
Wikipedia: An Info-Communist Manifesto

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Abstract

The task of this article is to analyze the political economy of Wikipedia. We discuss the specifics of Wikipedia's mode of production. The basic principles of what we call the info-communist mode of production will be presented. Our analysis is grounded in Marxist philosophy and Marxist political economy, and is connected to the current discourse about the renewal and reloading of the idea of communism that is undertaken by thinkers like Slavoj Žižek and Alain Badiou. We explore to which extent Wikipedia encompasses principles that go beyond the capitalist mode of production and represent the info-communist mode of production. We present the subjective dimension of the mode of production (cooperative labor), the objective dimension of the mode of production (common ownership of the means of production), and the subject–object dimension of the mode of production (the effects and products of the mode of production).

Keywords

Wikipedia, political economy, communism, info-communism, mode of production, Karl Marx

Introduction

Wikipedia is today an undeniable success: As of February 2012, Wikipedia is the sixth most visited website worldwide (Alexa 2012). Published academic papers conclude that the quality of Wikipedia's articles is fair and equal to corporate encyclopedia. The first important study concerning the subject was published in *Nature* (Giles 2005). The researchers compared forty-two Wikipedia articles and Encyclopedia

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Britannica articles. They found four inaccuracies in Wikipedia's articles, three in Britannica's, and therefore concluded that the two encyclopedias had the same quality. Chesney (2006) asked fifty-five academics to assess the quality of Wikipedia. On average, the academics gave it a fairly high credibility ranking.¹ Also, it appeared that academics were rating articles higher that belonged to their own field of expertise, showing at the same time the good quality of articles and their general lack of trust of Wikipedia. Halavais and Lackaff (2008) conclude that all encyclopedic topics within Wikipedia are sufficiently covered, except for Law and Medicine.

This article discusses the political economy of Wikipedia. We argue that Wikipedia's mode of production, which is used in other cooperative information productions, such as free software, bears strong resemblance with what Marx and Engels described as communism. At the same time, Wikipedia, as a semiautonomous system, is influenced by society at large and by the effects of inequality and exploitation of the capitalist system. First, we give an overview of the relationship of concepts of communication, communism, and the commons. Then, we analyze Wikipedia's mode of production in three parts: we present the subjective dimension of the mode of production (cooperative labor), the objective dimension of the mode of production (common ownership of the means of production), and the subject-object dimension of the mode of production (the effects and products of the mode of production). Finally, we reflect on the relationship between info-communism and capitalism.

The literature published on Wikipedia (for an overview, see: http://en.wikipedia.org/wiki/Wikipedia:Wikipedia_in_academic_studies) is positivistic and lacks a critical focus, because it pays little heed to its societal implications in terms of economic property, economic production, and participatory democracy.² We argue that Wikipedia is important in the sense that it presents a new way of collaborative decision making and a new way of producing, owning, consuming, and distributing goods. Wikipedia's decision-making process is an original method based on debate and consensus, a non-hierarchical and egalitarian system that bears emancipative outcomes (Fierer-Blaess 2011). Thanks to the intrinsic qualities of informational products, Wikipedia prefigures a new mode of production, based on cooperation, which could supersede the capitalist model and anticipates an alternative mode of production.

Communication, Commons, and the Communist Idea

One interesting thing about Marx is that he keeps coming back at moments when people least expect it, and in the form of various Marxisms that keep haunting capitalism like ghosts, as Jacques Derrida (1994) has stressed. It is paradoxical that almost twenty years after the end of the Soviet Union, it has become clear in the course of the new world economic crisis that capitalism has led to severe poverty and the rise of unequal income distribution. These problems brought a return of the economic and, with it, a reactualization of a Marxian critique of capitalism. Although a persistent refrain is "Marx is dead, long live capitalism," the 2008 global economic crisis shows that Marxist theory is still important today (Foster and Magdoff 2009). The renewed

discussion about the relevance of Marx's critique of political economy as an analytical tool for understanding the crisis has been accompanied by a discussion about the need for establishing a democratic form of communism as an alternative to capitalism (Badiou 2008; Douzinas and Žižek 2010; Hardt and Negri 2009; Harvey 2010a, 2010b). For Badiou (2010), the idea of communism can now only materialize in new, original social organizations that are not classical political parties. Negri (2010, 164) claims that the State is the enemy of the idea of Communism, and also calls for common militancy and the production of new institutions. For Žižek, the true task is to "make the State itself work in a non-statal mode" (2010b, 219).

Marx and Engels did not mean communism to be a totalitarian society that monitors all human beings, operates forced labor camps, represses human individuality, installs conditions of general shortage, limits the freedom of movement, etc. For them, communism was a society that strengthens common cooperative production, common ownership of the means of production, and enriches through individuality. Humans engage in cooperative social relations and by making use of different means of production (i.e. technologies, resources) to create a new good or service. This overall process has subjective and objective dimensions in the transition from a capitalist to a communist society (Fuchs 2011, chapter 9; Fuchs 2012).

Communism is not the Soviet Union, Stalin, Mao, and the Gulag, but participatory democracy. Stalin, Mao, and the Soviet Union called themselves communist but had nothing in common with participatory democracy and therefore were alien to the Marxian communism. Communism was for Marx the "struggle for democracy" (*MEW* 4:481). By democracy, Marx means a specific kind of democracy—participatory democracy.

Raymond Williams (1983) pointed out that the term *commons* stems from the Latin word *communis*, which means that something is shared by many or all. Williams argued that there are affinities and overlaps between the words *communism* and *commons*. The notion of the commons is also connected to the word *communication* because to communicate means to make something "common to many" (Williams 1983, 72). Communication and the means of communication are part of the societal commons in that they are continuously created, reproduced, and used by all humans as conditions of their survival. Therefore, the commons of society should be available freely without costs or access requirements for all people.

The freedom of the commons would include the creation of a commons-based Internet, ergo a communist Internet. A communist Internet involves an association of free producers and consumers that is cooperative, self-managed, and surveillance-free regardless of social class. Free access would imply no advertising and no corporations in charge of network access. In a communist Internet Age, programmers, administrators, and users would control Internet platforms by participatory self-management. Internet literacy programs would be widely available in schools and adult education in order to enable humans to develop capacities that allow them to use the Internet in meaningful ways that benefit themselves and society as a whole. Web platform access, computer software, and hardware would be provided to all humans. Humans would

engage more directly with each other over the Internet without the mediation by corporations that own platforms and exploit communicative labor. Instead, users would (1) cocreate and share knowledge that help them self-actualize as well-rounded individuals and (2) be equal participants in the decision-making processes that concern the platforms and technologies they use.

A truly communist Internet is only possible in a communist society, but short of that, Wikipedia offers a communist project. Communism is not a distant society, it exists to a certain degree in each society. David Harvey argues that “communists are all those who work incessantly to produce a different future to that which capitalism portends. . . . If, as the alternative globalization movement of the late 1990s declared, ‘another world is possible’, then why not also say ‘another communism is possible’” (Harvey 2010b, 259). Like alternative globalization activists, Wikipedians engage in communist production practices that need to be developed, extended, and intensified in order to create a communist Internet and a communist society.

The Political Economy of Wikipedia

We show in this section why Wikipedia should be considered as being a communist project and anticipates a communist mode of production. The mode of production at work in Wikipedia goes beyond the collaborative encyclopedia; it is also present in the production of, for instance, free software. This mode of production, which we call *info-communism*, is an informational mode of production, that is, a dialectic connection of social relations and information technology–based productive forces that create informational goods and services. In contrast to the capitalist mode of production, in the info-communist mode of production both the relations of production and the productive forces are fully socialized—they are based on common ownership of the means of production and collaborative work. In an info-communist mode of production, information production, circulation, and use is based on communist relations of production and communist productive forces. We do not claim that an info-communist society is only based on an informational mode of production; rather there is an interaction of various modes of production (even agricultural and classical industrial modes of production). But a high level of technological productivity enables a communist post-scarcity society and the end of hard, alienating work, which means that a realm of creative intellectual work opens up for all. This realm is the informational part of the communist modes of production—info-communism. It is based on knowledge work and makes use of and creates information technologies that also shape the other communist modes of production.

Information is different from a material good in the sense that it is an abundant product that can be used nonexclusively by many (Samuelson 1954). In addition, information has low or no reproduction costs, particularly in the digital age. Given these conditions, the profitability of information requires the introduction of copyright to control the product as private property. Copyrights grant the legal owners the right to put a price on each copy of information and create artificial scarcity. This artificial

rise of the cost of information is a waste for society as a whole. Info-communism, by contrast, unfetters the abundance of information through its cooperative labor, ownership structure, democratic and participatory production relations, and the use-value of its product.

There are three important dimensions of communism (Fuchs 2011, chapter 9):

1. The subjective dimension of production: communism as cooperative form of production
2. The objective dimension of production: communism as the common ownership of the means of production
3. The effect dimension of production: communism as the emergence of well-rounded individuals.

In this section, we will discuss the relevance of each of these three dimensions for Wikipedia.

Cooperative Labor

For Marx and Engels, communism is a community of cooperating producers that operate in a highly productive economy, use the means of production together to produce use values that satisfy the needs of all, and take decisions in the production process together. Marx speaks of communism as “general cooperation of all members of society” (*MEW* 4:377), “communal production” (Marx 1857/58, 172), and the “positing of the activity of individuals as immediately general or social activity” (Marx 1857/58, 832).

Info-communism relies heavily on intellectual work. In Wikipedia, the labor force is constituted by thousands of intellectual workers, mainly Western youth or students and “elite workers” who are very educated, white collar, and digitally literate (Glott et al. 2010; Jullien 2011). These Wikipedians have sufficient income, skills, and time to work within info-communism in their leisure time. Their narrow specificity as a labor segment reflects the general stratification patterns in global capitalism and shows that a truly info-communist mode of production requires a communist society in which free time, skills, and material wealth become universal.

The work on Wikipedia is cooperative. No one can claim the authorship of an article, as it is often the result of dozens of people writing and debating together about what should be written. Most of the articles have between seven and twenty-one coauthors (Auray et al. 2007, 194). Wikipedians have developed an ad hoc decision-making process (DMP) based on debate and consensus, which can be considered as participatory democracy (Figure 1). This process enables them to collaboratively edit the Wikipedia articles. It is supported and enabled by the *wiki* web software, which generates webpages that can be edited by anyone and that supports discussion between the users. An editorial change by a user will be accepted or rejected through what we can call a passive consensus; the new edit stays in place until it is deleted, or modified

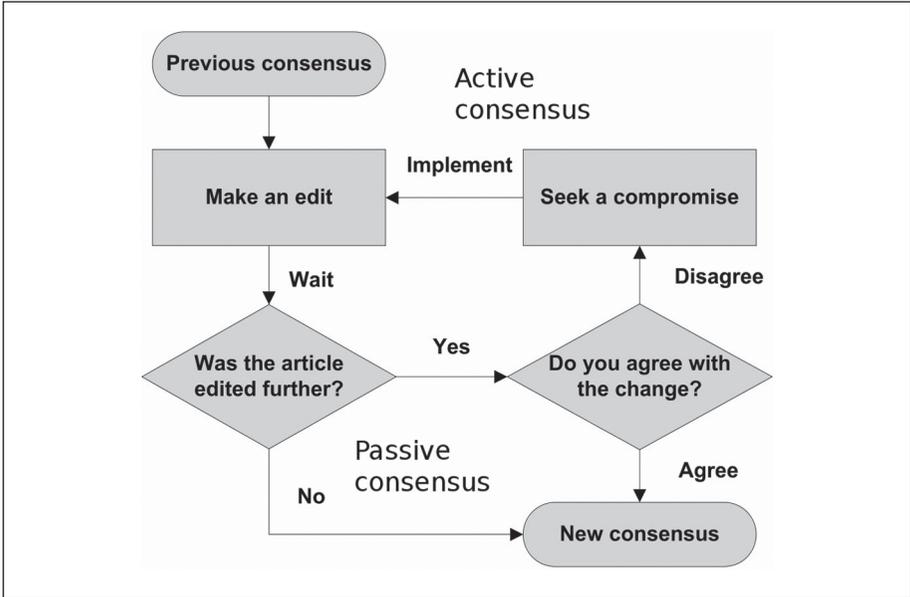


Figure 1. The decision-making process in the editing of articles of Wikipedia (source: <http://en.wikipedia.org/wiki/Wikipedia:Consensus> accessed on June 5, 2011, license CC BY-SA 3.0)

in the article. This process can go on indefinitely until Wikipedians disagree with one another whether an edit should stay. In order to resolve differences of opinion, Wikipedians must then enter into a process of active consensus. This process takes place on the “discussion” page attached to each article. Here the disagreeing parties will present their arguments and debate what edition should remain.

It is a custom, as well as a Wikipedia policy (Wikipedia 2011a), that parties in conflict should reach an agreement by themselves, but the debate is also structured by internal rules, such as rules of style and content. Policies that structure debate include the Neutral Point of View, which asserts that Wikipedia articles should present all significant facets or competing positions and that they should in the presentation of these positions weigh their popularity in the scientific or cultural field (Wikipedia 2011b). Other policies are the Verifiability Policy (Wikipedia 2011c), which rules that each claim should be attributed to a verifiable and reliable source, and the Prohibition against Original Research (Wikipedia 2011i), which rules that sources must have undertaken a peer review process. Much of the DMP concerns interpretations of such policies. Therefore, arguments in debates are often based on, and legitimated by, the aforementioned rules.

Wikipedia’s policies as well as the discussions about the content of articles are decided by Wikipedians in a deliberative process. These debates are part of the cooperative labor process and are based on the common ownership and control of the platform by the users. This means that the governance aspect of Wikipedia has both

aspects of collaborative work and common ownership. The latter aspect will also be discussed in a later section.

Common Ownership of the Means of Production

Communism did not mean for Marx and Engels that there would be no private goods for consumption. The main difference from a capitalist society is rather that the means of production (the technologies of production, the firms, the decision power in firms) are no longer only owned by a small group but controlled by all producers. Communism is a democratic way of organizing industry and the economy. It extends economic property from a small group to all producers. Communist firms are self-managed and do not have a power division between owners and workers—all workers are at the same time owners.

Marx and Engels extended the notion of the commons to all means of production. Marx spoke of “an association of free men, working with the means of production held in common, and expending their many different forms of labor-power in full self-awareness as one single social labor force” (Marx 1867, 171). In this association, machines are the “property of the associated workers” (Marx 1857/58, 833) so that “a new foundation” of production emerges. This new system is a system of commons (Marx 1894, 373; Marx 1857/58, 159; *MESW*, 305; *MEW* 4:370), social property (Marx 1867, 930), a control of structures by society as a whole (*MEW* 4:370; *MEW* 3:67).

For Marx, individuals in capitalism are not-yet fully developed social beings because they do not cooperatively own the means of production and operate the production process. He therefore spoke of the emergence of “social individuals” (Marx 1857/58, 832) and “the complete return of man to himself as a social (i.e. human) being” (Marx 1844, 102). A communist economy is not based on money and the exchange of goods: “money would immediately be done away with” (Marx 1885, 390), “producers do not exchange their products” (*MESW*, 305). Rather, the economy is so productive that all goods are given for free to consumers (*MESW*, 306). Marx’s notion of a communist economy is what Crawford Macpherson (1973) and Carole Pateman (1970) described as participatory democracy in the economic realm. Participatory democracy involves the intensification of democracy and its extensions into realms beyond politics. This also involves the insight that the capitalist economy is an undemocratic dictatorship of capital, but should be democratized. Participatory democracy requires for Macpherson and Pateman that the means and the output of labor are no longer private property, but become common property.

Participatory Ownership

In info-communism, the means of production belong to the workers. Wikipedia is operated by the Wikimedia Foundation, a nonprofit organization registered in San Francisco. The total expenses of the Wikimedia Foundation are rather low, US\$10 million in

2009–2010 (Wikimedia Foundation 2010). Donations finance Wikipedia directly, bypassing the need for capitalist investors. The Wikimedia Foundation is a public charity under U.S. law, with the statement of purpose to “empower and engage people around the world to collect and develop educational content under a free license or in the public domain, and to disseminate it effectively and globally” (Wikimedia 2012, article II). The Wikipedia community elects the top managers of the Wikimedia Foundation and thereby has some control over the Foundation (Wikimedia 2012, article IV, section 3).

The means of production of info-communism consist of servers, programs, and personal computers. Personal computers used for accessing Wikipedia and creating its content are private property of the users, unless the users employ public services (as e.g. computers in libraries). Programs and servers can be considered as common property managed by the Wikimedia Foundation. Servers are bought thanks to donations. Wikipedia uses the free software MediaWiki to run its website. MediaWiki is based on a “copyleft license” (Wikipedia 2012a) that makes it a free software commons. This means the code is free to use and to analyze. Users can copy and share the software with others. The code can be modified and distributed. It is illegal to use and/or modify part of the code outside of the copyleft license, which prevents a future proprietary enclosure of the commons. Wikimedia’s servers are becoming de facto public goods for the community of workers whose efforts do not serve capital accumulation purposes.

Participatory Democracy in the Relations of Production

In the info-communist mode, production is controlled by the workers. They make all decisions together and control the production process as an expression of economic participatory democracy. On Wikipedia, the rules structuring cooperation are decided in common. Policy making follows the same debate/consensus decision-making process (DMP) as in the editing process to adjudicate matters of style and content, of behavior in the editing process, of copyright and other legal matters, as well as of policy enforcement (Wikipedia 2011e) (Figure 2). Most of the time a policy is created when some Wikipedians realize that something is not working well or could be improved. A proposal usually emerges from a discussion in the village pump (Wikipedia 2011f), the general forum of the Anglophone Wikipedia. After the community has shown concern, a user will create a “policy proposition” page, and advertise the policy proposal through an “advert” section on sensitive pages. The policy proposition page serves as a forum where DMP takes place. Once consensus has emerged, a policy page is created (in a communal way, and following the DMP for editing). These policy pages have the status of official policies and therefore can be claimed in any DMP and enforced. As everywhere in Wikipedia, things are never fixed, and the policy pages stay open to amendments and modifications following the latest DMP edition (Wikipedia 2012b).

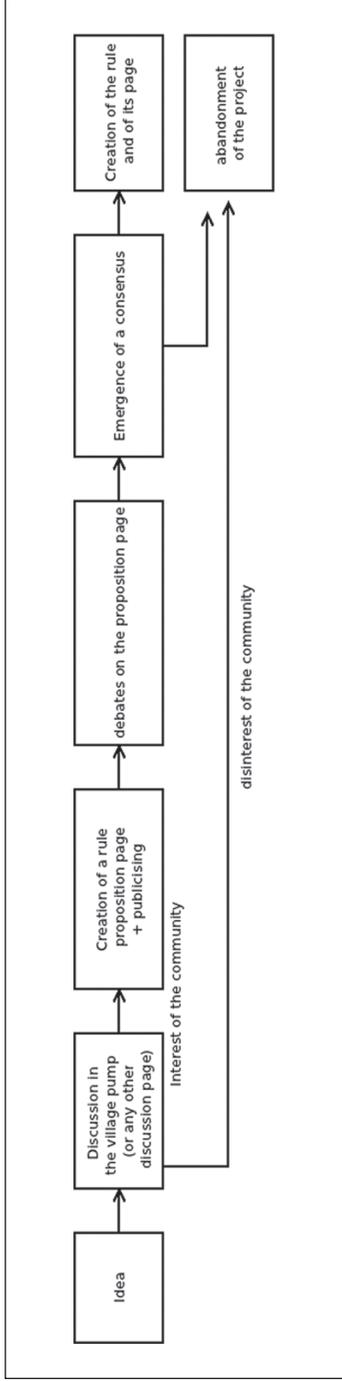


Figure 2. Policy Decision-Making Process (Source: Firer-Blaess 2011)

In contrast to the modern democratic system, the means for decision making on Wikipedia is not the vote but the consensus; votes are explicitly excluded from Wikipedia (Wikipedia 2011g). This is an important matter. The egalitarian ideology of the polling democracy (in which one person = one vote), is replaced by a process, whereby a point of view is weighed by the perceived quality of the argument. This maximizes the involvement of users. It is not enough to have points of view; one must also make them explicit and rational. Finally, the Wikipedia DMP not only enables the making of decisions but positively constructs them. Often in the talk pages, long and heated debates happen, and from the debates, new solutions appear. Unlike a representative democracy, in which citizens vote on solutions created by experts, Wikipedia agents are the makers and the deciders of solutions in a dialogical fashion.

The Use-Value of Free Content

The use of the means of production by workforces within definite relations of production results in the creation of use-values that serve human needs. In capitalism, use-values are exchange values and commodities, but in communism they are commonly owned and accessible to all people without payment. According to Wikipedia's terms of use, articles are licensed under the Creative Commons Attribution-ShareAlike License and the GNU Free Documentation License, which grants the users the same rights as under copyleft, namely, the right to freely use the Wikipedia content, to share it with others, and to modify it as long as the resulting work is under the same license.

Interestingly, Wikipedia allows for commercial use of its content. Enterprises can also sell services that use Wikipedia content. In order to increase the compatibility with other free contents, the Wikimedia foundation proposed to take Wikipedia's content out from under the GNU Free Documentation License and register it as a Creative Commons Attribution-ShareAlike license. The Wikipedia community agreed to this proposition through a vote that ended on May 3, 2009 (Wikipedia 2011h). Wikipedia itself is not subject to commercial logic, but the commercial use of content is due to its license possible and a reality. Some Wikipedia articles are reused on commercial websites, which use advertisements on their web pages (an example is *answers.com*). Services are created in order to facilitate direct access to the Wikipedia website. For instance, some smartphone applications propose a direct and simplified access to Wikipedia, but they either charge a fee for download or display advertising, thus selling the user as a commodity.³ A commercial publishing house has recently published books that are copying the content of Wikipedia (Bateman 2011).

While available for free, info-communist products can therefore become commodified. More precisely, it is not the info-communist product that is sold, but a service attached to it, like better user access or support. Whenever the commodification of Wikipedia knowledge happens, the work of Wikipedians is infinitely exploited. Unpaid users create surplus value such that the rate of surplus value $rs = s / v$ (surplus value / variable capital = wages) converges toward infinity (see Fuchs 2010). Commodified Wikipedia work is like voluntary slavery because no one other than the exploited and

unremunerated Wikipedians have opted for a policy that makes commodification of their labor possible.

This circumstance shows that Wikipedia is to a certain degree entangled into the capitalist relations of production. In order to go beyond them, Wikipedians would have to change Wikipedia's license from a Creative Commons Attribution-ShareAlike Unported License to a Creative Commons Attribution-Non Commercial 3.0 Unported License, which prohibits the commercial exploitation of Wikipedia (Creative Commons 2012).

The Effects of Wikipedia Production: Cooperative Intellectual Work

For Marx and Engels, communism also means that productivity has developed to such a high degree that in combination with common ownership of the means of production and the abolition of the division of labor, the time for self-directed activities can be enlarged so that humans can engage in many-sided activities and can thereby realize and develop creative potentials that benefit society as a whole. For Marx, a true form of individuality develops through the cooperative character of production.

With the technological increase of the productivity of labor in communism, "the part of the social working day necessarily taken up with material production is shorter and, as a consequence, the time at society's disposal for the free intellectual and social activity of the individual is greater" (Marx 1867, 667). There is a "general reduction of the necessary labor of society to a minimum, which then corresponds to the artistic, scientific etc. development of the individuals in the time set free" (Marx 1857/58, 706). Based on the development of the productive forces, "the realm of freedom really begins only where labor determined by necessity and external expediency ends" (Marx 1894, 958f). Freedom is here the freedom to determine one's own activities.

Reducing necessary labor time by high technological productivity is for Marx a precondition of communism (Marx 1857/58, 173, 711). Wealth would then result from the free activities of humans (Marx 1857/58, 488, 705, 708). Marx saw high technological productivity and the increase of disposable time as foundation for a rich human individuality. He spoke of the emergence of the well-rounded individual. The "highest development of the forces of production" is "the richest development of the individuals" (Marx 1857/58, 541, see also: 711; *MEW* 3:67f). The best known passage that describes the emergence of "complete individuals" (*MEW* 3:68), of "well-rounded human beings" (*MEW* 4:376), and of "a society in which the full and free development of every individual forms the ruling principle" (Marx 1867, 639) can be found in the *German Ideology*:

In communist society, where nobody has one exclusive sphere of activity but each can become accomplished in any branch he wishes, society regulates the general production and thus makes it possible for me to do one thing today and another tomorrow, to hunt in the morning, fish in the afternoon, rear cattle in the

evening, criticize after dinner, just as I have a mind, without ever becoming hunter, fisherman, herdsman or critic. (*MEW* 3:33)

If capitalism is driven primarily by the thirst for profit, followed with the natural or fabricated need for consumption, in info-communism, production seems to be driven primarily by the pleasure of collective work and other incentives related to common ownership. One must ask why so many people decide to work voluntarily for info-communist projects. Some free-software programmers are motivated by the improvement of their position in the labor market through their programming experience (Hars and Ou 2002, 29), a motivation absent from Wikipedia (Auray 2007, 192; Nov 2007, 63). The main incentive for most of the workers in info-communism, and especially in Wikipedia, is the pleasure derived from intellectual and cooperative work (Auray 2007, 192; Bauwen 2003, 3.1.C; Hars and Ou 2002, 27–28; Kuznetsov 2006, 6; Nov 2007, 63; Rafaeli 2005). To this point, a Wikipedian comments:

This common work gives a feeling of power. When one notices that a text one has submitted has been amended by someone else a few hours later, sometimes translated in many languages (for instance Latin and Esperanto), one has the feeling to be supported by an army of volunteers: a feeling of empowerment, with no whip nor carrots. It is exhilarating. One experiences a pride that has nothing to do with vanity, this is the simple pride to have achieved something. And one feels like an ant accomplishing a work of ant but supported by the immense mass of the others, carried by a vast ocean. This is what we call the Wikilove, an exhilarating atmosphere. (Foglia 2008, 54-55,⁴ translation by the authors)

The pleasure to work is not only derived from cooperative production and from the love to program or to write articles but also from the autonomy of the worker within the production process (Schroer and Hertel 2009). The work process is self-determined: Wikipedians work on whatever bit of program or article they want. The time Wikipedians work on Wikipedia is self-determined work time, an expression and anticipation of the communist mode of production, in which all work is self-determined and expression of well-rounded individuality.

At the same time, not everyone can access the pleasure from info-communist labor. Those who have the time and skills required for Wikipedia production are part of a well-educated elite. The intellectual skills and the wealth and time needed for contributing actively to Wikipedia are not available to all because global capitalism is a class society that creates classes of wealthy and poor people: the wealthy are rich in material resources, skills, time, relations, networks, etc., which the poor are deprived of these. Class structures are fluid, overlapping, and many-layered (the material rich are not automatically the culturally rich or most educated, although they can use money to try to convert money capital into cultural capital, e.g.). Wikipedia is embedded into global capitalism and therefore operated by an elite that can afford its elite status. A truly

communist Wikipedia can only be achieved in a classless society, in which all humans have a wealth of resources and capacities.

Info-communism and Historical Materialism

Communism is not about the establishment of a repressive state-centered society, but about the struggle for establishing a participatory democracy. There is a need for a renewed debate about democratic communism and a renewal of the critique of political economy. Wikipedia has communist potentials that are antagonistically entangled into capitalist class relations. Its practices and the roots of info-communism emerge within the economic structures of informational capitalism both through profit-driven Internet infrastructures and personal computer markets, and through an international class of educated workers with enough leisure time and education to develop info-communism. The free knowledge production by Wikipedians is a force that is embedded into capitalism, but to a certain degree transcends it at the same time. A new mode of production can develop within an old one. “The economic structure of capitalist society ha[d] grown out of the economic structure of feudal society” (Marx 1867, 875). According to Marx, a mode of production becomes outdated when it begins to restrain and fetter the possibilities of a larger and better production process that lies within the social structure in a potential but not-yet-achieved state. There is no guarantee that the roots of a new society can be realized, because this is a task of political practice.

Info-communism can only be applied to informational goods. The production of physical goods is more resource intensive, but in any physical production, information is present. From the simplest artifact to large-scale industry, knowledge and know-how are needed. Knowledge in physical production is an important factor and info-communism could therefore potentially expand into the sphere of the production of physical goods. Indeed other knowledge projects that are based on the wiki principle are Wiktionary, Wikiquote, Wikisource, Wikibooks, and Wikiversity, all owned by the Wikimedia Foundation. Well-known open software projects are the Operating System GNU/Linux, the Apache http server software, the blogging software WordPress, the web browser Firefox, and the social networking site project Diaspora. So Wikipedia is not alone in challenging the capitalist domination of the ICT realm.

Info-communism is however not the dominant mode of production. Capitalist companies try to make use of free software and open access principles. They hire programmers to modify or add modules to already-existing free software for their specific needs; or they simply take ideas from existing open source projects and develop their own proprietary software (Ågerfalk and Fitzgerald 2008). Wikipedia is prone to the forces of commercialization and commodification. If Wikipedia were sold to a company, all of the voluntary labor would suddenly become exploited free labor. Their past labor would nonetheless have become exploited and turned into profit. The question is if Wikipedians would still contribute their labor in the future under such conditions.

Wikipedia shows that there are two types of relations between capitalism and info-communism: competition and collaboration. In the former, capitalistic products confront info-communist products. In the latter, capitalist corporations abuse the info-communist mode of production to develop their own profitable software. There are therefore two possible futures for info-communism. In the first scenario, info-communism is politically nourished by communist class struggles, taking evermore market shares at the expense of the capitalist mode of production. In the second scenario, some of the characteristics of info-communism, such as the principles of open access, free content provision, and online mass collaboration, are absorbed by capitalism, thereby destroying the communist character of info-communism. Wikipedia is the brightest info-communist star on the Internet's class struggle firmament. While it is possible that capitalism subsumes the transcendent elements of info-communism, it is therefore the primary political task for concerned citizens to resist the commodification of everything and to strive for democratizing the economy, that is, building a participatory grassroots economy that is not controlled by corporations but the people.⁵

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Notes

1. On average, the academics gave Wikipedia articles a ranking of three, on a scale from one (very credible) to seven (very incredible).
2. An exception is Erik Olin Wright (2010), who discusses Wikipedia based on a critical framework and discusses its implications for "real utopias."
3. An example for such a commercial use is the application "Wiki Encyclopedia" for Android, <http://www.appbrain.com/app/wiki-encyclopedia/uk.co.exelentia.wikipedia> (accessed June 2011).
4. From the interview of a French Wikipedian by François-Dominique Armingaud in 2005.
5. Our study focused on the direct application of Marx's critique of political economy to Wikipedia. In future work, it will be interesting to engage more deeply with contemporary social theory such as the autonomist Marxist tradition (Hardt and Negri 2004; Dyer-Witheford 1999; Terranova 2004), contemporary theories of info-communism (Kleiner 2010; Söderberg 2007; Moglen 2003, Mueller 2008); to develop the discussion on the notion of "commons" (Berry 2008; Benkler 2007); and last but not least to acknowledge the tensions between capitalism and info-communism within the free software movement (Kelty 2008; Coleman 2011).

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