

The Political Economies of Media

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The Transformation of the
Global Media Industries

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B L O O M S B U R Y A C A D E M I C

The Contemporary World Wide Web

Social medium or new space of accumulation?

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Introduction

Many observers claim that the internet in general and the world wide web in particular have been transformed in the past years from a system that is primarily oriented toward information provision into a system that is more oriented to communication and community building.¹ The notions of “Web 2.0,” “social software,” and “social network(ing) sites” have emerged in this context. Web platforms such as Wikipedia, MySpace, Facebook, YouTube, Google, Blogger, Rapidshare, Wordpress, Hi5, Flickr, Photobucket, Orkut, Skyrock, and Twitter are said to exemplify this transformation of the internet.

One of the best-known definitions of “Web 2.0” has been given by Tim O’Reilly (2005):

Web 2.0 is the network as platform, spanning all connected devices; Web 2.0 applications are those that make the most of the intrinsic advantages of that platform: delivering software as a continually-updated service that gets better the more people use it, consuming and remixing data from multiple sources, including individual users, while providing their own data and services in a form that allows remixing by others, creating network effects through an “architecture of participation,” and going beyond the page metaphor of Web 1.0 to deliver rich user experiences.

The claim by O’Reilly and others is that the web has become more social, community-oriented, cooperative, and based on user-generated content. These claims have thus far hardly been empirically tested, and although there is much talk about the “social web,” there are hardly any approaches based on social theory that think systematically about what sociality on the web and the internet actually means. This chapter aims to remedy that shortcoming by introducing and discussing some social theory and critical theory foundations of the world wide web. I do so in three steps. First, the notions of Web 1.0, 2.0, 3.0 will be introduced based on social theory. Then the notion of the participatory web and the role of the category of class for the web will be discussed. Finally, some conclusions are drawn.

The world wide web and social theory

For Emile Durkheim, a “social fact is every way of acting, fixed or not, capable of exercising on the individual an external constraint” (Durkheim 1982: 59). For Durkheim, social facts are ubiquitous and permanently shape our thinking and action. Max Weber had a different notion of sociality as social action: “Not every kind of action, even of overt action, is ‘social’ in the sense of the present discussion. Overt action is not social if it is oriented solely to the behavior of inanimate objects” (Weber 1968: 22). For Ferdinand Tönnies, the most important form of sociality is the community, which he understands as “consciousness of belonging together and the affirmation of the condition of mutual dependence” (Tönnies 1988: 69). For Karl Marx, cooperation is a fundamental mode of human social activity: “By social we understand the cooperation of several individuals, no matter under what conditions, in what manner and to what end” (Marx and Engels 1846/1970: 50).

Based on these four theoreticians, we can distinguish three modes of human sociality: cognition, communication, and cooperation. Cognition is the activity of the human mind. Cognition is social for Durkheim because it is permanently confronted with social facts and is the foundation for creating and recreating social facts. Communication is a process in which signs and symbols are given a certain meaning by a person or group of persons who share those meanings among themselves and with others who also give certain meanings to these signs and symbols. The notion of communication relates to Weber’s concept of social action and stresses the role of meaning, signs, and symbols. Communication, in other words, is social action that makes use of symbols. Cooperation is a process in which several humans act together in order to achieve a goal or a process of joint actions that produces a shared consciousness of belonging together. If cooperation is understood in this way, then it expresses Marx’s notion of cooperation and Tönnies’ concept of community. Information can be understood as process that involves one or more of the social activities of cognition, communication, and cooperation (Hofkirchner 2008).

This notion of information allows us to distinguish three dimensions of the web (Figure 9.1). Web 1.0 is a computer-based networked system of human cognition, Web 2.0 is a computer-based networked system of human communication, and Web 3.0, a computer-based networked system of human cooperation. Web 1.0 describes cognitive aspects of the web, Web 2.0, communicative aspects, and Web 3.0, cooperative aspects. These three notions are layered one atop the other, whereby cooperation is based on but more than communication and communication is based on but more than cognition. In order to cooperate, we need to communicate, and in order to communicate we need to cognize. In Web 1.0, individuals cognize with the help of data that they obtain from a technologically networked information space. Web 2.0 as a system of communication is based on web-mediated cognition: Humans

interact with the help of symbols that are stored, transmitted, and received with the help of computers and computer networks. Web-mediated cognition enables web-mediated communication and vice versa. There is no communication process without cognition. In Web 3.0, a new quality is said to emerge out of the productive capacities of communicative actions. A certain amount of cohesion between the people involved is necessary, and web-mediated communication helps to enable such mediated cooperation. To put it another way, there is no cooperation without communication and cognition. These three relatively distinct forms of sociality (cognition, communication, and cooperation) are encapsulated within one another. Each layer forms the foundation for the next one, reflecting the emergent property of each element and the “total system” as a whole. As I use the term, the “web” is meant not only to refer to the world wide web but also to any techno-social information network that enables human action and interaction. There are also feedback loops between the levels, which are indicated by the causal arrows in Figure 9.1: Cognition enables communication, communication enables further cognition, communication enables cooperation, cooperation enables further communication.

In order to assess whether there have been significant transformations and distinct stages in the evolution of the web over time, I compared the top 20 websites used in the United States between 1998 and 2010, and asked whether there are manifest differences in the technological affordances they provide for cognition, communication, and cooperation over this span of time. The statistical data in Table 9.1 show the number of unique users who accessed

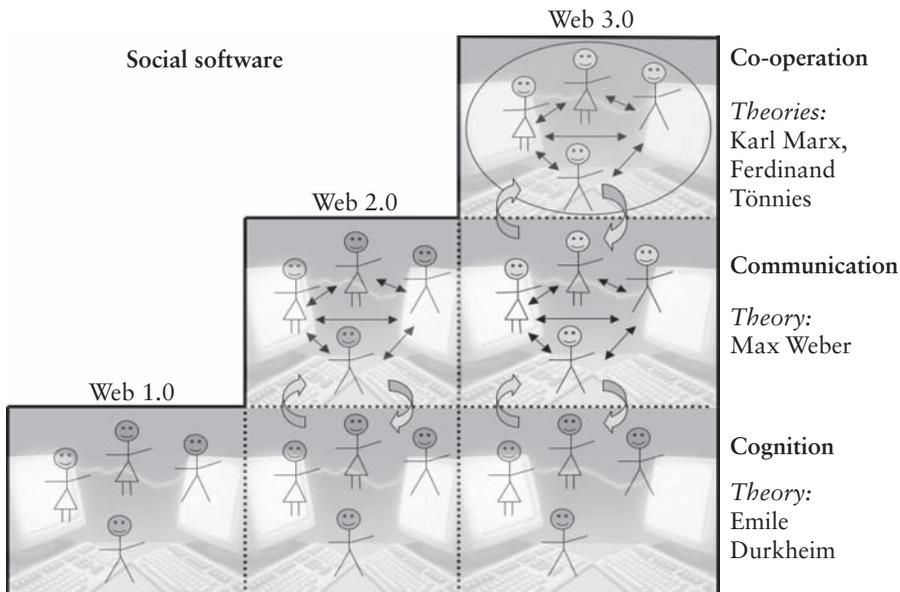


Figure 9.1 A model of social software and its three subtypes

Table 9.1 Information functions of the top 20 websites in the United States, 1998/2010

1998		2010					
Rank	Website	Unique users in '000s (December)	Primary functions	Rank	Website	Unique users in '000s (December)	Primary functions
1	aol.com	28,255	Cognition, communication	1	google.com	153,774	Cognition, communication
2	yahoo.com	26,843	Cognition, communication	2	facebook.com	133,843	Cognition, communication, cooperation
3	geocities.com	18,977	Cognition	3	youtube.com	123,585	Cognition, communication
4	msn.com	18,707	Cognition, communication	4	yahoo.com	120,081	Cognition, communication
5	netscape.com	17,548	Cognition, communication	5	amazon.com	85,311	Cognition
6	excite.com	14,386	Cognition, communication	6	twitter.com	81,631	Cognition, communication
7	lycos.com	13,152	Cognition, communication	7	msn.com	78,184	Cognition, communication
8	microsoft.com	13,010	Cognition	8	ebay.com	74,207	Cognition
9	bluemountainarts.com	12,315	Cognition, communication	9	wikipedia.org	71,952	Cognition, communication, cooperation
10	infoseek.com	11,959	Cognition, communication	10	live.com	71,348	Cognition

11	altavista.com	11,217	Cognition	11	microsoft.com	69,891	Cognition
12	tripod.com	10,924	Cognition	12	answers.com	62,192	Cognition, communication, cooperation
13	xoom.com	10,419	Cognition	13	blogspot.com	58,418	Cognition, communication
14	angelfire.com	9,732	Cognition	14	ask.com	56,249	Cognition
15	hotmail.com	9,661	Cognition, communication	15	blogger.com	52,673	Cognition, communication
16	Amazon.com	9,134	Cognition	16	aol.com	52,273	Cognition, communication
17	real.com	7,572	Cognition	17	bing.com	51,612	Cognition
18	znet.com	5,902	Cognition	18	ehow.com	50,590	Cognition, communication, cooperation
19	hotbot.com	5,612	Cognition	19	craigslist.org	45,943	Cognition, communication
20	infospace.com	5,566	Cognition	20	about.com	43,776	Cognition
		260,891				1,537,533	

Sources: Comcast (1999), Quantcast (2011).

a platform in a time span of 1 month. For each platform, it was assessed if it primarily supports information publishing or search (cognitive function), symbolic interaction (communicative function), or community building and knowledge cocreation (cooperative function). To help understand this relationship between different platforms and different functions, we can see, for example, that Google mainly supports information search (cognition) and communication (with its e-mail platform Gmail), while Wikipedia supports information search (cognition), interaction of users who collaborate on articles (communication), and knowledge cocreation (cooperation). The results of the analysis are shown in Table 9.1.

One initial observation is that from 1998 to 2010, the number of unique visitors in the United States to the top 20 websites multiplied by a factor of almost 6. In terms of the functional orientation of the top 20 websites, one can observe that in 1998, there were 20 instances in which information functions and 9 where communication functions were predominant. By 2010, there were still 20 information functions, but the number of communication and cooperation functions of the top 20 US websites had grown to 13 and 4, respectively. The number of websites that are oriented purely toward cognitive tasks decreased from 11 in 1998 to 7 in 2010. Thus, in 1998, and in terms of its technological structure, the world wide web was predominantly a cognitive medium (Sociality 1), although communicative features (Sociality 2) were also present. In 2010, the number of websites that also have communicative or cooperative functions is much larger than the number of “pure” information sites. This shows that the technological foundations for Sociality (2) and (3) have increased quantitatively. In other words, a feature of the web in 2010 that was not present on the top 20 websites in 1998 is the support of cooperative tasks: collaborative information production with the help of wikis (Wikipedia, answers.com) and social networking sites oriented to community building (Facebook, eHow). The development of the world wide web is thus marked by both continuity and discontinuity. Information sites are still predominant, but the importance of communicative and cooperative features has increased.

Participatory web as ideology

Changes of media and technologies have historically been connected to the emergence of certain one-sided techno-optimistic and techno-pessimistic myths. In the case of “Web 2.0” and “social software,” this continues to be true. The reigning myth of the past couple of years is that the world wide web and the internet have morphed into a participatory medium, with a reinvigorated participatory culture close in tow.

Henry Jenkins encapsulates this stance well when he argues that increasingly “the web has become a site of consumer participation” (Jenkins 2006a: 137). He claims that blogging, in particular, is “increasing cultural diversity and lowering barriers in cultural participation,” “expanding the range of perspectives,” and making it possible that “grassroots intermediaries” and “everyone has a chance to be heard” (Jenkins 2006b: 180–1). Axel Bruns sees the rise of produsage—the “hybrid user/producer role which inextricably interweaves both forms of participation” (Bruns 2008: 21)—as the central characteristic of Web 2.0. He argues that produsage “harnesses the collected, collective intelligence of all participants” (Bruns 2008: 1), that it allows “participation in networked culture” (Bruns 2008: 17), and that the “open participation” (Bruns 2008: 24, 240) of Web 2.0 has the potential to reconfigure democracy as we know it (Bruns 2008: 34). Clay Shirky (2008: 227–8) believes that the “linking of symmetrical participation and amateur production” in Web 2.0 spaces such as Flickr, YouTube, MySpace, and Facebook creates environments of “public participation.” Shiffman (2008) sees the emergence of the “age of engage” as result of Web 2.0. Tapscott and Williams (2006: 15) similarly argue that “the new web” has resulted in “a new economic democracy ... in which we all have a lead role.” Yochai Benkler (2006) points to the rise of commons-based peer production on the internet and concludes that “we can say that culture is becoming more democratic: self-reflective and participatory” (Benkler 2006: 15).

In the face of this seeming consensus, however, we must step back and ask whether the web is as participatory as many seem to think it is? To answer this question, however, we must first understand what is meant by the notion of participation. A good place to start in terms of that question is participatory democracy theory.

Held (1996: 271) argues that a primary feature of participatory democracy is the “direct participation of citizens in the regulation of the key institutions of society, including the workplace and local community.” It also means “democratic rights need to be extended from the state to the economic enterprise and the other central organizations of society” (Held 1996: 268). The central idea of participatory democracy theory is that individuals should be enabled to fully take part in collective decision processes and in the control and management of structures in the economic, political, and cultural systems that concern and affect them. In other words, participatory democracy can be understood as an extension and intensification of democracy in line with the following basic principles (Macpherson 1973; Pateman 1970).

The intensification and extension of democracy

Participatory democracy involves the “democratization of authority structures” (Pateman 1970: 35) in *all* decision-making systems, such as government,

the workplace, the family, education, housing, and so on. In particular, the economic system is seen as the fundamental sphere of participation, given that “most individuals spend a great deal of their lifetime at work and the business of the workplace provides an education in the management of collective affairs that it is difficult to parallel elsewhere” (Pateman 1970: 43).

The maximization of human developmental powers

Participatory democracy is not only a system of government but also a kind of society that “attains the presently attainable maximum ... level of abilities to use and develop human capacities given the presently possible human command over external Nature” (Macpherson 1973: 58). Factors that impede these powers—inadequate means of life (physical and psychological energy), lack of access to the means of labor, and a lack of protection against invasion by others—must be abolished in order to realize participatory democracy (Macpherson 1973: 59–70).

Extractive power as impediment for participatory democracy

For Macpherson (1973), capitalism is based on the individual right to unlimited accumulation of property and unlimited appropriation, a system of rights that allows some human beings to exploit others and that ultimately ends up limiting the development of human capacities in general (Macpherson 1973: 17–18). This results in an unequal distribution of property as well as inequality in terms of the “effective equal right of individuals to exert, enjoy, and develop their powers” (Macpherson 1973: 34–5). He calls this extractive power: the exercise of “power over others, the ability to extract benefit from others” (Macpherson 1973: 42).

Participatory decision making

Participatory democracy requires “(equal) participation in the making of decisions” (Pateman 1970: 43) and “a process where each individual member of a decision-making body has equal power to determine the outcome of decisions” (Pateman 1970: 71).

Participatory economy

Participatory democracy does not exclude individuals from common property but guarantees “the right to a share in the control of the massed productive resources” (Macpherson 1973: 137).

Technological productivity as material foundation of participatory democracy

A high level of technological productivity can be used to create a post-scarcity economy where all people have “economic security” (Pateman 1970: 40). As Macpherson (1973: 20f) states, “I am arguing that we are reaching a level of productivity at which the maximization of human powers, in the ethical sense, [...] can take over as the criterion of the good society, and that in the present world climate it will have to be an egalitarian maximization of powers.” According to Macpherson (1973), the revolution in energy generation and communication technologies could

releas[e] more and more time and energy from compulsive labour, allow men to think and act as enjoyers and developers of their human capacities rather than devoting themselves to labour as a necessary means of acquiring commodities. At the same time the technological revolution could enable men to discard the concept of themselves as essentially acquirers and appropriators. (Macpherson 1973: 37)

Macpherson’s views that people’s capabilities can be maximized through the application of technological forces rather than the latter leading to greater exploitation closely parallels Herbert Marcuse’s remarks on the role of technology in liberation. Marcuse (1964) imagined that a stage

would be reached when material production (including the necessary services) becomes automated to the extent that all vital needs can be satisfied while necessary labor time is reduced to marginal time. From this point on, technical progress would transcend the realm of necessity, where it served as the instrument of domination and exploitation which thereby limited its rationality; technology would become subject to the free play of faculties in the struggle for the pacification of nature and of society. (Marcuse 1964: 16)

This discussion shows that democracy is not limited to voting in general elections but is a condition where grassroot political participation and decision making in the economy, culture, and all spheres of society is the norm. This also includes the question of ownership, which is conceived to be undemocratic within contemporary capitalist societies because the means of production are privately owned by the capitalist class even though they are, in many respects, collectively produced. A participatory economy also requires that extractive power be reduced to zero and the establishment of “the right to a share in the control of the massed productive resources” (Macpherson 1973: 137). Furthermore, it involves “the democratizing of industrial authority structures, abolishing the permanent distinction between ‘managers’ and ‘men’” (Pateman 1970: 43).

Given these baseline conditions, we can analyze the ownership of “Web 2.0/3.0” to determine if it is truly participatory, as I do in relation to the top 50 websites in the United States in July 2009 identified in Table 9.2. The

Table 9.2 Web 2.0/3.0 platforms that are among the top 50 websites in the United States, 2009

Rank	Website	Ownership	Country	Year of domain creation	Economic orientation	Unique US users per month (July 2009) (in millions)	Unique US users per month (December 2010) (in millions)
4	Facebook	Facebook Inc.	USA	2004	Profit, advertising	91	134
6	YouTube	Google Inc.	USA	2005	Profit, advertising	72	124
8	Wikipedia	Wikimedia Foundation	USA	2001	Nonprofit, non-advertising	67	72
9	MySpace	MySpace Inc. (News Corporation)	USA	2003	Profit, advertising	63	29
14	Blogspot	Google Inc.	USA	2000	Profit, advertising	49	57
19	Answers	Answers Corporation	USA	1996	Profit, advertising	39	62
22	Wordpress	Automattic Inc.	USA	2000	Profit, advertising	28	43
23	Photobucket	Photobucket.com LLC	USA	2003	Profit, advertising	28	25
26	Twitter	Twitter Inc.	USA	2006	Profit, no advertising	27	82
31	Flickr	Yahoo Inc.	USA	2003	Profit, advertising	21	16
32	Blogger	Google Inc.	USA	1999	Profit, advertising	20	53
44	eHow	Demand Media Inc.	USA	1998	Profit, advertising	14	51
49	eZine Articles	SparkNet Corp.	USA	1999	Profit, advertising	13	7.5

Source: Quantcast (2010).

websites are ranked according to the number of unique US visitors in 1 month of observation.

Table 9.2 uses the number of monthly unique visitors per website to show which Web 2.0/3.0 platforms were among the top 50 websites accessed in the United States in July 2009. If we define Web 2.0/3.0 platforms as those that mainly support social networking, community building, file sharing, cooperative information production, and interactive blogging—platforms that are more systems of communication and cooperation than systems of cognition—then we can analyze the role that Web 2.0/3.0 platforms play on the world wide web overall. When we do so, one thing becomes immediately clear: namely, that 13 out of the top 50 websites in 2009 can be classified as Web 2.0/3.0 platforms (i.e. 26.0 percent). In terms of total usage of these top 50 websites in the United States, these 13 platforms account for 532 million visits out of a total of 1,916 million (i.e. 27.7 percent). If just 26.0 percent of the top 50 US websites are Web 2.0 platforms, and these platforms account for only 27.7 percent of usage, then this means that claims that the web has been transformed into social medium based predominantly on sharing, cooperation, and community building are vastly overdrawn. The predominant usage type of the internet in the United States is to access information search sites and others that provide information, shopping, and e-mail services. Web 2.0/3.0 platforms have become more important, but they do not dominate the web. Furthermore, 12 out of 13 Web 2.0/3.0 platforms among the top 50 websites in the United States are profit oriented, and 11 of them are advertising supported. An exception is Wikipedia, which is nonprofit and advertising-free. Advertising and targeted-advertising are the most important business models among these Web 2.0/3.0 sites.

There are also some sites that combine this accumulation model with that of selling special services to users. So, for example, Flickr, an advertising-based photo-sharing community, allows uploading and viewing images for free but sells additional services such as photo prints, business cards, and photo books. WordPress uses advertising but also generates revenue by selling VIP blog hosting accounts that have monthly subscription rates and services such as extra storage space, customized styles, a video blogging service, ad-free blogs, and blogs with an unlimited number of community members. Until 2010, Twitter was the only profit-oriented corporation that did not have a business model based on advertising. In April 2010, however, Twitter announced that advertising will be introduced in the near future (see <http://news.bbc.co.uk/2/hi/8617031.stm>, accessed on July 1, 2010). In July 2010, Twitter had not-yet implemented advertising, but its privacy policy had already been changed in the preceding year in anticipation of an advertising-financed business model. As a result, Twitter's terms of use significantly grew in length and complexity, and set out the company's ownership rights with respect to user-generated content. A note that Twitter "may include advertisements, which may be targeted to the Content or information on the Services, queries made through the Services, or

Table 9.3 Ownership rights and advertising rights of the 13 most used Web 2.0/3.0 platforms in the United States

Rank	Website	Ownership of data	Advertising
4	Facebook	License to use uploaded content	Targeted advertisements
6	YouTube	License to use uploaded content	Targeted advertisements
8	Wikipedia	Creative commons	No advertising
9	MySpace	License to use uploaded content	Targeted advertisements
14	Blogspot	License to use uploaded content	Targeted advertisements
19	Answers	License to use uploaded content	Targeted advertisements
22	Wordpress	License to use uploaded content	Targeted advertisements
23	Photobucket	License to use uploaded content	Targeted advertisements
26	Twitter	No license to use uploaded content	No advertising
31	Flickr	License to use uploaded content	Targeted advertisements
32	Blogger	License to use uploaded content	Targeted advertisements
44	eHow	License to use uploaded content	Targeted advertisements
49	eZineArticles	No license to use uploaded content	Targeted advertisements

Source: Quantcast (2010).

other information” was added to Twitter’s terms of service (<http://www.twitter.com/tos>, version effective on November 16, 2010).

The key point then is that, according to my empirical sample, 92.3 percent of the most frequently used Web 2.0/3.0 platforms in the United States and 87.4 percent of unique monthly Web 2.0/3.0 usages are corporate based. The vast majority of popular Web 2.0/3.0 platforms are mainly interested in generating monetary profits, and the corporate Web 2.0/3.0 is much more popular than the noncorporate Web 2.0/3.0.

We can also raise questions about the extent to which Web 2.0/3.0 are participatory by asking who owns the personal information gleaned from, and created by, the users of such sites? The difference between the “myth” of participatory democracy versus corporate capitalism can be seen by focusing

on Google, which owns 3 of the 11 web platforms listed in Table 9.3. In terms of ownership, 18 human and corporate legal persons own 98.8 percent of Google's common stock. Google's 20,000 employees, 520 million global Google users, 303 million users of YouTube, and 142 million users of Blogspot/Blogger have no ownership stakes in Google.² Beyond Google, all of the analyzed Web 2.0/3.0 platforms guarantee for themselves a right to display user-generated content in any manner they see fit. This is not a tangential consideration but pivotal to how they operate their services and their business model as a whole. As Table 9.3 shows, 10 of the 13 Web 2.0/3.0 sites have user licenses and "terms of use" policies that provide them with a *de facto* ownership right over all of the data the users create, including the right to sell the content.³ Furthermore, 11 of the 13 Web 2.0/3.0 platforms guarantee themselves the right to store, analyze, and sell the content and usage data of their users to advertising clients, who are enabled to provide targeted, personalized advertisements as a result. In sum, this means that the vast majority of the Web 2.0/3.0 companies in our sample exert ownership rights on user-generated content and behavioral data. While Web 2.0/3.0 companies own the data of the users, users do not own a share of the corporations.

To this point, we can see that corporate Web 2.0/3.0 platforms attract a large majority of users and that the corporations that operate the vast majority of these platforms are profit oriented and accumulate capital by online advertising and in some cases by selling special services. A few legal persons own the companies that operate Web 2.0/3.0 platforms, whereas millions of users have no share in ownership. This is how they accumulate capital and the cornerstone of their "business model." Web 2.0/3.0 does not extend democracy beyond the political sphere into culture and economy. Nor does it maximize the developmental powers of human beings. Instead, it mainly maximizes the developmental powers of an economic class that owns web platforms and holds the extractive power to dispossess users and to exploit workers and users in order to accumulate capital. We can conclude that from the perspective of participatory democracy theory, Web 2.0/3.0 is not a participatory techno-social system because it is based on capitalist ownership and accumulation structures that benefit the few at the expense of the many and access is stratified.

For Georg Lukács, ideology "by-passes the essence of the evolution of society and fails to pinpoint it and express it adequately" (Lukács 1971: 50). Slavoj Žižek (1994) argues that "'Ideological' is a social reality whose very existence implies the non-knowledge of its participants as to its essence" (Žižek 1994: 305). An ideology is a claim about a certain status of reality that does not correspond to actual reality. It deceives human subjects in order to forestall societal change. It is false consciousness (Lukács 1971: 83). Based on participatory democracy theory, we can argue that scholars who argue that the contemporary web or the internet is participatory advance an ideology that

celebrates capitalism and does not see how capitalist interests predominantly shape the internet. Given these empirical results, it seems both necessary and feasible to theorize “Web 2.0” not as a participatory system but by employing more negative, critical terms such as class, exploitation, and surplus value.

Class and the web

Karl Marx highlights exploitation as the fundamental aspect of class by saying that “the driving motive and determining purpose” of capitalist production is “the greatest possible exploitation of labour-power by the capitalist” (Marx 1867: 449). He says that the proletariat is “a machine for the production of surplus-value,” and capitalists are “a machine for the transformation of this surplus-value into surplus capital” (Marx 1867: 742). Whereas Marx had in his time to limit the notion of the proletariat to wage labor, it is today possible to conceive of the proletariat in a much broader sense as all those who directly or indirectly produce surplus value and are thereby exploited by capital. Besides wage labor, this also includes houseworkers, the unemployed, the poor, migrants, retirees, students, precarious workers, and also the users of corporate Web 2.0 platforms and other internet sites and applications. Hardt and Negri (2004) use the term “multitude” for the multidimensional proletariat of the twenty-first century.

For Marx, the profit rate is the relation of profit to investment costs: $p = s/(c + v)$ = surplus value/(constant capital (= fixed costs) + variable capital (= wages)). If internet users become productive Web 2.0 producers, then in terms of Marxian class theory this means that they become productive laborers who produce surplus value and are exploited by capital because for Marx productive labor generates 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 software and hardware, performing marketing activities, and so on, but by the users 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 users free access to services and platforms, let them produce content, and to accumulate a large number of producers who are then sold as a commodity to third-party advertisers. No product is sold to the users, but users are sold as a commodity to advertisers. The more users a platform has, the higher the advertising rates can be set. The productive labor time that is exploited by capital, on the one hand, involves the labor 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 labor, 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 can be transformed for this accumulation strategy as follows:

$$p = s/(c + v1 + v2),$$

where s is surplus value, c is constant capital, $v1$ is wages paid to fixed employees, and $v2$ is wages paid to users.

The typical situation is that $v2 \geq 0$ 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 labor to users who work completely for free and who help to maximize the rate of exploitation ($e = s/v = \text{surplus value/variable capital}$) so that profits can be raised and new media capital accumulated. Again, this situation is one of infinite overexploitation. Capitalist produsage is, thus, an extreme form of exploitation rather than the harbinger of a new “democratic” or “participatory” economy based on fundamentally different values and principles.

That surplus value generating labor is an emergent property of capitalist production means that production and accumulation will break down if this labor is withdrawn. It is an essential part of the capitalist production process. That producers conduct surplus-generating labor can also be seen by imagining what would happen if they stopped using platforms such as YouTube, MySpace, and Facebook: The number of users would drop, advertisers would stop investing 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 coproduce parts of the products and, therefore, parts of the use, exchange, and surplus values that are objectified in these products.

Dallas Smythe (1981/2006) suggests that in the case of advertising-based media models, the audience is sold as a commodity to advertisers: “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” (Smythe 1981/2006: 233, 238). Smythe’s argument is that audience labor is productive, creates surplus value, but is not materially remunerated by money. With the rise of user-generated content, free-access social networking platforms, and other free-access platforms that yield profit through online advertising—a development subsumed under categories such as

Web 2.0, social software, and social networking sites—the web seems to come close to accumulation strategies employed by capital from traditional mass media like TV or radio. When we speak of Web 2.0, however, the audience has turned into prosumers, understood as, first suggested by Toffler (1980), consumers of information, who are at the same time producers of information. The prosumers 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 such as 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 case the users are also content producers; prosumers' creative activity generates 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.

The first sentence of Chapter 1 of Marx's *Capital* is as follows: "The wealth of societies in which the capitalist mode of production prevails appears as an 'immense collection of commodities'" (Marx 1867: 125). A commodity is a good that is exchanged in a certain amount for a certain amount of another good (in most cases, money). Marx (1867) formulates this relation as follows: x amount of commodity $A = y$ amount of commodity B . In capitalism, labor power and means of production are bought as commodities on markets by capitalists and used as production factors. Labor creates new products in the production process by using its labor power with the help of the means of production. The new products according to Marx contain unpaid labor time (surplus value) that is transformed into profit by selling a commodity. As a result, the initially invested sum of money capital is increased. Commodities have a use value, and thus they satisfy human needs, while commodification reduces such values to exchange values. The exchange value dominates over the use value of a commodity. Dallas Smythe's notion of the audience commodity means that consumers are no longer just the buyers of commodities but are themselves sold as commodities to advertising clients. In other words, they are transformed into exchange values. Prosumers also have a price tag, where advertisers have to pay to obtain access to a certain number of people.

Due to the permanent activity of the recipients and their status as prosumers, we can say that in the case of the internet the audience commodity is a prosumer commodity. This category does not signify a democratization of the media toward a participatory or democratic system but the total commodification of human creativity. During much of the time that users spend online, they produce 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 surveillance, 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, talk shows, and call-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.

The importance of the prosumer commodity and extractive power as principles of the contemporary web is evidenced by the continuing absolute and relative rise of internet advertising revenues. In 2008, internet advertising was the third-largest advertising market in the United States and the United Kingdom. Internet advertising revenues were only exceeded in these two countries by newspapers and TV advertising (Internet Advertising Bureau (IAB) 2009: 14; Ofcom 2009: 36). Worldwide, advertising spending on Facebook was US\$605 million in 2010, which was an increase of 39 percent in comparison to 2009 (Adweek 2009).

The constant real-time surveillance of prosumers is also achieved through the proliferation of privacy statements that guarantee that personalized advertising can be operated on web platforms. Indeed, users hardly have any choice as to whether or not to agree with such policies if they want to interact with others and make use of the technical advantages Web 2.0/3.0 poses. Privacy statements are, in other words, totalitarian mechanisms that are, out of necessity, not democratically controlled by the users but under the exclusive control of corporations.

Facebook, for example, automatically uses targeted advertising. There is no way to opt out.

We allow advertisers to choose the characteristics of users who will see their advertisements and we may use any of the non-personally identifiable attributes we have collected (including information you may have decided not to show to other users, such as your birth year or other sensitive personal information or preferences) to select the appropriate audience for those advertisements. For example, we might use your interest in soccer to show you ads for soccer equipment, but we do not tell the soccer equipment company who you are. [...] We occasionally pair advertisements we serve with relevant information we have about you and your friends to make advertisements more interesting and more tailored to you and your friends. For example, if you connect with your favorite band's page, we may display your name and profile photo next to an advertisement for that page that is displayed to your friends. (Facebook 2010)

Also, MySpace allows targeted personalized advertising that is automatically activated. Users can opt out, but doing so is very difficult. There is no menu setting in the privacy options that allows people to do so, only a link in the privacy policy that users have to follow in order to opt out. As its statement declares,

MySpace may use cookies and similar tools to customize the content and advertising you receive based on the Profile Information you have provided. Profile Information you provide in structured profile fields or questions (multiple choice questions like “Marital Status,” “Education,” and “Children”) (“Structured Profile Information”), information you add to open-ended profile fields and questions (essay questions like “About Me,” “Interests” and “Movies”) (“Non-Structured Profile Information”) and other non-PII about you may also be used to customize the online ads you encounter to those we believe are aligned with your interests. (Facebook 2010)

Conclusion

The social theories of Durkheim, Weber, Tönnies, and Marx make it possible to distinguish between three modes of sociality that can be applied to the realm of the web. Web 1.0 is a networked digital system of cognition, Web 2.0 a networked digital system of communication, and Web 3.0, a networked digital system of cooperation. Based on this distinction, one finds that in the past 10 years the world wide web has continuously remained primarily a web of cognition, although sites that support communication and cooperation have become more important.

Empirical analysis shows that corporate interests dominate the contemporary web. In participatory democracy theory, economic democracy is a central element of participation, and capitalist ownership structures are considered as undemocratic and, thus, nonparticipatory. This allows me to conclude that claims about the contemporary internet and the web as spaces of sociality, cooperation, and a “new economy” are uncritical and ideological. They celebrate capitalism and the capitalist character of the internet but wrap these realities in new rhetoric, thereby constituting a form of false consciousness.

Viable alternatives to celebratory web theories are critical theories of the web that are based on Karl Marx’s notions of class, exploitation, and surplus value. A central mechanism for capital accumulation on the web is the surveillance of personal user data and activities. The access to these data or the analyzed data are sold to advertising clients that the right to use these data in order to present targeted advertising to the users. Contemporary internet users are to a certain extent content producers, so-called produsers or prosumers. Nonetheless, they are exploited by capital and produce surplus value because their activities are sold as commodities. They constitute an internet produsage commodity that is at the heart of class formation, exploitation, and surplus value production on the internet.

My suggestion that the contemporary internet and the contemporary world wide web are predominantly corporate spaces of capital accumulation is meant as a corrective to techno-optimistic approaches that claim that the internet has become a participatory system. My approach should not

be misread as a techno-pessimistic nihilism that declares that there are no positive potentials in the internet. The internet is a dialectical space consisting of positive and negative potentials, potentials for dominative competition and for cooperation that contradict each other (for a detailed discussion of this hypothesis, see Fuchs 2008). The internet acts as critical medium that enables information, coordination, communication, and cooperation of protest movements (Fuchs 2008). It has the potential to act as a critical alternative medium for progressive social movements, as examples such as Indymedia show (Fuchs 2010a; Sandoval and Fuchs 2009). The internet is both a social medium and a space of accumulation. The extension of internet sociality toward more communication and cooperation today serves primarily corporate purposes, however. Corporations commodify and exploit sociality, that is, communication, production, and cooperation on the internet. At the same time, internet cooperation, as, for example, expressed by the free sharing of data on the internet with the help of file-sharing platforms, points toward a noncapitalist economy in which goods are not exchanged but available for free (Fuchs 2008). Cognition, communication, and cooperation on the internet, thus, have a contradictory character: They are commodified but at the same time advance the socialization and cooperation of labor that undercuts and tends to threaten corporate interests.

But the dialectic of the internet is asymmetric. Visibility is a central resource on the internet. Information can be produced easily, cheaply, and fastly, but the more important aspect of information on the internet is how many users become aware of this information and make use of it in meaningful and critical ways. Dominant actors such as corporations, political parties, or governments control a vast amount of resources (money, influence, reputation, power, etc.) that gives them advantages over ordinary citizens and protest movements. It is much easier for them to accumulate and maintain visibility on the internet. Everyone can produce and diffuse information relatively easily because the internet is a global, decentralized, many-to-many and one-to-many communication system, but not all information obtains the same attention. Amidst an ocean of information, the problem is how to draw other users' attention to information. So, for example, Indymedia, the most popular alternative online news platform, is only ranked Number 4,147 in the list of the world's most accessed websites, whereas BBC Online is ranked Number 44, CNN Online, Number 52, *The New York Times Online*, Number 115, *Spiegel Online*, Number 152, *Bildzeitung Online*, Number 246, or Fox News Online, Number 250 (alexa.com, top 1,000,000,000 sites, August 2, 2009). This shows that there is a stratified online attention economy in which the trademarks of powerful media actors work as potent symbols that help these organizations' online portals to accumulate attention.

In short, as with the material world, resources, and hence visibility, on the internet are asymmetrically distributed. Protest, critique, and participation

are therefore mere potentials on the internet. Citizens and movements have to struggle in order to attain a more participatory web and a more participatory society. These struggles will not continue on their own accord, and they are currently subsumed under the dominance of capital and State. The asymmetric dialectic of the internet can only be exploded through class struggles that question the dominative and corporate character of the internet. The emergence of a participatory web is only a nonrealized potential. Its attainment is possible but not certain.

Notes

- 1 The research presented in this chapter was conducted as part of the project “Social Networking Sites in the Surveillance Society,” funded by the Austrian Science Fund (FWF): Project Number P 22445-G17. Project coordination: Christian Fuchs.
- 2 Data: Google US Securities and Exchange Commission (SEC) Filing Proxy Statements 2008. Number of worldwide internet users: 1,596,270,108 (internetworldstats.com, August 14, 2009); 3-month average number of worldwide Google users (alexa.com, August 14, 2009): 32.671 percent of worldwide internet users (520 million users); 3-month average number of worldwide YouTube users (alexa.com, August 14, 2009): 18.983 percent (303 million users); 3-month average number of worldwide Blogger/Blogspot users (alexa.com, August 14, 2009): 8.869 percent (142 million users).
- 3 At the time when the analysis was conducted (August 2009), Twitter had relatively short terms of use. However, in September 2009, the terms were changed so that targeted advertising and the *de facto* ownership and selling of user data by Twitter became possible. Twitter’s terms of use thereby became very similar to the ones by other commercial, profit-oriented Web 2.0 platform companies.