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Value in Informational Capitalism and on the Internet

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We engage with recent applications of the Marxist "labor theory of value" to online prosumer practices, and offer an alternative framework for theorizing value creation in such practices. We argue that the labor theory of value is difficult to apply to online prosumer practices for two reasons. One, value creation in such practices is poorly related to time. Two, the realization of the value accumulated by social media companies generally occurs in financial markets, rather than in direct commodity exchange. In an alternative framework, we offer an understanding of value creation as based primarily on the capacity to initiate and sustain webs of affective relations, and value realization as linked to a reputation based financial economy. We argue that this model describes the process of value creation and appropriation in the context of online prosumer platforms better than an approach based on the Marxist labor theory of value. We also suggest that our approach can cast new light on value creation within informational capitalism in general.

Keywords affect, data mining, finance, informational capitalism, Marx, reputation, social media, value

The issue of value creation and exploitation in the information economy has been a topic of much debate over the last few years (cf. Dyer-Witheford 1999; Margonelli 1999; Petersen 2008; Scholz 2008; Terranova 2004; Willmott 2010; Zwick et al. 2009). The success of social media like Facebook, Twitter, and Google and platforms for customer co-production or "prosumption" in attracting substantial investments has given new urgency to the development of theoretical tools that enable a more precise understanding of how such user-generated content is monetized. Such tools are neeed not only to critique possibly exploitative and unjust forms of value exchange, but also to confer more realistic valuations on the performance of companies operating social media and prosumption platforms (Carr 2011).

Recently there have been a number of attempts to address the issue of value creation and distribution in new forms of online co-production that introduce some, however diluted, version of the Marxian labor theory of value. Concomitantly, the notion that online content production can be understood as a form of "labor" and that Internet users, whether they are Facebook users or citizen journalists, are exploited by virtue of the fact that they produce content for free, has begun to enter into academic common sense (see, e.g., the many presentations at the 2009 Internet as Playground and Factory conference in New York, available online, or the papers in the 2010 *Ephemera* issue on "digital labor").

We too are convinced that a better understanding of value creation and distribution in informational capitalism in general, and in the case of online prosumer practices in particular, is an urgent task for social and media theorists. But we are not convinced that the Marxist labor theory of value offers the best point of departure for filling this lacuna. In this article we supply theoretical and empirical reasons for this skepticism, and offer, not so much a complete alternative theory, but a framework within which an alternative approach can begin to be thought out.

In essence we suggest that value in the case of co-production platforms, and perhaps in the case of informational capitalism and the Internet in general—although this requires further substantiation—can be rethought by considering the relation between financial value and affective investments, rather than simply departing from a, however modified, notion of labor time. In the concluding discussion we draw out the implications of this argument for both research and political action.

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We organize part of our argument around a critical reading of Christian Fuchs's recent article "Labor in Informational Capitalism and on the Internet" (published in volume 26, issue 3 of this journal in late 2010). In this article, Fuchs combines a theoretical analysis of informational capitalism that draws heavily on the Italian "autonomist" "school" of post-Marxist thought, centered around Antonio Negri and his followers (cf. Hardt & Negri 2000; 2004; Wright 2002), with an orthodox application of the labor theory of value to online prosumer practices. In arguing for the relevance of the labor theory of value to prosumer practices, Fuchs applies Dallas Smythe's (2002/1978) theory of "the audience commodity" to suggest that since prosumer platforms like Facebook draw on audience participation to valorize the advertising space they sell to advertisers but do not pay their audiences for their participation, prosumers suffer "infinite levels of exploitation." This, Fuchs suggests, joins social media users, or indeed anyone who produces content on the Internet, together with other knowledge workers, whether steadily employed or precarious, in a common exploited class (Fuchs 2010, 191)

Admittedly, Fuchs's analysis is extreme in pushing the theoretical consequences of the application of the Marxian labor theory of value in informational capitalism. But this also makes his article an excellent springboard for a critical debate. To put it in simple terms: It is beyond doubt that the wealth and profits of new media companies such as Facebook and Google depend in some way on the activity of their users, and that value creation in informational capitalism builds ever more on the ability of corporations to appropriate the common resources that are produced by a multitude of diverse actors (cf. Dyer-Witheford 1999). And while it is possible to call this productive activity "labor" in a colloquial sense, this also implies a particular critical perspective that has a set of highly particular political implications. For such a choice to be legitimate, it is not sufficient that the activity of online "prosumers" can be described as "labor" in colloquial terms; we must also show that their contribution to the overall value of, say, Facebook can be understood in the more rigorous terms of the Marxian labor theory of value. If this is not possible, then we might as well chose to use a different perspective, with different political implications. (We suggest something along those lines in the conclusion.) In what follows, we provide an in-depth analysis to show that the labor theory of value in fact does *not* apply, at least not to the material that Fuchs analyses (and we extend this argument to informational capitalism and the Internet in general, albeit in more sweeping and suggestive terms). Even if our critique of Fuchs can appear to be hair-splitting in its theoretical detail, we believe that it is necessary to engage in such hair-splitting in order to critically examine the theoretical basis of a perhaps abstract argument that, however, has very concrete and practical implications: in terms of how to regulate social media companies, for example.

With this in mind, we have two principal objections to Fuchs's argument, which we present in this article. (And since Fuchs relies heavily on the Italian "autonomist" school of Marxism, we too frame our argument in that language.[1])

First, we suggest that value creation on social media platforms is poorly related to quanta of productive time. In other words, the basic premise of the Marxist labor theory of value no longer holds. Instead, value is ever more related to the ability to create and reaffirm affective bonds, like the ties that bind consumers into a community of interest or "tribe," or the link structure that underpins the network centrality of valuable "influencers" (Cova et al. 2007).

Second, we suggest that social media platforms should not be considered in isolation. Furthermore, the realization of value in informational capitalism in general should not be understood as occurring principally through the sale of commodities, whether this be material commodities or Smythe's "audience commodity." Instead, any discussion of value needs to take into account the central role finance plays in the appropriation and distribution of value. For example, it can be argued that Facebook is essentially a financial venture: Its profits from the sale of "audience commodities" amounted to $355 million in 2010, but the financial rent that it has been able to appropriate in the stock market had already reached $1.5 billion in late January 2011 (Rao 2011). Similarly, financial rent has seen a steady rise as a component of corporate profits, vis-à-vis sales for S & P 500 companies (cf. Harvey 2010). This suggests that the appropriation and realization of value in informational capitalism needs to be understood as part of an extended, society-wide process of finance-centered accumulation, where the link between reputational (or affective) value and access to financial rent becomes fundamental. This, we argue, is particularly true for social media platforms, the values of which are very difficult to justify in terms of their revenues.

Facebook has become something of an authoritative case that is often invoked in discussing value creation and appropriation in prosumer practices (cf. Cohen 2008). This is logical since its massive reliance on user input makes it an excellent example of how corporations use the information and communication "commons" as a source of value to be appropriated. Consequently, Facebook has often been presented as the authoritative case that establishes the relevance of the labor theory for understanding value appropriation in informational capitalism. In this article we suggest that the case of Facebook also provides a good illustration of our alternative approach. Of course, this does not give general validity to our argument.

Facebook is just one springboard for understanding value creation and appropriation in the information economy, and if our alternative approach is to hold, it needs to be demonstrated to hold (or not to hold) for a wide range of different mechanisms of value creation that are found in informational capitalism and on the Internet. While determination of this general validity is beyond the scope of this article, in the conclusions section we provide what we believe are possible directions for further research in that direction.

In the next section we provide a contextualization and an overview of the labor theory of value argument and situate our position with respect to this general perspective. We then present Fuchs's version of this argument, our principle objections to it, and the basis of an alternative perspective. Thereafter we critique Fuchs's argument and develop our approach, first in relation to informational capitalism in general and then in relation to the specific case of Facebook. In the concluding section we draw out implications for further research and provide the basis for the further development of an alternative paradigm.

VALUE, LABOR, EXPLOITATION: AN OVERVIEW

The labor theory of value has a long and tortuous history within Marxian economics (which we do not summarize here; for an overview see, Bellofiore [1997]). Its basic premise is that (abstract) labor time is the only source of value, and that capital thus exploits labor by paying it less than the true value of the time in which it is deployed. In other words, the foundations of this approach rest on the supposition that there is a direct linear relation between value and time. Within management and accounting, this fundamental assumption was abandoned long ago, and the very concept of "value" presently does not have a clear definition (cf. Gallazara et al. 2011) Within the critical social sciences, the labor theory of value has been supplanted by more identity-based critiques wherein factors such as race, gender, ethnicity, and sexuality are seen as critical for understanding oppressive social relations (cf. Graeber 2005; Hardt and Negri 2000; 2004). However, the emergence of concepts like "prosumers" or "digital labor" has triggered the revival of the labor theory of value within critical culture and media studies. Originally introduced into critical cultural and media studies in the late 1970s by Canadian media theorist Dallas Smythe for conceptualizing how media companies exploit viewers and profit from "audience work," this approach was marginalized in the following decades by the more identity-oriented critiques proposed by the cultural studies scholars (cf. Arvidsson 2008). Recently, however, the labor theory of value has been taken up again by a number of authors who have generally been inspired by the Italian tradition of "autonomist Marxism," starting with Tiziana Terranova's early concept of "free labor" (Terranova 2000) for unpaid and unsupervised "labor" that goes into the construction and maintenance of content on the Internet.

In many ways the "free labor" argument is compelling. It emphasizes how the contemporary media system relies on the activities of a wide range of diverse external actors (a multitude) that are generally not paid for what they do, like writers of fan fiction, members of brand communities, or the people who create content for social media sites like Facebook. This way the free labor argument offers a way to go beyond and problematize more celebratory accounts of participatory culture and Web 2.0 that prevail within what Kreiss, Finn, and Taylor (2011) call the influential "utopian consensus." However, while there is little doubt that media companies like Facebook rely on audience participation in creating value in some way, conceptualization of this relation as "labor" comes with a heavy and somewhat restrictive theoretical baggage. First, it implies that the activities thus described can be understood as manifestations of exploitation. Traditionally, exploitation has two dimensions, one political and another economic. From a political point of view, exploitation also involves domination, or at least some form of compulsion. Individuals must be forced, in some way, to undertake the activity in which they are exploited (cf. Callinicos 2000). This political dimension of the concept has led many authors (among them Hesmondalgh [2010]) to refute the applicability of the concept of exploitation to media participation. After all, people who "create value" for Facebook and other social media platforms do so voluntarily without any kind of compulsion whatsoever. Indeed, people feel more than compensated (as already noted by Smythe) by the use value and gratification they derive from these activities. In response to this critique, more recent approaches, in particularly those inspired by Italian autonomist Marxism and by Terranova's "free labor" argument, have suggested that the formal necessity of compulsion no longer holds in informational capitalism, where, precisely, the free or voluntarily offered activities of people are what is exploited. Such "exploitation without compulsion" can function in different ways. For example, Mark Andrejvich (2004) argues that the exercise of exploitation has moved up to the level of data aggregation that remains invisible to users. Facebook compels its users to use a particular protocol, but this compulsion is not experienced as such by users, who understand it as part of the natural environment of the Facebook platform. Facebook then uses the data thus generated to make a profit. In this case the exercise of compulsion is inscribed in the protocol of the application and rendered akin to something natural (cf. Galloway 2004; Rushkoff 2011). Arvidsson (2006) makes a similar argument in suggesting that the compelling nature of brands rests not on their ability to force consumers to use them, but on their omnipresence and ubiquitous

nature: There are simply very few alternatives to brands and branded environments for the construction of identity and the exercise of social relations. But even if critiques like that of Hesmondalgh can be accommodated by taking the position that exploitation is exercised within a different paradigm of power (Rose 1999), the labor theory of value also implies a particular way of conceptualizing exploitation from an economic point of view. It implies that the activity of the subject exploited actually creates value for the exploiters, and that such value creation proceeds in a way where the value created is proportionate to the time of activity employed in its creation. This last relation, that of the proportionality of value to labor time, is precisely what we address in this article. To enter into the merits of this argument, let us first start by summarizing Christian Fuchs's theory of labor and exploitation on social media platforms, together with our principal objections against it.

LABOR, VALUE, AND EXPLOITATION ON SOCIAL MEDIA ACCORDING TO FUCHS

Christian Fuchs proposes to reintroduce an orthodox Marxist definition of class as the framework for an analysis of value creation and exploitation "on the Internet" and in informational capitalism more generally. As Fuchs goes on to stress, the Marxist concept of class is both an analytical and a normative concept. Analytically, Marxian class analysis presupposes a particular theory of value—the Marxian "labor theory of value" where the value of goods is thought to be determined by the amount of socially average (or "abstract") labor time needed for their production. Normatively, the labor theory of value supports a theory of exploitation that, at a basic level, highlights the appropriation of surplus value that is inherent to capitalist relations of production (in the sense that workers get paid less than the overall value of their labor), and, at a more abstract level, allows both a theory of class as determined by relations of exploitation in the sphere of production, and an overall "critique of value" that addresses the ideologies and practices that support this arrangement at the societal level (such as the predominance of the commodity form and the power of related ideologies like consumerism or competitive individualism). Fuchs goes on to apply Marxian class analysis to what he calls "informational capitalism" in general, and, in particular, to the case of social media platforms like Google, YouTube, Myspace, and Facebook. He concludes that since these platforms, as well as informational capitalism in general, rely significantly on what Tiziana Terranova (2004) calls "free labor," that is, socialized production processes that are generally not paid a wage, the result is that informational capitalism entails an unprecedented extension of exploitation where "all knowledge workers, paid and unpaid" (including everyone who produces "content" on the Internet), are "part of an exploited class" (Fuchs 2010, 192). In the conclusion, Fuchs goes on to suggest that this situation should be redeemed by the provision of a universal basic income.

We think that Fuchs's approach is fundamentally flawed, in three ways. First, it is based on an inadequate empirical analysis, both of informational capitalism in general and of the "case" of social media platforms. (Fuchs never really examines the case of informational capitalism in general, but simply lists the subjects that "in my opinion" [sic!, 187] belong to the new exploited "multitude.") His analysis of value creation and appropriation on social media platforms consists of a direct application of Dallas Smythe's theory of the "audience commodity," without any in-depth analysis of how the new media advertising market actually works. As we describe in more detail in the following, Dallas Smythe's theory of the audience commodity is based on a number of premises that do not apply to the situation of online prosumer practices.

Second, Fuchs's analysis is also based on a conceptual confusion where an orthodox version of the traditional Marxist concept of "class" is imposed on a quite different, post-Marxist concept of "multitude." The concept of the "multitude" as developed by Antonio Negri and Michael Hardt is not simply "an expanded notion of class that goes beyond manual wage labor and takes into account that labor has become more common" (whatever this might mean; Fuchs 2010, 187), but a concept that has risen precisely out of the difficulty of applying Marxian class analysis to the different relations of value creation and appropriation that prevail in informational capitalism. That is, "multitude" should be understood as a post-Marxist alternative to "class." This means that an analysis of relations of exploitation in informational capitalism that centers on the concept of "multitude" cannot simply be fused with one that centers on the concept of "class."

Third and finally Fuchs's application of the labor theory of value to online prosumer practices is unable to yield much in terms of a critique of these practices. If Facebook made a profit of $355 million in 2010 (according to its own figures), this would mean that each Facebook user was a "victim of exploitation of surplus value" to the extent of $0.7 a year, and if we use the consulting company McKinsey's most recent figure on the overall value created by audience participation on the Internet *globally*, $100 billion, this becomes $59 per Internet user per year, hardly "a rate of exploitation that converges towards infinity" (191) as Fuchs claims—and not much to redistribute as basic income![2] Certainly, other forms of online coproduction, such as crowd-sourcing platforms like Amazon.com's "Mechanical Turk," might yield higher rates of exploitation (Irani 2009). But, these figures suggest that simply invoking the Marxian "theft of labor time" is not a

particularly productive way of criticizing the online prosumer economy in general.

AN ALTERNATIVE FRAMEWORK: VALUE AND AFFECT

Against Fuchs, we want to suggest that the labor theory of value does not offer an adequate understanding of value creation in social media practices. We are not alone to suggest this. Apart from mainstream economics and managerial thought where the labor theory of value has been abandoned long ago, the very tradition of post-Marxist thought centered around Antonio Negri and his followers that Fuchs refers to has been making the same claim for at least a decade.

In this context the claim that the labor theory of value no longer functions as a measure of value in informational capitalism was, to our knowledge, first made in English in an 1999 article by Antonio Negri called "Value and Affect"(his earlier comments on the *Grundrisse*, published in Italian in 1979, made a similar argument). In that article, Negri concluded that affect might be emerging as the basis for a new alternative conception of value (and he suggested that this implied a potential for more democratic and autonomous forms of "self-valorization").[3] We make a similar argument in this section, albeit in a less enthusiastic and more empirically grounded way.

Negri claimed that the growing irrelevance of the labor theory of value had to do with two tendencies that were intrinsic to post-Fordist capitalist developments: the "becoming complex of labor" and the "becoming abstract of value." Let us discuss them in turn.

The Becoming Complex of Labor

Simply put, the Marxist labor theory of value states that the relative values of goods and services are related to the quantity of socially necessary (or abstract) labor time needed for their production. (This is by no means an unproblematic statement, even within Marxist thought. A number of issues remain unresolved, notably the problem of how the abstract concept of value is related to empirically observable prices; cf. Bellofiore [1997]). This posits a fundamental link between value and (quanta of) time. But this connection between value and time is not a timeless [sic!] phenomenon. Even though the medieval historian Jacques le Goff (2010) dates an emerging conception that "time has value" to the commercial revolution of the 14th century, the labor theory of value in its modern version only arises in the writings of 18th-century political economists like Sir William Petty and Adam Smith (Linnebaugh and Rediker 2000). However, it is only in Marx's writings that the notion of "socially abstract" labor time arises (Smith and Ricardo thought of labor as individual effort, or in Smith's case "disutility"), and Marx connects this "becoming abstract" of labor to the development of the capitalist economy itself. It is through the remediation of labor as it enters into the capitalist division of labor that individual, concrete productive efforts become measurable as manifestations of a new general equivalent, composed of abstract labor time (Marx 1976 [1867],159–160). This remediation of labor occurs through the construction of an industrial economy. More specifically, it happens through the implementation of Taylorist philosophies of scientific management (which began to be used in practice at the time of Marx's writings, before they were systematized into a distinct managerial philosophy by F. W. Taylor some 50 years later), by means of which the labor process is subdivided into discrete units that lend themselves to be measured and controlled in terms of the productivity of the time deployed. So for the labor theory of value to apply, two complementary conditions must be met (actually three, but we discuss the third condition in the next section, to avoid confusion). First, concrete productive practices must be organized in such ways that they can be measured as expressions of a general equivalent: abstract labor time. Two, the labor process must be organized in such ways that value creation can be easily attributed to individual actors or units. Both of these conditions become increasingly problematic as capitalist development proceeds "beyond Fordism."

As Marx himself argues at another point in his writings, the expansion of the capitalist division of labor also increases the level and complexity of cooperation and the importance of such cooperation as a source of wealth creation. Indeed, in a famous passage in the *Grundrisse* Marx suggests that with the rising organic composition of capital (i.e., the growing "weight" of machinery and technology in relation to labor), and the ensuing increased complexity of the labor process, cooperation and what Marx calls General Intellect will dwarf labor time as a source of wealth creation. This, Marx argues, will fundamentally transform both the process of value creation and the relations of value appropriation (or exploitation) that prevail within capitalism. It is worth quoting the passage at length:

> [The worker] steps to the side of the production process instead of being its chief actor. In this transformation, it is neither the direct human labour he himself performs, nor the time during which he works, but rather the appropriation of his own general productive power, his understanding of nature and his mastery over it by virtue of his presence as a social body—it is in a word, the development of the social individual which appears as the great foundation-stone of production and of wealth. The theft of alien labor time, on which present wealth is based, appears a miserable foundation in face of the new one created by large-scale industry itself. As soon as labour in the direct form has ceased to be

> the great well-spring of wealth, labour time ceases and must cease to be its measure, and hence exchange value [must cease to be the measure] of use value. (Marx 1973 [1939], 705)

This passage has been central to Negri and the tradition that follows from his writings. This tradition has suggested that precisely the transition away form a factory-centered Fordist regime of accumulation to a new kind of informational or "cognitive" capitalism (Moulier-Boutang 2002) has increased the reliance on socialized and networked transnational productive processes as the main source of wealth creation. This has entailed a shift in the relations of production: The creation of value now occurs ever more in cooperative processes where individual value creation is less easy to identify (cf. Rullani 2004). This makes it less susceptible to control and measure in terms of the labor theory of value (cf. Negri 1999). It has also entailed a change in the relations of appropriation. As Marx argued, the "theft of labor time," that is, the direct extraction of surplus value from such productive practices that are subject to factory discipline and hence directly measurable in terms of the labor theory of value, is ever more replaced by the ability to appropriate the "general productive power" of new, heavily socialized productive networks. In practice, this has entailed that the automation and globalization of factory labor has made measurable forms of labor time less important as a source of value (10 percent in the early 1990s, as opposed to 90 percent on average in the 1890s, with significant variation across industries; cf. Boer & Jeter [1993]), while the importance of innovation, flexibility, and brand and other so-called "intangible" resources has risen in proportion (Lev 2001). The important thing about such intangible resources is that their production often occurs outside the control of single organizations, and sometimes, as in the case of brands, it builds on input from nonsalaried actors including consumers and the public at large (Arvidsson 2006). Furthermore, the creation of value in this way mostly employs resources, such as communicative and social skills, the "skills" of "the social individual," the value-creating potential of which are poorly related to the quanta of time in which they are employed. Instead, as Paolo Virno would argue, the creation of intangible value in the form of a corporate culture conducive to innovation or teamwork, or an attractive brand, involves "virtuosity" in the appropriation of common knowledge, symbols, relations, and competences, or General Intellect (Virno 2004). This means that the value of intangible resources is less susceptible to measurement in terms of productivity of time, and depends more on the ability to attract affective investments such as reputation, goodwill or employee motivation. While this does not mean that labor has "disappeared" or "no longer counts," it means that labor ever more creates value in ways that are poorly related to quanta of time.

Indeed, it is this replacement of the centrality of labor time to capitalist appropriation of surplus value, with a new centrality of the appropriation of new kinds of "immaterial" (or "intangible") wealth created in extended and heavily socialized networks of production, that has driven the development of the concept of "the multitude" as an alternative to that of "class." In essence, the multitude, understood as composed of a multiplicity of actors that have widely diverse positions in relation to the capitalist valorization process (Hardt and Negri 2004), creates a number of common resources deploying its "understanding of nature and . . . mastery over it by virtue of his presence as a social body" (cf. Fumagalli 2007). This wealth is subsequently appropriated by capital as, chiefly, intangible resources. This can be a matter of technical innovation, as in the case of open source software, it can be a matter of affective innovation as in the case of brand loyalty and the development of new consumer styles, it can be matter of reputation and attention, as in the case of the online audience, and it can be the case of the employers' contribution to the creation of a corporate brand conducive to a creative work environment, or of their self-organization of productive relations on the factory floor, as in Toyotist forms of industrial organization. It can be a matter of many other things. The point is that these new forms of wealth creation are not necessarily subject to the division of labor inherent in factory discipline. Instead, they are increasingly subject to practices of self-valorization, as when a community of Free Software developers or a consumer tribe creates the "orders of worth" (Stark 2009) by means of which its productive efforts are evaluated (cf. Kelty 2008). This means that this kind of "labor" is "outside capital" (Negri 1999) and hence the value that it creates is both poorly represented by the general equivalent of labor time, and difficult to attribute to the productive input of specific individual actors. (This is also evident in the transformation of industrial accounting systems, where approaches like Value Flow Analysis or Total Quality Management measure the productivity of a whole value chain, paying attention to factors like synergy and flexibility of response, rather than simply looking at the time spent in production by each individual unit of that chain, as was the case in Taylorist cost accounting.) The implication of this is that however the multitude is exploited in creating common resources, labor time is not a good measure of that exploitation.

The Becoming Abstract of Value

A third crucial precondition for the relevance of the labor theory of value is that the realization of value occurs in direct commodity exchange on markets where there is a direct correspondence between market price and the labor time necessary for commodity production. However, in parallel to the process of "becoming complex of labor"

(to use Antonio Negri's term) described earlier, there has been a process of "becoming abstract of value" through which capital accumulation is "moved" to a level above that of the individual firm, first through the agency of the Fordist "planner state" and subsequently through the massive growth in the importance of financial markets. Consequently, financial rent has risen massively as a proportion of both corporate profits (and in particular of the revenues of social media companies), and private income in recent decades (cf. Harvey 2010). And the prevalence of "shareholder-oriented corporate governance" has shifted the strategy of companies from the long-term growth of Chandlerian memory to (often short-term) maximization of asset value (Lazonick and O'Sullivan 2000). This development is directly linked to the "becoming complex of labor" that we described in the last section. Christian Marazzi, a political economist close to the Negrian tradition, organizes his understanding of the contemporary finance-centered regime of accumulation along these lines: Simply put, value is ever more produced in complex networks of interfirm cooperation, as well as cooperation between firms and other actors, like consumers—that is, by a multitude that remains, at least in part, outside of the direct control of capital. These relations are ever more financialized, principally through the securitization of interfirm and consumer credit (Leyshon and Thrift 2007). This means that value created in such productive processes is more or less directly channeled to financial markets, where it is redistributed as financial rent. But how is the distribution of such financial rent determined? Or, better, how is the financial value of the socialized productivity that a company can attract determined on financial markets?

To understand this, we might benefit from turning to the now rich tradition of the sociology of finance. Economists themselves have begun to question the hypothesis of market rationality that has underpinned financial economics for the last several decades. The notion that market prices are the effect of a rational processing of the best available information about the performance of assets has been seconded by a perspective that gives greater explanatory power to the affective climate that guides the evaluation of such information, or what is known as "market sentiment" (Fox 2009).[4] Market sentiment, an admittedly diffuse term, refers to a wide range of factors, from macro conventions like the overall "bear" or "bull" climate of the market, to conventions that guide investments into particular sectors (BRICS, dot.com companies, etc.), as well as day-to-day variations in "sentiment" about particular companies or assets, and the network effects that can emanate from the popularity of a particular asset or type of assets, as market actors imitate the behavior of others (cf. Borch 2007). Overall, it is argued that financial markets are not so much rational as they are affective and that, consequently, the recent crisis can be understood as caused by a period of "irrational exuberance," where the asset valuations exceeded rational levels by far (Schiller 2005). However, recent advances in the sociology of finance have problematized this emphasis on market "irrationality" (cf. Stark 2009). In their deep ethnography of financial markets, Beunza and Garud (2004) argue that even though there might not be a common "market rationality," traders are generally not irrational. Rather, their rationality is bounded by particular "calculative frames": that is, conventions that guide the interpretation of data. (This way, a convention that says that Amazon.com should be understood as a dot.com company and not a bookseller affects evaluations of the market value of the company.) In their analysis, Beunza and Garud point at the crucial role of market analysts in determining and sustaining such conventions. Other contemporary theorists, like Christian Marazzi (2008) and André Orleans (2009), share this emphasis on the importance of conventions in supplying "frames" that enable rational analysis. But they have pointed at how such conventions increasingly build either on "political factors," like the ability of large investment banks to suggest a general direction of investments, or on network effects that come from the imitative dynamics of market behavior and the affective sentiment invested in a particular asset or class of assets by the "multitude" of actors who take an interest in it. Such conventions are in part derived from communicative practices in which the "multitude makes itself into a community" by sharing an affective intensity (cf. Marazzi 2008, 36).

These two points of view share a common perspective on the necessary role of conventions of interpretation in *enabling* market rationality and in making value decisions possibe. But they emphasize the role of different actors, market analysts on the one hand, and powerful political actors as well as the "multitude" of actors that take an interest in and communicate around financially traded assets on the other, in creating and sustaining such conventions. Looking at one of the most important conventions that operate empirically in financial valuation, notions of brand value, we find that a combined perspective offers the most realistic interpretation.

Brand Value

The notion of "brand value" is a convention that enables the interpretation of information about a company, so that a large share of the discrepancy between market and book value can be made sense of. This convention is elaborated by market analysts but it uses various estimations of the affective investments that a brand has been able to accumulate (through measures like popularity, consumer loyalty, sentiment, and so forth) as an important parameter. So, at least in the form of "brand value," valuations on financial markets are to a large extent affected by the

ability of market analysts to erect conventions as to how to interpret available data. However, the viability of those conventions depend, to no small degree, on their ability to find support in and mobilize the "faith" or, more precisely, the affective investments of a multitude composed of market actors, as well as, increasingly, members of the public at large. Indeed, it would also seem that such conventions are becoming ever more dependent on processes of communication that extend outside the restricted circle of market actors, as financial analysts and asset valuators begin to rely ever more on empirical indicators of reputation or sentiment (sometimes "mined" form online data; cf. Flatt & Kovalcyk 2006; Fomburn 1996; Orlitsky & Benjamin 2009).

In other words, the setting of values on financial markets can be understood as a process that to a large extent mobilizes and builds on the public affective "standing" or "reputation" of companies, brands, and related assets. (Of course, macro conventions, such as the overall climate of markets, recursive loops like when the past performance of an asset influences expectations of its future performance, or the network effects that set in as market actors follow each other in investing in a particular asset or class of assets play an important part in framing these operations.) This leads us to suggest that informational capitalism ever more deploys an affective "law" of value, where the values of companies and their intangible assets are set not in relation to an objective measurement, like labor time, but in relation to their ability to attract and aggregate various kinds of affective investments, like intersubjective judgments of their overall value or utility in terms of mediated forms of reputation. (The reference here would not be Marx but Gabriel Tarde, who suggested in 1902 that in an ever more mediatized economy the value of goods would increasingly depend on the public perceptions of their "truth, beauty, and utility," which would be underpinned by intersubjective communion—*communion méntale*—among members of a public.) A growing literature suggests that similar mechanisms apply to other aspects of value formation in the information economy. For example, in the case of knowledge workers, and in particular freelancers, the value of skills is increasingly determined by their ability to create a "personal brand" (Marwick et al. 2010).

Value and Affect

Negri's article on value and affect ends with a somewhat obscure prophecy that since the labor theory of value no longer holds, the "multitude" would be free to erect its own circuits of "affective self-valorization." "Value-affect opens the way to a revolutionary political economy in which insurrection is a necessary ingredient and which poses the theme of the reappropriation of the biopolitical context by the productive subjects" (Negri 1999, 88). Communism, not with a bang but with a whimper, as it were. At the same time, Negri hints at a process by means of which affect is reintegrated within the "fold" of capitalism itself and is controlled and made measurable through the construction of conventions.[5] We too emphasize this second process. Indeed, the most important developments toward an "affect-based law of value" have happened within the corporate economy itself, chiefly through the development of the concept of intangibles. It can well be argued that the term "intangibles" has risen mainly as a way of making sense of two parallel developments that have marked the corporate economy in the last decades: the socialization of wealth creation on the one hand, and the rising discrepancy between the book and market value of companies, on the other. Or, to put it in Negri's own terms: the "becoming complex of labor" and the "becoming abstract of value."

Most measurements of what is arguably the most important kind of intangible—brand—mainly add some estimate of the affective investments that consumers and other stakeholders have in the brand (what Interbrand calls the "brand multiplier") to a subtraction of book value from market value (cf. Lury and Moor 2010; Salinas and Amber 2009). This way, the measurement of brand value serves as ways of framing rational calculations of the financial performance of assets by invoking measurements of the affective investments they have been able to attract. Brand value constitutes a first attempt to institutionalize the link between value and affect as an operational "law" of value.

In sum, we suggest that in informational capitalism in general, value realization does not primarily occur through direct commodity exchange where market prices correspond to necessary labor time, but through mediated forms of commodity exchange where factors like reputation, brand, and value conventions that are supported by public affective investments intervene to distort, obscure, and *mediate* this relationship. We further develop this approach in our discussion on value on social media platforms and, in particular, Facebook.

VALUE ON SOCIAL MEDIA PLATFORMS

In this section we show how the rudimentary "general model" of value in informational capitalism that we fleshed out earlier can be applied to the case of social media and in particular Facebook. As in the preceding discussion, we subdivide this analysis into two parts. The first part looks at how value is created in *prosumer* practices on social media platforms, and the second examines the place of social media in the contemporary finance-centered regime of accumulation.

Can Using Facebook Be Understood as "Labor"?

Fuchs suggests that social media platforms derive most of their revenue from the sale of advertising, and he uses Dallas Smythe's (2002 [1978]) model of the "audience commodity and its work" to argue that using Facebook can be understood as a form of value creating "labor." Smythe argued that since media companies make money by selling their audiences as a valuable commodity to advertisers (by selling advertising time), the actual audience "works" or produces value in watching and paying attention and thereby producing a valuable audience commodity. Smythe thus reconstructed the Marxian theory of exploitation. If an advertising slot in the daytime soap opera *Enemies* sells for x dollars and the total value of all advertising spots X is larger than the television stations' costs in transmitting *Enemies* (Y), and it is, since otherwise there would be no point for a commercial television station to do this, then X minus Y constitutes the surplus value that comes from the audience "working on" the entertainment commodity *Enemies*, by devoting a certain number of hours to watching and paying attention to it. From the point of view of the individual watching, his or her "audience labor" is compensated by its exchange value (the entertainment and general use value that he or she can derive from watching *Enemies*, which has a monetary price of Y divided by total audience number z, Y/z), but it contributes the total of X/z. Y/z minus X/z constitutes a measure of the amount of surplus value that the television station is able to derive from each spectator. Can the same thing be said about social media use?

Smythe's theory of the audience commodity was developed in an era dominated by television advertising where channels were few and the remote control was not yet a widely used device. It assumed—in the face of the audience studies that have come after Smythe's writings, but not before him, to his defense—that the audience paid total attention both to the entertainment product that they consumed as "wage" and to the advertising that put their attention to work. (Indeed one of the key assumptions of Smythe's model was that the audience created value not only by watching, but by actually imitating the "consumption style" proposed by advertisements.) In other words, Smythe's model was built on the assumption that time spent in media use equaled attention time. Within the advertising industry, models similar to Smythe's were in use until the 1980s. With the arrival of remote controls, and greater choice brought about by cable and satellite television, came more advanced forms of market segmentation (Weiss 1988) that made Smythe's assumption that viewing time equaled attention time obselete (Ritchie 1995). On the Internet, the link between time spent online and the creation of valuable attention is even more tenuous.

A model similar to Smythe's could possibly be used to understand the early Internet advertising economy of the 1990s, where banner ads dominated and where the main measure of the value of advertising was "hits" or simple page views. But as the number of websites grew much faster than the number of users and competition for attention intensified, the value of banner advertising declined, and commercial online operators began to look for other value models. In 1995 there were roughly 20,000 websites and 6 million web users globally, or 300 users per site. In 2010 there were circa 234,000,000 websites and 1.7 billion users, or 7.3 users per site (Mobcom 2010). An alternative measure of value that has emerged is click-through rates, where advertising is valued not on the basis of "hits," or people watching the advertisements, but on the basis of click-throughs, or people actually clicking on an advertisement to "surf on" to the site that it advertises. What is valued by this measure is the ability to convert "hits" or mere page views into however minimal forms of engagement, where users take sufficient interest in an advertisement to actually click on it (cf. Halavais 2009).

However, click-through rates are not the main foundation for emerging social media business models. In part this is so because social media platforms have fairly low click-through rates, because each user generally has a lot of page views. (In simpler terms, each Facebook user tends to look at a lot of Facebook pages. This increases her or his exposure to advertising and makes it less likely that she or he will click through on a particular advertisement.) Instead, the present trend in social media business models is to valorize not simple hits or views but affective relations.

Arguably, Google pioneered this model with its launch of what Gerlitz and Helmond (2010) call a "link economy." The principle of the Google page rank algorithm was that not all links have equal value but links from sources that themselves receive many in-links have a higher value. This way the value of a website as advertising space came to depend not only on the number of hits and quantity of in-links that it could attract, but also on the *quality* of those in-links defined in terms of the network centrality or influence of the sites from which they originated. The Page Rank metrics became a measure of the value of advertising space that took into account not only the quantity of views but also the relational context in which those links occur. While Google and the link economy that it promotes are well established in the online advertising market (cf. Jarvis 2009), social media platforms are presently pioneering a different way of valorizing advertising space, what Gerlitz and Helmond (2010) call a "like economy." The principle of the like economy is similar to that of the link economy, only that the main determinant of value is not links between webpages but direct forms of user engagement. Indeed, such forms of direct user engagement are now in the process of becoming objectified

and quantifiable through the proliferation of "social buttons," like Facebook's "like" button, Twitter's "retweet" button, or bookmarking buttons on Digg or Reditt. Such social buttons "allow for transforming intensive social and affective dynamics into comparable metrics and thus add a social and personal qualification to the hit economy" (Gerlitz and Hemond 2010, 3, 25). In other words, the introduction of social buttons allows for an objectification and valorization not of the time spent by users online, but of their ability to create webs of affective attachments around informational objects.

Facebook's current business model is based on such a principle of "collaborative filtering" whereby the interests and social centrality of a particular user are deduced from affective investments within his or her network of friends (or social graph, to use Mark Zuckerberg's own term) as rendered explicit by the "like button." Such networks of affective investments ("likes," "shares," etc.) are what are sold on to advertisers, either as spaces in which to insert targeted ads, or as data from which to extract and "mine" market information. Similarly, Twitter is experimenting with monetizing its users through its construction of an "interest graph" where possible interests are deduced from patterns of retweet (Whittemore 2010). Yahoo has been identifying and selling on "influencers," that is, people who are central to particular networks of users as particularly valuable vehicles for online advertising for a long time. In other words, there is a tendency, which has been underway for some time now and which seems to be affirming itself ever more, that the valuation of online advertising is ever more oriented not to mere "time spent online" but to users' creation of social relations, or at least relations of affective proximity.

So there seems to be a general tendency in the online advertising economy for affect to become objectified as a parameter for the measurement of the value of advertising space. But what is affect? Gilles Deleuze speaks about affect as "nonrepresentational thought." While there is, for example, an idea of "a loved thing," "love as such represents nothing." Rather, it signifies the "mood" of an act or a statement (Deleuze 1978). Up until quite recently such affects were understood to be a private matter, or at least something that mattered in the small interaction networks of what sociologists call "primary sociality," like friends, family, lovers, and community. Public participation, on the other hand, was, at least ideally, understood to be affectively neutral (Liu 2004). But with social media, affective investments become increasingly objectified and public. The affects that flavor people's relations to brands, celebrities, and public issues acquire a public presence as texts on blogs, tweets, and recordable uses of "social buttons" in social media systems. (Or rather, social media extend and intensify the process of objectification of affect that Gabriel Tarde [1902] associated with the emergence of modern mass mediated pubic communication at the turn of the last century.) In the contemporary media economy, affect is measured along three dimensions. First is number, that is, the quantity of affective expressions ("likes" or positive statements in text) that a particular media object (a brand or a Facebook profile with which advertising is associated) has acquired. Second is intensity, that is, the particular affect that "flavors" a statement (love, hate, etc.) and its strength. In practice, this parameter is operationalized as sentiment analysis, which, at present, is generally limited to mining text for expressions of positive, neutral and negative sentiment and grading the strength of that sentiment on a numerical scale (cf. Pang and Lee 2008). Third, and finally, is influence, that is, the social centrality of the actors that express a particular affective investment in relation to a media object. In practice, this means that a brand or an advertising space is considered to be worth more if many people who are central to relevant communication networks (what Yahoo calls "influencers") express strong positive affective investments in relation to the media object in question. For example, it is by now common practice to measure return on investment (ROI) on viral advertising and media campaigns by estimating their ability to change the number of mentions of a brand, the sentiment of those mentions, and the influence of the people who mention it (Andrejevic 2011). Incidentally, these dimensions coincide precisely with the factors that Gabriel Tarde thought would determine the strength of the affective communions that he argued ever more underpinned perceptions of value in a mediatized consumer economy: "*le plus ou moins grand nombre: le plus ou moins poids social (ce qui veut dire ici considération, compétence reconnue) des personnes qui s'accordent à l'admettre, et le plus ou moins d'intensité de leur croyance en elle*"[6] (Tarde 1902, 62).

The point here is that the value of online advertising is not primarily dependent on the number of users that a site can attract (as Fuchs claims on page 191). And contrary to Smythe's model that Fuchs relies on, time spent online viewing or interacting with a particular site is not the critical parameter for defining or measuring value in the online advertising environment. Rather, value is ever more defined according to the ability to mobilize affective attention and engagement. The emerging metrics for this entail some kind of quantifiable estimate of affective engagements, whether through "social buttons" or by means of sentiment or network analysis. In effect, the "source of value" in the online advertising economy is not user time per se, but rather user affect, or the ability to construct the kinds of relations and affiliations that are able to transform "persuasion oriented 'hype' into relevant, useful, communally desirable social information that builds individual reputations and group relationships" (Kozinets et al. 2010, 83).

Only one of the three dimensions according to which affective investments are presently valued—the number of mentions—can be incorporated within such a "Smythian" paradigm of measurement; the other two, the affective direction and intensity of such mentions and the influence of who mentions it, cannot. What we have is rather an "affective economy" (Jenkins 2006) where the main measure of value is, as Antonio Negri (1999) suggested long ago, not labor or attention time, but new forms of "affective self-valorization" on the part of the "multitude," whereby advertising or other kinds of messages are given value by being inserted within such communicative and affective webs.

Facebook and Finance

An even more important consideration is that advertising revenue, however produced, is not the most important source of income for Facebook. And there is no linear relation between the number of users and the advertising revenue that Facebook has been able to attract and investor valuations of the company (Saleem 2010). Indeed, if Facebook earned $350 million from advertising sales in 2010, its recent investment round had attracted $1.5 billion in late January of 2011 (primarily through Goldman Sachs's institutionalization of a special fund that allows its wealthy clients to invest in Facebook even though the company is not yet publicly traded). Furthermore, the implicit valuation of Facebook at $50 billion on the part of Goldman Sachs would be an astronomical overvaluation of its advertising revenue by any standard metric. Deploying Facebook's own figures this would imply a price/earnings ration of 143, as compared to the S & P 500 average of 9. And while the recent *hausse* around Facebook may indeed turn out to be a speculative bubble, the more stable Google, which does have an established business model centered on advertising sales (Facebook, on the other hand, has often been accused of being single handedly *bad* at monetizing its 500 million users), is also valued at 29 times its earnings, or 3 times as much as the S & P 500 average. Twitter has not yet found a reliable business model despite its 5 years on the market and its 160 million users. Even so, the company acquired an implicit valuation of $4 billion in January 2011 (Parr 2011).

These figures can be interpreted as manifestations of a bubble, an "irrational exuberance" that has moved on to social media companies after the collapse of the housing boom in 2008 (Schiller 2005). And in some ways that interpretation is probably correct. However, a complementary interpretation is also possible. It might be the case that financial valuations of these companies are not primarily built on their earnings capacity in terms of attracting advertising revenue, but are related to their perceived capacity of attracting future investments, or, to use a more general term, financial rent. This would be consistent with the general trend within the information economy towards the financialization of corporate profits (cf. Harvey. 2010).

Building on the model described earlier, what determines the allocation of such financial rent is not primarily rational calculations as to the underlying performance of company assets (like labor and capital) but rather the ability to initiate and sustain a convention that enables a rational estimate of a company's future financial performance. That is, value builds on the kinds of self-fulfilling prophecies that Keynes argued to be typical of financial markets. These are primarily based on the affective climate that prevails among market actors and that guides their interpretation of economic "facts" (such as Facebook's revenue figure; cf. Keynes 1936; Marazzi 2008; Orleans 2009). In the case of Facebook there is no doubt that "political" factors, such as the Goldman Sachs endorsement of the company as a potential future IPO (initial public offering) client and the bank's institutionalization of a special investment fund dedicated to Facebook, have played an enormous part in initiating and sustaining a powerful convention as to its value. But it is also likely that the strength of the Facebook brand, that is, of the number, strength, and influence of the affective investments that it has been able to attract from the multitude that uses it, also plays an important role in sustaining this convention. Facebook is uniquely positioned in this game since the number of its users together with its centrality to communication flows on the Internet in general and, by implication, to the lives of the multitude in general means that user investments of affect in a wide diversity of informational objects—pages that represent brands, groups, political causes, other users—*also* become affective investments in the Facebook brand itself. (This would also explain the present Facebook strategy of "eating the Internet" [Fulton 2011].)

And this is not unique to social media companies. We can apply a similar model to value in informational capitalism as a whole, and this leads us to a different interpretation of the value of advertising, including online advertising. The development of the average price/earnings ratio for the S & P 500 from 2 in the 1950s to 9 today has been paralleled by the rise of brands as a component of market value, from virtually nil in the 1950s to on average 30 percent today (and for some companies with strong brands like Coca Cola or Apple, 40 to 50 percent; cf. Arvidsson 2006). This implies that brands or conventions, which are the same thing, that build on the accumulation of affective investments have become a key factor in justifying investor valuations that are ever more remote from earnings potential. This can be interpreted as a symptom of a transition away from a Fordist, industrial

model of accumulation where the value of a company is mainly related to its ability to extract surplus value from its workers (to use Marxian terminology), to an informational finance-centered model of accumulation where the value of a company is increasingly related to its ability to maintain a convention or brand that justifies a share, in terms of financial rent, of the global surplus that circulates on financial markets. Indeed, given the present importance of brand building vis-à-vis sales as a motivation for advertising investments, advertising revenues can themselves be understood as investments in attracting the kinds of affective attachments that can support such positions of financial rent. (In the case of city branding, the equity of the city brand is predominantly realized on real estate markets; cf. Oakley [2004].) And this is particularly true for social media advertising. As a number of surveys have shown, advertising on social media platforms is generally not conceived of as investments in sales or market share, but as investments in brand building: as investments that can mobilize the affective attachments that are able to legitimize the valuation of company assets above and beyond earnings potential. For example, the 2011 Global Facebook Advertising Report shows how advertising on the platform is more efficient in mobilizing adherence to community-oriented brand initiatives, like loyalty cards, than in promoting sales (TGB Digital 2011). Concomitantly, contemporary marketing conceives of the value that prosumers create online as primarily a matter of value cohesion and affective proximity, rather than sales. That is, it is argued that "value" is created when consumers are made to cohere to or participate in an online brand community and in particular when they experience a proximity between their values and those of the community (cf. Cova and Paranque 2010).

In this scheme of things, social media platforms like Facebook function as advertising platforms insofar as they that can attract and objectify such affective investments (in terms of "social buttons," online sentiment, and so on) and transform them into objective data that can support such conventions. In effect, social media platforms like Facebook function as channels by means of which affective investments on the part of the multitude can be translated into objectified forms of abstract affect that support financial valuations. In this sense Facebook is a "utility" (Boyd 2010) not only in the sense that the platform enables social relations to form and unfold in new ways but also in the sense that it allows for new ways for the conventions that support financial valuations to stabilize. Facebook is a utility that allows for the determination of otherwise indeterminable values. It is or could potentially be a sort of deliberative device on which a new and perhaps more participatory "law of value" could operate.

CONCLUSION

The main point of Fuchs's argument is that a modified version of Marx's model of industrial value creation and exploitation can be applied to social media platforms, as well as to informational capitalism in general. This implies two things: (1) Labor time can be taken as a reasonable measurement of the value created, and (2) the realization of value primarily takes place in direct commodity exchange, whereby the labor "embodied" in commodities can be realized. We have shown that these conditions are not particularly representative of value creation and realization, neither in informational capitalism in general nor on social media platforms in particular. Instead, we have shown that value is produced in ways that are poorly related to investments of labor (or attention) time, and that value is increasingly realized on financial markets, where the value embodied in commodities is but one minor parameter. And we have argued that these conditions apply to social media platforms in particular.

We have proposed an alternative model wherein socially produced surplus value is distributed globally on financial markets, and what determines the value of an asset (i.e., its "legitimate" share of the surplus value circulating globally) seems to be its ability to support a convention that can ground decisions about its value in the absence of precise measurements. The ability to support such a convention appears to affect the ability to attract affective investments, or a brand, from the multitude or the global public. Social media platforms like Facebook are important utilities that allow for the linking of individual affective investments and their aggregation into the kinds of conventions that can frame and support value decisions.

We write "seems to" and "appears to" because in fact such an affect-based "law" of value has yet to be formulated. In practice the connection between value and affect is an emerging phenomenon, and there is a growing interest among practitioners for including some version of objectified affect in their elaboration of value conventions. Indeed, data extracted from social media traffic are increasingly entering into the calculations of brand valuators and asset valuators on financial markets (Bowerman 2010). Similarly, new studies have pointed at the possibility of predicting stock market movements using sentiment data, and correspondingly to successful trading based on such data (cf. Tironialli and Tellis 2011). Among social theorists there has been a growing interst in affect as theoretical category (Massumi 2002; Ticineto-Clough 2007), in particular in relation to new media (Miller 2008), but attempts to connect affect to questions of value have hence been scarce (cf. Andrejevic 2011; Jenkins 2006).

In view of this, we suggest that the emerging connection between value and affect can constitute an interesting and potentially fruitful area for further research. In

particular, this connection can be addressed empirically in two ways. One, we see need for more research on how asset valuators actually evaluate assets. What are the day-to-day dynamics of the operations of brand valuators, markets analysis, and accountants seeking to come to terms with things like reputation and social responsibility? Here there is much potential for the kinds of qualitative in-depth ethnography that Beunza and Garud (along with others) have conducted. Two, we see much potential in quantitative analysis of the kinds of "Big Data" (Bollier 2010) that can be harvested from Web traffic with growing ease. Such analyses could explore long-term correlations between online sentiment and reputation on the one hand, and asset prices on the other.

We also suggest that since no such "affective law of value" has yet been formulated, research in this area is likely to have performative consequences (cf. McKenzie 2006). That is, since there is a growing interest on the part of practitioners in how to actually value affect, it is likely that some of the models that social scientists develop in this area will actually be deployed and institutionalized as operational ways of actually measuring it. This opens up an important "political" role for social research. That is, the ways in which social scientists formulate models for the relation between value and affect are likely to have important political consequences in influencing the ways in which important decisions in related areas are actually made.

We suggest that Fuchs's inadequate analysis of value creation also means that his final more "political" suggestions "bark up the wrong tree," so to speak. If the suggestion is that Internet platforms or even "the Internet" as a whole exploits users by attracting surplus value from their "audience labor," and that consequently this surplus value ought to be redistributed in the form of a basic income, then, as we have seen earlier, there is not much to redistribute. This becomes a rather toothless argument. What needs to be redistributed in a more equal fashion is not the value appropriated by social media platforms, but the value that circulates on financial markets. And our analysis suggests that social media platforms can play an important part in determining the parameters of the distribution of such financial value (by enabling the affect of the multitude to be objectified into a brand, or conventions, that can justify financial valuations). From this point of view, social media platforms are not so much part of the problem as much as they could be part of the solution. That is, one could imagine that social media platforms like Facebok and Twitter play an even greater role in determining the redistribution of financial value by supporting a society wide and more democratic reputation economy where the relative "worth" of individuals and companies could be determined in more extended processes of deliberation.

This would of course require more intensive forms of regulation of social media platforms safeguarding, for example, open access to user data, the portability of identity, open protocols whereby users can determine how much information about themselves they wish to make public, antitrust policies that counter excessive levels of capital concentration in the social media business, and so on. It would also build on the construction of a series of alternative devices and platforms that enable communication and data gathering to operate in different ways. Overall, it would follow Bruno Latour's (2005) suggestion for the necessity of a new kind of "Dingpolitik" whereby a new public sphere is constructed. We believe that engaging in such a constructive Dingpolitik, and at the same time calling attention to the regulatory and policy issues that the possibility of a more "democratic" role of social media bring to light, is an important and potentially productive direction for political action, as well as for "theoretical politics" (cf. Althusser 1969). How, precisely, that can be done must be a topic for another article.

NOTES

1. We too are inspired by the tradition of Italian autonomist Marxism, but our ambition in this article is to go beyond this tradition and add to it, rather than simply apply it to the problem of value in informational capitalism and on the Internet. While the main perspective of this tradition is that in informational capitalism the "law of value" no longer applies, some, whom we cite in this article, suggest that affect is indeed emerging as the basis for a new such "law of value." In this article we build on this perspective and try to present a version of it that is less philosophical and more empirically substantiated. Our main divergence form the tradition of Italian "autonomist" Marxism is our suggestion that the socialization of production and the affirmation of a productive multitude do not lead to the "end of Empire" (Hard and Negri, 2004), but they impel a reconfiguration of capitalism centered on a new affect-based law of value (which of course opens up new areas and fields of struggle and conflict). In our effort to add to this tradition and in articulating our embryonic model of such a new "law of value" we draw on managerial research and business sources. We do this for two reasons. One, many of the theoretical insights proposed by the school of Italian autonomist Marxism have been better developed empirically by management scholars, even if the latter use a different terminology. Two, the best and most-up-to-date data on social media companies come from business sources. We see few problems in using management research and business sources for building on an existing Marxist framework. After all, in writing *Capital*, Marx used what was at his time the best available business sources. We are aware that the end result might be very un-Marxist in its conclusions. But then again, Marxist theory is a toolbox, not a religious creed, and if the insights produced with Marxist tools point beyond Marxist dogma, then so be it. (We also think that Fuchs has misunderstood many concepts and insights from the Italian autonomist tradition, and we make it clear in the rest of this article where we think that such misinterpretations have taken place.)

2. For data on Facebook's economic performance in 2010, see Guerrera (2011). Data on Facebook's economic performance vary

significantly (not being a publically traded company, Facebook has no obligation to publicize details of its accounts). Profit estimates for 2009 have varied between "tens of millions" and $200 million. The figure of $355 million comes from Facebook's own promotional documentation supporting its 2011 $2 billion investment round, so it is likely to be a tad exaggerated. On the total value of audience participation on the Internet, see Bughin (2011). Fuchs is of course *technically* correct in pointing out that any amount of surplus value divided by zero wage results in an infinite level of exploitation. Our point is that this analysis, however technically correct, does not make much empirical sense.

3. "The more the theory of value loses its reference to the subject (measure was this reference as a basis for mediation and command), the more the value of labor resides in affect, that is, in living labor that is made autonomous in the capital relation, and expresses—through all the pores of singular and collective bodies—the power of self-valorization" (Negri 1999, 79–80).

4. The asset pricing models that have dominated the setting of financial values for the last decades have all been premised on the transformation of insecurity into calculable risk. They have been based on a rational market hypothesis that market prices are the best possible interpretation of available information about the future. But this only holds when there is *one* correct interpretation of that available information. In a situation where multiple orders of worth prevail, there is no established hierarchy that determines which of these orders of worth should be the most important one, and there is no dominant "law of value"—there are many correct interpretations of available information. This means that the transformation of uncertainty into risk, on which present methods of valuation rely, is increasingly ambiguous, and we are increasingly approaching a situation known as Knightian uncertainty, that is, uncertainty that cannot be transformed into calculable risks, in economists' parlance (Knight 1929). Here values are determined when asset conventions enable the transformation of such Knightian uncertainty into calculable risks. As Stark and Beunza (2009) note in their ethnography of an arbitrage trading room: "We encountered a world abundant in information, delivered with dazzling, dizzying speed. But after months of fieldwork, we realized that, as increasingly more information is almost instantaneously available to nearly every market actor, the most strategic advantage shifts from economies of information to the sociocognitive process of interpretation" (Stark and Beunza 2009, 124).

5. "Convention (in other words a set of productive modes of life and exchange) would thus present to political economy the opportunity to bring back the immeasurability of affect-value under control" (Negri 1999, 87).

6. English translation: "The greater or smaller number, the greater or lesser social weight (that is, overall reputation and recognized competence) of the people who admit to this, and the greater or lesser intensity of their belief in it."

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