressive forces should learn from the failures of the Left in the 1920s when various factions, especially Social Democrats and Communists, opposed each other and did not unite against the fascist threat. We need a united political front against right-wing authoritarianism where the defence of the social, natural and communicative commons becomes one movement associated with one progressive party and an associated movement. Social democracy needs a renewal in the form of social democracy 2.0; a movement for socialist democracy and democratic socialism. To the convergence of capital and right-wing authoritarianism, the only feasible answer is left-wing convergence into an internationalist progressive movement (see Figure 4).



Figure 4: Political convergence of movements for the commons.

In respect of communications, the perspective of the commons-based society stands for the advancement of the digital commons, platform cooperatives, and a public-service Internet. Democratic communications shape and are shaped by ‘an association of free men, working with the means of production held in common, and expending their many different forms of labour-power in full self-awareness as one single social labour force’ (Marx 1867, 171).

Franz L. Neumann (1957, 294–295) stresses that in situations of crisis, it is important that academics act as critical public intellectuals: ‘Hence there remains for us as citizens of the university and of the state the dual offensive on anxiety and for liberty: that of education and that of politics. Politics, again, should be a dual thing for us: the penetration of the subject matter of our academic discipline with the problems of politics [...] and the taking of positions on political questions. If we are serious about the humanization of politics; if we wish to prevent a demagogue from using anxiety and apathy, then we – as teachers and students – must not be silent. [...] We must speak and write’.

Notes

¹ Data sources: SEC-filings for the year 2016, forms 10-K (Alphabet, Facebook); Forbes 2000 list of the world’s biggest public companies.

² Data source: Twitter SEC-filing, form 10-K for the year 2016.

³ Data source: Reed Elsevier Investor Relations, Annual Reports, <https://www.relx.com/investors/annual-reports>

⁴ For a significant share, there was no data available, which means that the actual rate of journals not using APCs was actually higher.

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