

Commentary

Class, knowledge and new media

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Knowledge labour as class

Marx highlights exploitation as the fundamental aspect of class. He says that ‘the driving motive and determining purpose of capitalist production’ is ‘the greatest possible exploitation of labour-power by the capitalist’ (Marx, 1976 [1867]: 449). Antagonistic class relations arise due to exploitation:

The control exercised by the capitalist is not only a special function arising from the nature of the social labour process, and peculiar to that process, but it is at the same time, a function of the exploitation of a social labour process, and is consequently conditioned by the unavoidable antagonism between the exploiter and the raw material of his exploitation. (Marx, 1976 [1867]: 449)

The exploited class is ‘free from, unencumbered by, any means of production of their own’, which would mean the ‘complete separation between the workers and the ownership of the conditions or the realization of their labour’ (1976 [1867]: 874). The proletariat is ‘a machine for the production of surplus-value’, capitalists are ‘a machine for the conversion of this surplus-value into additional capital’ (1976 [1867]: 742).

Knowledge labour is labour that produces and distributes information, communication, social relationships, affects, and information and communication technologies. It is a direct and indirect aspect of the accumulation of capital in informational capitalism: there are direct knowledge workers (either employed as wage labour in firms or outsourced, self-employed labour) that produce knowledge goods and services that are sold as commodities on the market (e.g. software, data, statistics, expertise, consultancy, advertisements, media content, films, music, etc.) and indirect knowledge workers that produce and reproduce the social conditions of the existence of capital and wage labour such as education, social relationships, affects, communication, sex, housework, common knowledge in everyday life, natural resources, nurture, care, etc. These are forms of unpaid labour that are necessary for the existence of society, they are performed not exclusively, but to a certain extent by those who do not have regular wage labour – houseworkers, the unemployed, retirees, students, precarious and informal

workers, underpaid workers in temporary or part-time jobs, and migrants. This unpaid labour is reproductive in the sense that it reproduces and enables the existence of capital and wage labour that consume the goods and services of unpaid reproductive workers for free. Therefore both capital and wage labour exploit reproductive workers – which is just another term for indirect knowledge workers. Capital could not be accumulated without a common societal infrastructure in the areas of education, spare time, health and social care, natural resources, culture, art, sexuality, friendship, science, media, morals, sports, housework, etc. that are taken for granted and do not have to be paid for (in the form of shares of its profit). Marx (1981 [1894]: 175) remarks in this context that the rise in the rate of profit in one line of industry depends on the development of the productive power of labour in another sector of the economy. This can also mean that accumulation in the wage labour economy is not only based on its own advances but also on the non-wage labour economy. ‘What the capitalist makes use of here are the benefits of the entire system of the social division of labour’ (1981 [1894]: 175). This system of the division of labour also includes a non-wage economy that is dialectically separated from, and connected to, the wage economy and is exploited by capital.

By consuming reproductive and public goods and services, wage labour is reproducing itself. Wage labourers exploit reproductive workers in order to be able to be exploited by capital. Therefore we can define the multitude as the class of those who produce material or knowledge goods and services directly or indirectly for capital and are deprived and disappropriated of resources by capital. Such exploited resources are consumed by capital for free. Here the arguments of Hardt and Negri (2000, 2005) can be applied: in informational capitalism, knowledge has become a productive force, but knowledge is not only produced in corporations in the form of knowledge goods, but also in everyday life, for example by parents who educate their children, citizens who engage in everyday politics, consumers of media who produce social meaning and hence are prosumers, users of MySpace, YouTube, Facebook, etc. who produce informational content that is appropriated by capital, radio listeners and television viewers who call in live on air in order to discuss with studio guests and convey their ideas that are instantly commodified in the real-time economy, etc. The production process of knowledge is a social, common process, but knowledge is appropriated by capital. By this appropriation the producers of knowledge become just like traditional industrial labour, an exploited class that, with reference to Hardt and Negri (2000, 2005), can be termed the multitude. The multitude is an expanded notion of class that goes beyond manual wage labour and takes into account that labour has become more common.

Hardt and Negri never outlined the subclasses of the multitude. The multitude as the class of all those who are in some sense exploited, in my opinion consists of the following class fractions:

- Traditional industrial workers, who are wage labourers and produce physical goods. Capital appropriates the physical goods of these workers and the surplus-value contained in them.
- Knowledge workers, who are wage labourers and produce knowledge goods and services in wage-relationships or self-employed labour relations. Capital appropriates the knowledge goods and services of these workers and the surplus-value contained in them. One must note that public servants in areas such as health, education, transport, social care, housing, energy, and so on, are not under the direct command of capital. Most of them are waged knowledge workers who produce parts of the commons that are a necessary condition for the existence of society and capital. The latter exploits these public goods in an indirect way.

- Houseworkers: these workers – who are still predominantly female – produce knowledge in the broad sense of communication, affects, sexuality, domestic goods and services that are not sold as commodities, but consumed by capitalists and wage labourers for free in order to reproduce manpower.
- The unemployed: this class is deprived of job assets by capital and wage labour. It is the result of the tendency of the organic composition of capital to rise, which is due to technological progress. The unemployed, just like houseworkers, are involved in unpaid reproductive knowledge work that is a necessary condition for the existence of capital. Furthermore, the unemployed are frequently forced to take on very low-paid and often precarious or illegal jobs and hence are also subjected to extreme economic appropriation. Unemployed persons are increasingly forced by the state to perform extremely low-paid, compulsory over-exploited work.
- Migrants and workers in developing countries: migrants are frequently subjected to extreme economic exploitation in racist relations of production as illegal, over-exploited workers. They are exploited by capital. A certain share of wage labourers who hope to increase their wages and to reach better positions if migrants can be forced to do unpaid or extremely low-paid unskilled work, ideologically supports this exploitation. Developing countries are either completely excluded from exploitation or they are considered as a sphere of cheap, unskilled wage labour that is over-exploited by capital by paying extremely low wages and ignoring labour rights and standards.
- Retirees: retirees are exploited to the extent that they act as unpaid reproductive workers in spheres such as the family, social care, home care and education.
- Students: Students are exploited in the sense that they produce and reproduce intellectual knowledge and skills that are appropriated by capital for free as part of the commons. Students are furthermore frequently over-exploited as precarious workers, a phenomenon for which terms such as ‘precariat’, ‘generation internship’ or ‘praktikariat’ (from the German term ‘*Praktikum*’, which means internship, combined with the term ‘precariat’) can be employed.
- Precarious and informal workers: part-time workers, temporary workers, the fractionally employed, contract labour, bogus self-employment, etc. are work relations that are temporary, insecure and low-paid. Hence these workers are over-exploited by capital in the sense that such jobs would cost much more capital if they were performed by regularly employed wage labour. This condition also applies for racist labour relations and compulsory work performed by unemployed persons. Self-employed persons who do not employ others themselves are forced to sell their own labour power by contract. They control their means of production but produce surplus for others who control capital and use the appropriated labour for achieving profit.

I have used the term over-exploitation here several times. Capital can gain extra surplus-value by over-exploitation. Extra surplus-value is a term coined by Marx for describing relations of production in which goods are produced in such a way that the ‘individual value of these articles is now below their social value’ (Marx, 1976 [1867]: 434). By employing illegal migrants, unemployed compulsory or illegal workers, students, precarious and informal workers, capital can produce goods at a value that is lower than the average social value because its wage costs are lower than in a regular employment relationship. As a result the commodities produced contain less variable capital, but are nonetheless sold at regular prices so that an extra profit can be obtained. The total value of a commodity is $V = c + v + s$ (constant capital + variable capital + surplus-value). By over-exploitation, variable capital and the total value of the commodity are decreased, the commodity can be sold at regular market prices and thus extra profit can be achieved. Those who are outside of regular employment,

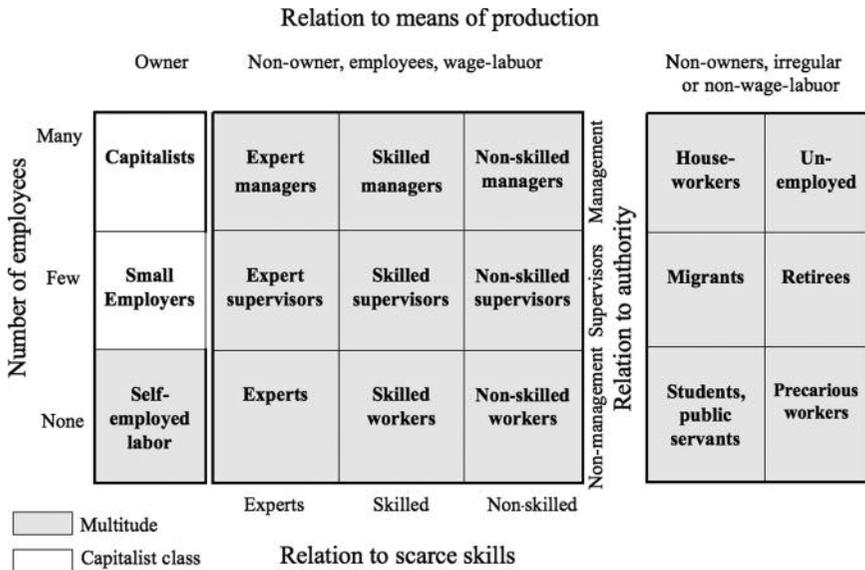
such as students, pensioners, the unemployed and illegal immigrants, are particularly active in reproductive labour that produces the social, educational and knowledge commons of society. All of these activities indirectly benefit capital accumulation. If capital had to pay for this labour, its profits would probably decrease drastically. Therefore it can be argued that capital accumulation is advanced by outsourcing reproductive labour from corporations to the private and public realm, where groups like young people, parents, teachers, the unemployed, pensioners and illegal immigrants especially engage in producing these commons of society that are a necessary condition for the existence of the capitalist economy. This process of outsourcing is free for capital, the informal workers are over-exploited to an extreme extent (if they receive no money at all, the rate of exploitation is infinite). Capital makes use of gratis labour, which is just another formulation for saying that capital exploits all members of society except for itself.

Class relationships have become generalized and the production of value and hence exploitation are not limited to wage labour, but concern society as a whole. Houseworkers, the unemployed, migrants, developing countries, retirees working in reproduction, students, precarious and informal workers should, besides wage labour, be considered as exploited classes that form part of the multitude. The multitude is antagonistic in character and traversed by inner lines of exploitation, oppression and domination that segment the multitude and create inner classes and class fractions. Nonetheless the multitude is objectively united by the fact that it consists of all those individuals and groups that are exploited by capital, live and produce directly and indirectly for capital that expropriates and appropriates resources (commodities, labour power, the commons, knowledge, nature, public infrastructures and services) that are produced and reproduced by the multitude in common.

The growing number of those who produce the commons and are exploited outside of regular wage relationships should be included in a class model as exploited classes (see Figure 1). Note that an individual can be positioned in more than one class at a time. Class positions are not fixed, but dynamic, meaning that in informational capitalism people have a fluid and transitory class status. So, for example, female workers are frequently at the same time houseworkers; many students are also precarious workers; many precarious workers form a type of self-employed labour, and so on. That class positions are antagonistic also means that there is no clear-cut separation between the multitude and the capitalist class, so, for example managers can be considered to have a contradictory class position: they work for a wage, but at the same time execute authority over workers in the name of capital.

Knowledge is a social and historical product; new knowledge emerges from the historical heritage of knowledge in society and is in many cases produced cooperatively. Hence, Marx argued that knowledge is 'universal labour' that is 'brought about partly by the cooperation of men now living, but partly also by building on earlier work' (1981 [1894]: 114). Nature, knowledge and societal infrastructures, due to their collective or natural form of production, are common aspects of society. These resources are not produced by single individuals. Knowledge and infrastructures can only exist due to the collective activities of many. Nature produces itself and is transformed into resources by metabolic processes organized by many. Knowledge, nature and infrastructures are collective goods that cost nothing for capital, but they are a necessary condition for capital accumulation, entering production processes, and capital profits from them. Capital consumes the commons for free; it exploits the results of societal and natural production processes such as education, science, health, reproductive labour and so on. The Essence of the commons is its social character; in capitalism the commons are individually appropriated as proprietary goods by capital. In the categories of Hegelian logic, one can argue that the Essence and Existence of knowledge

FIGURE 1
The multitude and the capitalist class



and the commons are non-identical. Exploitation alienates the Existence of the commons from their Essence and their Truth, Reason, and Reality (Fuchs, 2008).

All humans benefit from knowledge in society that was produced in the past (inherited historical knowledge) in the form of organizations that allow the development of skills (educational knowledge), cultural goods (music, theatre performances, literature, books, films, artworks, philosophy, etc.) that contribute to mental reproduction (entertainment knowledge), and in the form of traditional practices as aspects of education and socialization (practical knowledge). These three forms of knowledge are handed over to future generations and enriched by present generations through the course of the development of society. All humans contribute and benefit therefrom (although to different degrees under the given circumstances). Another form of knowledge is technological knowledge, that is objectified in machines and practices that function as means for reaching identified goals so that labour processes are accelerated and the amount of externalized labour power can be reduced. Not all humans and groups benefit from these four types of knowledge to the same extent. Corporations especially consume a share above average: educational, entertainment, and practical knowledge are aspects of the reproduction of manpower. Individuals and society perform these processes to a large extent outside of firms and labour time. Technological progress helps corporations to increase their productivity, that is, the ability of capital to produce ever more profit in ever less time. Technological knowledge does not enter the production process indirectly as the other three forms of knowledge do; it is directly employed in the production process by capital. Technological knowledge is produced by society, but it is individually appropriated as a means of production by capital.

The result of this discussion is that corporations consume the commons of society that consist of nature, educational knowledge, entertainment knowledge, practical

knowledge, technological knowledge and public infrastructures (labour in the areas of health, education, medical services, social services, culture, media, politics, etc.) for free. Hence, one important form of exploitation in the knowledge society is the exploitation of the commons by capital, which is also exploitation of the multitude and of society as a whole. But are capitalists and small employers not also part of the multitude in the sense that they contribute to the production and reproduction of the commons in everyday life? There is no doubt that all humans contribute a certain share of unpaid work to the production and reproduction of nature, knowledge and the public services, and so on. But the capitalist class is the only class in society that exploits and expropriates the commons; it is the only class that derives economic profit and accumulates capital with the help of the appropriation of the commons. All humans produce, reproduce and consume the commons, but only the capitalist class exploits the commons economically. Hence, this class should not be considered as a part of the multitude. With the rise of informational capitalism, the exploitation of the commons has become a central process of capital accumulation.

New media and class exploitation

Class is a central concept for a critical theory of media and information, and a critical theory of ICTs and society (Fuchs, 2009).

For Marx, the profit rate is the relation of profit to investment costs: $p = s / (c + v)$. The investment costs are subdivided into constant and variable capital. Variable capital v is the value form of labour, constant capital c the value form of the means of production. Constant capital consists of two parts: circulating constant capital c_{cir} (the value of the utilized raw materials, auxiliary materials, operating supply items and semi-finished products) and fixed constant capital c_{fix} (the value of the utilized machines, buildings and equipment) (Marx, 1978 [1885]: ch. 8). Together, c_{cir} and v form circulating capital – they transfuse their value totally to the product and must be constantly renewed; c_{fix} remains fixed in the production process throughout the course of many turnovers of capital. Fixed constant capital decreases its value by each turnover of capital. Its value is decreased by Δc , which is a flexible value. Fixed constant capital like machinery does not create value and its value is never entirely transfused to capital at once. It is depreciated by wear and tear, non-usage and moral depreciation (i.e. the emergence of new machinery with increased productivity)¹ (Marx, 1978 [1885]: 237f.).

In the production sphere, capital stops its metamorphosis; capital circulation comes to a halt. The new value V' of the commodity is produced; V' contains the value of the necessary constant and variable capital and all surplus-value of the surplus product. Surplus-value is generated by unpaid labour. Capitalists do not pay for the production of surplus, therefore the production of surplus-value can be considered as a process of exploitation. The value V' of the commodity after production is $V' = c + v + s$. The commodity then leaves the production sphere and again enters the circulation sphere, where it is sold on the market, so that surplus-value is transformed into profit. The value of the commodity is realized in money form. Parts of the profits are reinvested and capitalized in order to produce more profit. Capital is accumulated.

Commodities are sold at a price that is higher than the investment costs so that profit is generated. For Marx, the decisive quality of capital accumulation is that profit is an emergent property of production that is produced by labour, but owned by the capitalists. Without labour no profit could be made. Workers are forced to enter class relations and to produce profit in order to survive, which enables capital to appropriate surplus. The notion of exploited surplus-value is the main concept of Marx's theory, by which he intends to show that capitalism is a class society. The capitalist:

... wants to produce a commodity greater in value than the sum of the values of the commodities used to produce it, namely the means of production and the labour-power he purchased with his good money on the open market. His aim is to produce not only a use-value, but a commodity; not only use-value, but value; and not just value, but also surplus-value.... The cotton originally bought for £100 is for example re-sold at £100 + £10, i.e. £110. The complete form of this process is therefore M-C-M', where M' = M + M, i.e. the original sum advanced plus an increment. This increment or excess over the original value I call 'surplus-value'. (Marx, 1976 [1867]: 293, 251)

The immediate effects of surplus-value production in class relations are that the product belongs to the capitalist and not to the worker and that surplus-value 'costs the worker labour but the capitalist nothing', but 'none the less becomes the legitimate property of the capitalist' (1976 [1867]: 672). If you do not produce cotton, but knowledge, such as for example the Microsoft Windows Vista operating system, the decisive quality is that knowledge only needs to be produced once and can be infinitely reproduced at low costs and distributed at high speed. There is no physical wear and tear of the product, knowledge is not used up in consumption, it can be reworked and built upon. There are high initial production costs, but once knowledge such as software is produced, it can be cheaply copied and sold at high prices. The constant and variable capital costs for reproduction are low, which is beneficial for sustained capital accumulation in the knowledge industries.

The situation again changes a little if knowledge is produced for new media and carried and distributed by it. A central characteristic of networked digital media is that the consumer of knowledge has the potential to become its producer. New media are simultaneously used for the production, circulation and consumption of knowledge. They support cognition (thought, language), communication (one-to-one, one-to-few, one-to-many, few-to-one, few-to-few, many-to-many, many-to-one, many-to-few, many-to-many), and cooperation (peer production, sharing, virtual communities, social networking, cyberlove, online collaboration, etc.) by combining the universal digital machine of the computer with networking functions as structural principles. In informational capitalism, the brain and its bodily mediations are enabled to engage in organic practices of economic production, surplus-value generation, co-production, communicative circulation and productive consumption by new media. The production of new knowledge is based on the prior consumption of old knowledge, on co-production as well as on communicative interchange as a coordinative mechanism. Consumption of knowledge produces individual meaning and incentives for further social production and communication. Circulation of knowledge is the consumption of bandwidth and technical resources and the production of connections.

If the users become productive, then in terms of Marxian class theory this means that they also produce surplus-value and are exploited by capital as for Marx productive labour is labour generating surplus. Therefore the exploitation of surplus-value in cases like Google, YouTube, MySpace or Facebook is not merely accomplished by those who are employed by these corporations for programming, updating and maintaining the soft- and hardware, performing marketing activities and so on, but by them and the producers who engage in the production of user-generated content. New media corporations do not (or hardly) pay the users for the production of content. One accumulation strategy is to give them free access to services and platforms, let them produce content, and to accumulate a large number of producers that is sold to third-party advertisers. No product is sold to the users, but the users are sold as a commodity to advertisers. The more users a platform has, the higher the advertising rates can be set. The productive labour time that is exploited by capital on the one hand involves the labour time of the paid employees, and on the other hand all of the time that

is spent online by the users. For the first type of knowledge labour, new media corporations pay salaries. The second type of knowledge is produced completely for free. There are neither variable nor constant investment costs. The formula for the profit rate needs to be transformed for this accumulation strategy:

$p = s / (c + v1 + v2)$, s ... surplus-value, c ... constant capital, $v1$... wages paid to fixed employees, $v2$... wages paid to users

The typical situation is that $v2 \Rightarrow 0$ and that $v2$ substitutes $v1$. If the production of content and the time spent online were carried out by paid employees, the variable costs would rise and profits would therefore decrease. This shows that produsage in a capitalist society can be interpreted as the outsourcing of productive labour to users who work completely for free and help to maximize the rate of exploitation ($e = s / v$) so that profits can be raised and new media capital may be accumulated. Again, this situation is one of infinite over-exploitation. Capitalist produsage is an extreme form of exploitation of labour that the producers perform completely for free.

That surplus-value generating labour is an emergent property of capitalist production and means that production and accumulation will break down if this labour is withdrawn. It is the most essential part of the capitalist production process. That producers conduct surplus-generating labour can also be seen by imagining what would happen if they were to stop using platforms like YouTube, MySpace and Facebook: the number of users would drop, advertisers would stop investing in them because no objects for their advertising messages and therefore no potential customers for their products could be found, the profits of the new media corporations would drop and they would go bankrupt. If such activities were carried out on a large scale, a new economic crisis would arise. This thought experiment shows that users are essential for generating profit in the new media economy. Furthermore they produce and co-produce parts of the products, and therefore parts of the use value, exchange value and surplus-value that are objectified in these products.

Dallas Smythe suggests that in the case of media advertisement models, the audience is sold as a commodity:

Because audience power is produced, sold, purchased and consumed, it commands a price and is a commodity.... You audience members contribute your unpaid work time and in exchange you receive the program material and the explicit advertisements. (2006 [1981]: 233, 238)

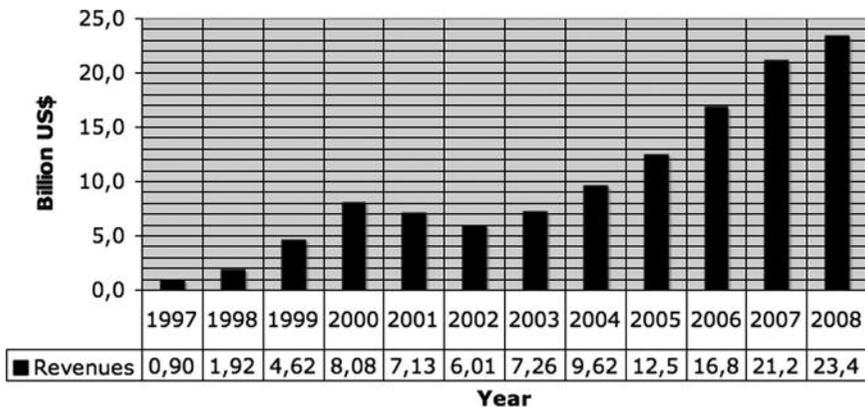
With the rise of user-generated content and free access social networking platforms and other free access platforms that yield profit by online advertisement, the web seems to come close to accumulation strategies employed by the capital on traditional mass media like TV or radio. The users who google data, upload or watch videos on YouTube, upload or browse personal images on Flickr, or accumulate friends with whom they exchange content or communicate online via social networking platforms like MySpace or Facebook, constitute an audience commodity that is sold to advertisers. The difference between the audience commodity on traditional mass media and on the internet is that in the latter the users are also content producers; there is user-generated content, the users engage in permanent creative activity, communication, community building and content-production. That the users are more active on the internet than in the reception of TV or radio content is due to the decentralized structure of the internet, which allows many-to-many communication. Due to the permanent activity of the recipients and their status as producers, I would argue, in the case of the internet, that the audience commodity is a producer commodity. The category of the producer commodity does not signify a democratization of the

media towards participatory systems, but the total commodification of human creativity. Much of the time spent online produces profit for large corporations like Google, News Corp. (which owns MySpace), or Yahoo! (which owns Flickr). Advertisements on the internet are frequently personalized; this is made possible by surveilling, storing and assessing user activities with the help of computers and databases. This is another difference from TV and radio, which provide less individualized content and advertisements due to their more centralized structure. But one can also observe a certain shift in the area of traditional mass media, as in the cases of pay per view, tele-votes, talkshows and phone-in TV and radio shows. In the case of the internet, the commodification of audience participation is easier to achieve than with other mass media.

Marx anticipated the exploitation of producers by arguing that, as a result of the development of the productive forces, a time of capitalist development would come in which ‘general intellect’, the ‘power of knowledge, objectified’, ‘general social knowledge has become a direct force of production’ (Marx, 1973 [1857/8]: 706). The productive forces would not only be produced in the form of knowledge, but also as ‘immediate organs of social practice, of the real life process’. Marx here describes how, in a knowledge society, social life becomes productive. That knowledge labour, such as that performed online by producers, is productive, then also means that under capitalist class relations it is exploited and that all knowledge workers, unpaid and paid, are part of an exploited class.

Figure 2 shows the rapid growth of internet advertising profits in the USA. These profits amounted to US\$23.4 billion in 2007, which makes up 11 percent of total US advertising profits (IAB Internet Advertising Revenue Report, 2008). The online advertising profits were higher than the profits made by radio and cable TV advertising in 2008 and were only exceeded by profits in newspaper and TV distribution advertising (IAB Internet Advertising Revenue Report, 2008). The statistics show that the accumulation model that is based on internet prosumption is gaining in importance and that the hopes that the internet in general, and Web 2.0 in particular, will bring about a participatory society are shattered by corporate domination of the internet.

FIGURE 2
Internet advertising revenues in the USA, 1997–2008



Note

1. By 'moral depreciation' Marx means a devaluation of machinery not by physical wear and tear, but caused by the belief in the logic of technical progress.

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