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Value and Productive Labour in the Era of Digital Technologies: Revisiting the Digital Labour Debate

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Abstract: This article revisits the so-called digital labour debate to clarify and problematise the many different positions in this debate. Synthesising the most promising arguments from the different positions in the debate, the article outlines a theory of digital media usage as exploited, value-producing labour. In doing so, the article criticises the Autonomist Marxist tradition and argues for the utility of a value-form theoretical approach to the question of free digital labour. In conclusion, the article argues for more analytical attention to the ways in which technological developments in contemporary capitalism can engender new processes of production and thereby also new types of unpaid value-producing labour.

Keywords: Digital technologies, digital labour, Marx's theory of value, productive and unproductive labour, circulation and production, Autonomist Marxism, value-form theory

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1. Introduction

The aim of this paper is to expound the various positions in the so-called digital labour debate around the free digital labour thesis, i.e., the claim that digital technologies have enabled capital to exploit leisure-time activities such as digital media usage as a form of productive labour. It does so to identify what is at stake in this debate for analyses of productive labour in contemporary capitalism in terms of the Marxian theory of value and in light of current developments in digital technologies.

First, the paper introduces the two main positions in the digital labour debate and relates them to some of the claims of the Autonomist Marxist tradition. The paper then introduces three further positions and provides an overview of their merits and drawbacks, after which the paper presents a sixth value-form theoretical position to formulate a theory of digital media usage as value-producing labour. The two following sections unfold this theory by discussing the relationship between production and circulation and by analysing the creation of targeted advertising space as a production process dependent on the value-producing labour of digital media users. The final section concludes by arguing for more analytical attention to the tendency towards the commodification of social life in contemporary capitalism and the new forms of exploitation of unpaid, productive labour engendered by this tendency.

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2. The Digital Labour Debate

The digital labour debate refers to an exchange between Christian Fuchs, Adam Arvidsson and Elanor Colleoni in 2012 in various articles in *tripleC* and *The Information Society* (Fuchs 2010, 2012a; Arvidsson & Colleoni 2012). The controversy revolves around the question of whether developments in digital technologies, especially the emergence of online digital platforms, and, concomitantly, the rise of so-called "prosumption" (Toffler 1980) or "produsage" (Bruns 2008), i.e., the blurring of the distinction between production and consumption, has led to a break with traditional modes of exploitation of wage-labour inside the factory or firm. The debate can be traced back to Dallas Smythe's concept of audience labour, which together with Tiziana Terranova's theorization of free internet labour forms the background of Fuchs' argument that digital media usage can be considered a new type of exploited labour productive of value (Fuchs 2012b, 706; Terranova 2004; Smythe 1977). Although this theoretical background is clearly important to the debate, the present paper engages instead with the assortment of different positions in the more recent digital labour debate.

The continued relevance of this debate is demonstrated by recent publications such as Bilić et al.'s *Political Economy of Digital Monopolies*, in which the authors argue that the advertising model of digital media corporations "does not create any new value; its value is a deduction from the value of the advertised product" (Bilić et al. 2021, 54). For them, the value realised by large tech firms like Google stems not from their own process of production, but rather from the process of production of those companies whose commodities are being advertised (Bilić et al. 2021; Bilić 2023). Similarly, Tim Christaens, in his recent publication *Digital Working Lives*, follows the Autonomist Marxist approach in arguing that "[p]latform companies privatize social cooperation and live off the rent", rather than producing any new surplus value on their own (Christiaens 2023, 40). Recent scholarship has thus largely converged towards the idea that the profits realised by digital media corporations constitute a form of rent (see also Srnicek 2017; Rikap 2021). Against this convergence, this paper will argue that it is theoretically feasible to conceptualise digital media usage as productive of value.

2.1. The Free Digital Labour Thesis

Fuchs is the principal proponent of the thesis that digital media usage constitutes labour productive of value.[1] According to Fuchs, this is because this usage contributes to the creation of what he calls "the internet prosumer commodity", which is the targeted advertising space auctioned off to advertisers by digital media corporations (Fuchs 2014, 102ff). This means that "[p]artly the users and partly the corporations' employees create the surplus value contained in this commodity. The difference is that the users are unpaid and therefore – in monetary terms – *infinitely exploited*" (Fuchs 2012b, 713, my emphasis). For Fuchs, the exploitation of the users of digital media is part of a general tendency in contemporary capitalism towards the commodification of ever more spheres of social existence and the outsourcing or "crowdsourcing" of productive labour to consumers (Fuchs 2012b, 714). This outsourcing extends to:

> "[…] knowledge creation and reproduction, "reproductive labour" such as housework, care work, educational work, affective work, sexual work, etc. so that the human being in contemporary capitalism spends a lot of working hours

[1] For similar positions, see: Kostakis 2009; Rey 2012; Fisher 2012; Andrejevic 2012, 2013.

> every day in creating value for capital by abstract labour that is unpaid" (Fuchs 2012b, 716).

Digital media usage is therefore only one type of unpaid labour that capital in our historical period has succeeded in exploiting for its capacity to produce surplus value. In this, Fuchs agrees with several Marxist-feminist scholars, who have long stressed the value-producing nature of reproductive labour (Jarret 2015; Dalla Costa & James 1972; Fortunati 1995). The foundation of this analysis Fuchs draws, above all, from Marx's theorisation of the so-called *Gesamtarbeiter*, or collective worker, according to which any work is productive of value if it can be considered "an organ of the collective labourer" that performs "any one of its subordinate functions" (Marx 1976, 644; Fuchs & Sevignani 2013, 249). In effect, Fuchs' analysis leads to the conclusion that all human activities in contemporary capitalism are value-producing and exploited labour.

2.2. Immaterial Labour and the Becoming-Rent of Profit

Other commentators have argued that digital prosumption can be seen as paradigmatic of the Autonomist Marxist concept of *immaterial labour*, a concept originally proposed by Maurizio Lazzarato, designating "the labour that produces the informational and cultural content of the commodity" (Lazzarato 1996; Coté & Pybus 2007). Autonomist Marxists see the proliferation of immaterial labour not as a quantitatively dominant tendency in contemporary capitalism, but rather as dominant in a qualitative sense, effecting transformations in the capitalist economy, where the cooperative, communicative, and cognitive labour performed by an increasingly autonomous and decentralised "multitude" is creating an "immeasurable productivity", which can no longer be related to quanta of labour-time, leading capital to assume an exterior and parasitic position vis-à-vis the production process (Hardt & Negri 2004, 107ff; Vercellone 2007, 34; Moulier-Boutang 2011).

In this view, because exploitation has diffused to the whole of what Mario Tronti termed the "social factory" (Cleaver 1992, 115), such that all spheres of social existence become productive of value, the central definition of abstract labour based on socially necessary labour-time becomes untenable (Vercellone 2010). Autonomist Marxists therefore argue that the law of value is in crisis and that profit-accumulation is increasingly taking the form of rent extraction rather than the exploitation of value-producing labour (Vercellone 2014; Fumagalli 2019). This theoretical tradition forms the background for one of the main positions in the digital labour debate, according to which digital media corporations do not produce value in the traditional sense but rather siphon off surplus-value from an amorphous multitude engaged in immaterial production autonomously from capital (Brown 2014).

2.3. Financial Value and Affective Investment

The Autonomist Marxist position in the digital labour debate is represented foremost by Arvidsson and Colleoni, who argue that Fuchs' theorisation of digital prosumption is a fundamentally flawed application of an orthodox Marxian analysis to phenomena no longer explicable in terms of Marx's labour theory of value (Arvidsson & Colleoni 2012, 136). For Arvidsson and Colleoni, analysing digital platforms requires reconsidering the concept of value itself by taking into account "the relation between financial value and affective investments" (Arvidsson & Colleoni 2012, 135). This is so, argues Arvidsson and Colleoni, because:

1. “value creation on social media platforms is poorly related to quanta of productive time” (Arvidsson & Colleoni 2012, 136).
   a. This means that “the basic premise of the Marxist labour theory of value no longer holds” and that “value is ever more related to the ability to create and reaffirm affective bonds” (Ibid).
2. The increasing financialisation of the global capitalist system entails that “the realization of value in informational capitalism in general should not be understood as occurring principally through the sale of commodities” but rather through “financial rent” (Ibid).

On these grounds, Arvidsson and Colleoni criticise Fuchs’ theorisation of free digital labour for being based on a conceptual confusion, where a traditional notion of class is inconsistently combined with the Autonomist Marxist concept of multitude, which “should be understood as a post-Marxist alternative to ‘class’” (Arvidsson & Colleoni 2012, 138). Moreover, Arvidsson and Colleoni see Fuchs’ assertation that users of digital media are infinitely exploited as misleading, because, when the profit of, e.g., Facebook, is divided out among their users, “each Facebook user was a ‘victim of exploitation of surplus value’ to the extent of $0.7 a year” (Ibid).

2.4. Fuchs’ Rejoinder

In response, Fuchs has argued that Arvidsson and Colleoni misunderstand Marx, when they consider the profits of social media companies the direct expression of value, as this does not take into account the difference between values and prices, which, according to Marx, do not necessarily coincide (Fuchs 2012a, 633f; Marx 1981, 287). For Fuchs, “[v]alue is a measure of the production process, price a measure of the circulation process (selling) of commodities”, which means that “exploitation of labour takes place before the selling of commodities” (Fuchs 2012a, 634). Accordingly, Arvidsson and Colleoni are operating with a “subjectivist concept of value” closer to a neo-classical price-theory, where value is not the objective expression of socially necessary labour time but rather the outcome of the affective attachments of market actors (Fuchs 2012a, 635).

Fuchs also maintains that Hardt and Negri’s concept of multitude is not a post-Marxian concept but is rather intended to counter the orthodox conception of class, according to which only wage-labourers can be considered productive workers (Fuchs 2012a, 634). For Fuchs, the Autonomist Marxist conceptualisation of the social factory allows us to understand that “today, also unpaid workers are productive” (Ibid). Fuchs thus interprets the concept of the social factory in a way that upholds the definition of value as dependent on the labour-time expended in production, thereby dismissing the claim that the law of value has come into crisis and that profit in contemporary capitalism tendentially takes on the form of rent (Fuchs 2012a, 635).

3. Mapping the Positions in the Digital Labour Debate

In the wake of the exchange between Fuchs and Arvidsson and Colleoni, commentators like Edward Comor have argued that Fuchs’ rendering of the labour theory of value extends the exploitation of productive labour such that it is “literally […] everywhere and all the time” (Comor 2015, 16). This is problematic, as such an interpretation would mean that “key categories from Marxist economics (such as socially necessary labour time […]) are rendered moot” (Ibid). In contrast, for authors like Comor, productive labour in the digital media industry occurs only in the exploitation of the employees of digital media corporations (Comor 2015, 18; see also

Caraway 2011; Bolaño and Veieira 2015). This echoes the earlier assertion by Göran Bolin, that "it is not the viewers who work, but rather the statisticians", which, in the context of online digital media, would mean that it is the data-analysts working for e.g. Google, that should be considered exploited and value-producing labourers (Bolin 2009, 357; Fuchs 2012b, 702).

Another position, championed, e.g., by Bruce Robinson, is that the accumulation models of digital media corporations are "[…] not based on independent and self-sustaining value creation" but rather "depend on consuming value produced elsewhere in the economy" (Robinson 2015, 44). Similarly, for John Michael Roberts, digital media "prosumers do not in fact generate surplus value" but instead help "to create profits for unproductive capital in the sphere of circulation" (Roberts 2016, 29). The profits garnered by media corporations, according to Roberts, are therefore a form of rent on "an already generated portion of surplus value created in the productive sphere" (Roberts 2016, 36). For these authors, all labour performed in the sphere of circulation, including advertising and therefore also digital media usage and digital labour performed for advertising-based media corporations, is unproductive of value (Robinson 2015, 45, see also Huws 2014; Arriaga 1984).[2]

Finally, some commentators have argued that information commodities in toto cannot contain any value and that the production of such commodities can therefore not be considered labour productive of value (Rigi & Prey 2015; Teixeira & Rotta 2019). According to Teixeira and Rotta, e.g., because commodified information can be effortlessly reproduced, it always has "zero value regardless of who produces it" (Teixeira & Rotta 2019, 396). Similarly, for Rigi and Prey, the activities of digital media users cannot be considered productive of value, as the information they create "has no exchange value because it can be reproduced digitally and transported electronically at negligible cost and time", which, according to them, "is the case with all information in an era of digital reproduction" (Rigi & Prey 2015, 398).

Based on the above expositions a provisional overview of the different positions in the digital labour debate can be constructed:

Position 1:	*Position 2*:	*Position 3*:	*Position 4*:	*Position 5*:
Andrejevic 2012, 2013; Fisher 2012; Fuchs 2012a, 2012b, 2015; Kostakis 2009; Rey 2012.	Bolaño & Vieira 2015; Comor 2015; Caraway 2011.	Roberts 2016; Robinson 2015; Reveley 2013.	Rigi and Prey 2015; Taixeira & Rotta 2019.	Arvidsson and Colleoni 2015; Böhm et al. 2012; Brown 2014.
Digital media usage, as well as most human activities in general, can	Productive labour should be reserved for waged workers, and only the	None of the activities in the circulation sphere can be considered productive of	Information commodities contain no value, and the employees of digital media	Because of the diffusion of immaterial labour like digital media usage, labour-

[2] See also Brown's theorisation of the political economy of audience labour as the redistribution of surplus value from the wages of other productive workers (Brown 2014, 107ff).

be considered productive labour.	employees of digital media corporations can be considered exploited, productive labourers.	value and the profits of digital media corporations represent surplus value redistributed from industrial capitalist firms.	corporations produce value only insofar as they provide a commoditized service.	time is no longer the measure of value, and profit-accumulation has become rent-extraction from the commons produced by an autonomous multitude.

Table 1: Overview of the different positions in the digital labour debate

The main pitfall of Fuchs' approach is that the analytical usefulness of the concepts of productive labour and socially necessary labour time disappears when applied in such an extremely broad way. As Comor notes, "If value-creating and exploitative relationships are everywhere, analytically they are nowhere" (Comor 2015, 19). Viewing exploitative and value-creating social relations as ubiquitous also depicts contemporary capitalism as an all-encompassing social system operating in a fundamentally smooth and stable way (Robinson 2015, 49). As Hesmondhalgh has noted in connection with Smythe's claim that "all non-sleeping time under capitalism is work time" (Smythe 1977, 6), such a position is "crude, reductionist and functionalist, totally underestimating contradiction and struggle in capitalism" (Hesmondhalgh 2010, 280).

Thus, while the concept of the social factory might be useful in identifying new forms of unpaid but productive labour, the concept of multitude and the expansion of productive labour to all human activities makes it impossible, as Ursula Huws has observed, "to identify the point of production: the point where workers have the power to challenge capital" (Huws 2014, 178). However, as will be argued in later sections, the fact that it is a clear exaggeration to claim that "exploitation is with us twenty-four hours a day and occurs everywhere in society" does not rule out the possibility of *some* leisure activities being made productive of value (Roberts 2016, 36).

Regarding the second position, it is not obvious why we should not consider, e.g., volunteer work at a company or unwaged internships labour productive of value (Hesmondhalgh 2010, 279; Huws 2014, 173). As Rodrigo Finkelstein has argued, the necessary condition for labour to be productive of value is not that it receives a wage, but rather that it is located in a capitalist process of production (Finkelstein 2018, 573ff). Marx makes this clear in *Results of the Immediate Process of Production*, where he states that "the only productive labour is that which is directly consumed in the course of production for the valorization of capital" and that "[e]very productive worker is a wage-labourer, but not every wage-labourer is a productive worker" (Marx 1976, 1038, 1041). One of the arguments of this paper is that this dissociation between being remunerated and being a productive labourer also holds the other way around, so that a worker does not need to receive a wage to be productive of value. As Huws has pointed out, in addition to unproductive, wage-labour that creates the subsistence necessary for its reproduction "without creating value directly for capital", in capitalism

we also find “unpaid labour that produces value directly for capital without contributing to the worker’s subsistence” (Huws 2014, 154). Thus, while capitalism as a social system depends on the reproduction of workers and therefore on their remuneration, this does not mean that capital will not seek to minimise wages to the point where productive labour becomes unpaid (Huws 2014, 174ff).

The problem with the third position is that the application of a rigid distinction between production and circulation risks overlooking how technologically mediated social transformations can lead to the emergence of novel production processes and thereby new forms of productive labour. When taking into consideration the increasing porous boundaries between production, circulation, and consumption, it is crucial to analyse the tendency in contemporary capitalism towards the commodification of spheres of social life formerly not part of the capitalist accumulation process. Thus, if it is true, as David Harvie has argued, that “capital’s tendency is to (attempt to) make all labour productive of value”, we should be wary of any overly rigid concatenation of the productive/unproductive dichotomy and the production/circulation distinction (Harvie 2005, 133).

Regarding the fourth position, authors such as Parkhurst have contested this view of informational commodities, arguing that Rigi and Prey conduct their analysis in view of a counterfactual situation characterised by a lack of intellectual property rights (Parkhurts 2019, 82). Moreover, what is relevant in calculating the value contained in informational commodities is not simply the value of the individual unit, but rather “the unit cost *multiplied by the number of units*” (Parkhurst 2019, 78). Thus, even if the reproduction costs of creating targeting advertising space tended towards zero, it would not mean that such information commodities should be considered without value.

4. Critiquing Autonomist Marxism

Finally, the fifth position, and the Autonomist Marxist approach more generally, has faced criticisms from several different commentators. One criticism has been that the emphasis on “immaterial labour” exposes a viewpoint that mistakenly considers the contemporary capitalist economy “weightless” and “immaterial”, thereby overlooking the material labour and infrastructure necessary to support the ICT industry (Huws 2003, 129; Sandoval 2015, 42). As several authors have suggested, such a viewpoint obscures the material basis of the physical infrastructure for manufacturing commodities along what Fuchs has called the “international division of digital labour”, which are often produced out of sight of consumers in developed countries by labourers in the Global South (Fuchs 2014, 287ff; Fuchs & Sandoval 2014, 503ff; Huws 2014, 157).

Another criticism concerns the claim that immaterial labour cannot be measured in terms of labour time. Against this “immeasurability thesis”, George Caffentzis has argued that “the process of creating […] so-called “immaterial” products that could be transformed into intellectual property is a process in time that can be (and is) measured” (Caffentzis 2013, 111). This objection is also propounded by Fuchs in his critique of Arvidsson and Colleoni:

> “affect and sentiments require labour activities that take place in space and time. You do not simply create positive affects, relations, attitudes, and reputations, you work on creating and maintaining them, which is time-intensive and takes place in certain spaces” (Fuchs 2012a, 639).

A third criticism concerns the overly optimistic view on the autonomy of the immaterial labour of the multitude from capital. Teresa Ebert and Mas'ud Zavarzadeh, e.g., have argued that this presumed autonomy is nothing but a left fantasy that obscures how "[t]he silent compulsion of economic relations" continuous to dominate both workers and consumers in contemporary capitalism (Marx 1976, 899; Ebert & Zavarzadeh 2014, 401; see also Pitts 2018, 153f). By emphasising the autonomy of the multitude from capital, proponents of the Autonomist Marxist tradition thus "overstate the immediate emancipatory potentialities of the present phase of capitalism" (Starosta 2012, 369).

This optimistic view is coupled with an idiosyncratic reading of the so-called "Fragment on Machines" in *Grundrisse*, which, as several scholars have pointed out, is based on a misunderstanding of what Marx is attempting to convey in this passage (Starosta 2012, 388; Marx 1973). Marx's theorisation of the development of a "general intellect" is not about the dissolution of the law of value within capitalism due to the autonomous cooperation of a diffuse mass-intellectuality, but rather about how the increasing organic composition of capital points towards the possibility of overcoming capitalism in a future communist society, which can, however, only be fully realised through the political organization of the working class in the endeavour to overthrow the capitalist mode of production (Fuchs 2012, 635; Fuchs 2022, 277; Steinhoff 2021, 46; Starosta 2011, 2013).

As Tony Smith has convincingly argued, the new immaterial products of the general intellect, "does not dissolve the power of the capital form to prevent the general intellect from being 'actually fully realised' […]" (Smith 2013, 251). On the contrary, capital, as Steinhoff has demonstrated, is actively employing new digital technologies such as AI-driven monitoring software to subsume the type of labour termed "immaterial" by the Autonomist Marxist tradition under the imperative to valorise capital (Steinhoff 2021, 187f). The Autonomist Marxists underappreciate this ability of capital to continuously subsume both material and immaterial labour under the value-form, because they mistakenly identify the real subsumption of labour under capital with a specific social division of labour during the Fordist regime of accumulation (Ebert & Zavarzadeh 2014, 404ff; Pitts 2018, 258f). The concepts of formal and real subsumption, however, should not be seen as belonging exclusively to different historical phases of capitalist development, but rather as analytical categories that describe different configurations of concrete labour processes that might contain both forms of organisation (Endnotes 2010, 150f).

For the Autonomist Marxists, the value-producing nature of labour is thus based on a "naturalistic interpretation of value theory, which considers abstract labour as pure expenditure of human energy" (Jeon 2010, 100). As the following sections will show, this means that the Autonomist Marxists overemphasise the concrete content of immaterial labour, thereby overlooking how the appearance of both material and immaterial products as value-bearing commodities does "not derive from the material characteristics of the product but from the specific social form in which its production process is organized" (Starosta 2012, 380).

5. A Sixth Perspective? A Value-Form Theoretical Approach

In his book *Critiquing Capitalism Today*, Frederick Harry Pitts has argued for the utility of combining the New Reading of Marx with Open Marxism to understand the continuities rather than changes in capitalist development that technological progress has enabled (Pitts 2018, 180f; see also Pitts 2019). In contrast with critiques against Autonomist Marxism for not being materialist enough, Pitts argues that it is not

immaterialist enough (Pitts 2018, 198ff). The problem with the Autonomist Marxist approach is not that it:

> "[…] elides the material substrate of labour, but that it focuses too much on transitions in the material substrate of labour – of changes in the character and composition of the physical activities of concrete labour" (Pitts 2018, 199).

This is because it is the social form that labour assumes in capitalism that is important to the valorisation process, and not the concrete content of that labour (Pitts 2018, 180). Consequently, the arbitration of a concrete activity as productive labour is not something that occurs in the production process prior to the social validation of the value of a commodity through exchange on the market, although measures of value might be ideally posited in the process of production in an anticipatory way (Pitts 2018, 227; Riva 2022, 92). The problem with the focus on changes in the concrete activities of labour is that it gives the impression that abstract labour is somehow performed in the labour process, an impression also conveyed by Fuchs, when he writes that "the human being in contemporary capitalism spends a lot of working hours every day in creating value for capital by *abstract labour* that is unpaid" (Fuchs 2012b, 716, my emphasis; Pitts 2018, 205).

Against such interpretations of Marx's theory of value, Pitts builds on Michael Heinrich to argue that abstract labour is not the general physiological expenditure of energy, but rather a "category of social mediation" (Pitts 2015; Heinrich 2012).[3] This means that abstract labour is not a specific form of labour that is abstract in its expenditure, but rather labour abstracted from its concrete specificities (Pitts, 2018: 95; Arthur 2013, 120). This alternative interpretation has the merit of rendering the crisis of measurability posited by the Autonomist Marxists a misunderstanding, as abstract labour is not something that can be directly measured in the process of production at all (Pitts 2018, 172; Jeon 2010, 105f). As Pitts explains:

> "Concrete labour-time is abstracted from and validated through the process of exchange. What is described as 'immaterial labour' is not abstract labour, because abstract labour has no concrete existence" (Pitts 2018, 214).

The recent changes in the concrete processes of production identified by the Autonomist Marxists thus pose no threat to the law of value, because "[c]apitalism is characterised by categories of social mediation" that "persist regardless of whether a worker uses a keyboard or a hammer, ideas or nuts and bolts" (Pitts 2018, 187). Consequently, it is the validation of concrete labour as abstract and social through the process of exchange that renders labour productive of value (Pitts 2018, 227). From this value-form theoretical perspective, then, the arbitration of labour as productive occurs whether or not the concrete labour expended in production is immaterial and the product of that labour is "the provision of a car, a viral ad, or a brand strategy" (Pitts 2018b, 12).

6. The Relation Between Production and Circulation

While Pitts' theorisation is quite useful, some of his formulations imply a problematic disconnection between the concepts of socially necessary labour-time and value, because, as Pitts argues, "abstract labour-time has no necessary relation to expended

[3] A discussion of the exact nature of abstract labour is outside the scope of this paper but for debates on this issue see Bonefeld 2010, 2011; Starosta & Kicillof 2007, 2011; Roberts 2017.

concrete labour. It does not matter where or for how long labour takes place" (Pitts 2018, 212). If, then, the determination of value is made through the exchange of commodities regardless of how much labour-time went into their production, it would seem that the determination of value relies simply on the demand and supply prevalent on the market (Pitts 2018, 238). Of course, this is not to say that Pitts is in fact embracing a subjective, neo-classical price-theory of value, but rather to caution against a too pronounced emphasis on circulation that disconnects the concept of value from the time taken to execute concrete labour in the process of production. In his book on *Value*, Pitts in fact explains that:

> "what distinguishes the new reading of Marx from a purely subjective 'bourgeois' economics […] is the social objectivity that value, as a real abstraction, attains as a form of mediation between things" (Pitts 2021, 49).

Pitts further contends that what he terms "struggle theories of value" can provide a necessary correction to "overly circulationist" accounts of value (Pitts 2021, 115). According to such theoretical approaches, "value determines and 'organizes' labour", because "measurement plays an active and not passive role with reference to the labour it measures, and premonitorily commensurates 'value-producing labours' ahead of their final validation in the market" (Pitts 2021, 111). Here, Pitts rightly refers to the many ways in which various labour processes are being measured and labour compelled to produce for more hours and with higher degrees of efficiency and productivity (Pitts 2021, 129). In this way, according to Pitts, "abstract labour takes on an existence in the labour process" in an anticipatory way (Pitts 2021, 112).

Although this clarification goes some way to avoid a purely subjectivist conception of value, it does not sit well with some of Pitts' more circulationist formulations, and it leaves unclear what exactly the value-objectivity of commodities consists of. This issue might be ameliorated by following Isaak Rubin's emphasis on the importance of both production and circulation (Rubin 1928; Riva 2022, 91). According to Rubin, reconciling the statements by Marx, that it is only in exchange that the abstraction from concrete forms of labour into abstract labour is attained, with the fact that value is created in production, can be achieved by distinguishing between exchange as a *social form* and exchange as a *phase* in the total reproduction process of capital (Rubin 1927, 10). Doing so, argues Rubin, allows us to see how "exchange is not only a separate phase in the process of reproduction, [but] stamps the whole process of reproduction with its specific mark and represents a particular social form of the social process of production" (Ibid).

For Rubin, however, the relative value relations between commodities are not "laid down each time in the act of exchange itself" in a completely accidental manner, because these value relations "are governed by a determined regularity which is based in the process of production" (Rubin 1927, 15). The source of this "determined regularity" is the socially necessary labour time required to produce specific commodities, which is dependent on "alterations in the productivity of labour" (Rubin 1927, 17) that changes constantly and, as Heinrich has also pointed out, "only becomes apparent in the act of exchange" (Heinrich 2012, 51). The value of a commodity, then, is socially validated in the process of exchange, but this validation itself "depends on the quantity of social labour necessary for its production" (Rubin 1927, 18; Marx 1976, 156). This also means that value does not reside in the product of labour in any substantialist sense, because "value isn't a thing like the bread roll, but rather a social relationship that appears as a tangible characteristic of a thing", a

relationship which is "constituted in production *and* circulation, so that the 'either/or' question is senseless" (Heinrich 2012, 54).

The determination of value by socially necessary labour time, then, is not a formal, logical relation of determination between an independent and a dependent variable, as this determination is itself not independent of the price-form, which means that "values cannot be calculated or observed independently of prices" (Elson 1979, 135).[4] Instead, the inner character of the social form of value "regulates its representation at the level of appearance" (Elson 1979, 167). Thus, while socially necessary labour time determines the value-constituting character of labour, it is only through exchange on the market that this social validation is finalised, because "only then does the individual producer find out to what extent his individually expended labour-time corresponds to the socially necessary labour-time" (Heinrich 2012, 51). In other words, the fact that money is the "necessary form of appearance" of value does not mean that the socially necessary average of the labour times expended in production does not have a determining effect on the price of commodities and the value-constituting nature of labour (Marx 1976, 188; Heinrich 2012, 65; Harvey 2013).

The reciprocal relationship between production and circulation therefore constitutes a process of interaction, where not only the concrete and privately performed labour in the process of production is shaped by the social form of exchange, but also the social validation of labour as productive of value on the market is regulated by the socially necessary average of the concrete labour-times expended in the process of production (Heinrich 2012, 51f). It is this determination of value by socially necessary labour time which forms the basis for the value-objectivity that acts as a form of mute compulsion in capitalist societies, compelling production units to increase the productivity of labour (Marx, 1976: 138f; Starosta & Kicillof 2007, 35; Bonefeld 2023, 26ff; Backhaus 1980, 103; Mau 2023). The social form of exchange is thereby a "superindividual process" that "imposes itself behind the backs of economic agents as an ideal average […]" and determines the validation of labour as productive of value (Riva 2022, 98).

The advantage of this rendering of the value-form theoretical perspective in the context of the digital labour debate is that it avoids the narrow focus on the concrete content of the production process, which led the Autonomist Marxists to the theorisation of immaterial labour and the breakdown of the law of value (Pitts 2021, 132). On the other hand, it also eschews an overly rigid application of the distinction between productive and unproductive labour that categorises beforehand whole sectors of the economy as unproductive. Instead, it leaves open the possibility of various activities assuming the social form of value-producing labour and thereby takes seriously "[…] capital's ceaseless imposition of work, which has spread into more and more spheres of human activity" (Harvie 2005, 147). Finally, by maintaining the connection between value and socially necessary labour-time it can also avoid the subjectivist tendencies in some Autonomist Marxist approaches as well as overly circulationist interpretations of value-form theory.

6.1. Exploitation and Productive Labour

One of the consequences of a value-form theoretical approach, however, is that all labouring activities where "commensuration through market exchange does not take place" are considered unproductive of value (Harvie quoted in Pitts 2018, 234). If exploitation is coupled with the concept of productive labour, this would also mean, as

[4] See also Heinrich's discussion of the transformation problem in Heinrich 2012, 147 as well as Riva 2022, 87ff.

Fuchs has argued, that labour which does not result in commodities that are successfully exchanged on the market, has not been exploited (Fuchs 2012a, 636; Fuchs 2014, 45). Against this proposition, Steinhoff has argued that Fuchs' quasi-moralistic critique of Heinrich and circulation-oriented approaches incorrectly connects value conceived of as abstract labour in the form of general expenditure of human energy with the concept of exploitation, thereby neglecting how the circumstance that the product of surplus labour is not realised as value on the market "does not change the character of work that has already been done within a relation of exploitation" but "simply means that valorization has been aborted" (Steinhoff 2021, 58).

The concept of exploitation, therefore, is not coterminous with the concept of productive labour, which means, as Shaikh and Tonak argued some time ago, that "[a]ll capitalistically employed labour is exploited by capital, whether it is productive labour or unproductive labour" (Shaikh & Tonak, quoted in Teixeira & Rotta 2019, 17). Exploitation, then, is a broader concept that designates all situations in which a surplus of labour is appropriated by someone other than the producer (Heinrich 2012, 102). Thus, while Fuchs is right in asserting that the exploitation of labour takes place before the selling of commodities, if these commodities cannot be sold on the market and the labour that went into them be socially validated as productive of value through exchange, this does not mean that this labour has not been exploited (Fuchs 2012a, 634).

7. The Process of Production of the Targeted Advertising Space Commodity

The argument for a value-form theoretical approach to the question of digital media usage can be further bolstered by considering some of Marx's comments on productive labour. If it is true, as Marx argues in *Theories of Surplus Value*, that both material and immaterial goods and services can assume the form of value-bearing commodities, and that the "materialization" of labour in this form "has nothing to do with its corporeal reality", but rather concerns a "purely social mode of existence", it can be argued that there is no theoretical impediment to conceptualising targeted advertising space as an immaterial and value-bearing commodity (Marx 1969, 171).[5] Consequently, if the creation of this commodity depends on the activities performed by users of digital media in generating the data on which the micro-targeting of the advertising space is based, their activities can plausibly be considered exploited labour productive of value.[6]

Some commentators, like Huws, have argued against such a theorisation because targeted advertising space can be considered analogous to renting out billboard space (Huws 2014, 160). However, we should be attentive to the fact that renting out space for advertising, if organised as a capitalist enterprise, where labour is expended in order to make that space more attractive to other capitalist firms, after which this enhanced space is sold as a commodity to maximise profits, it can plausibly be described as a production process that, in Huws definition of the term "commodity",

[5] Another possible path for theorising targeted advertising space as a value-bearing commodity would be through Fuchs' theorisation of digital media usage as a form of transportation work (Fuchs 2022, 168; Fuchs 2014, 110). However, this theorisation tends to conflate the commodity targeted advertising space with the actual advertisements posted through them (see also Pitts 2018, 237 as well as Marx's theorisation of transportation work in Marx 1978, 229).

[6] Of course, it can be debated whether labour is the right term for this value-producing activity or if we should adopt another term to distinguish it from wage-labour in the factory/firm. I thank Toni Prug for making me aware of this issue through his criticisms of my position.

produces “standardized products or services for sale in a market whose sale will generate profits that increase in proportion to the scale of production” (Huws 2014, 160).

So, if selling space reconfigured for advertising purposes can be considered an act of the sale of a commodity, it can likewise be argued that the labour that goes into the production of that commodity is productive of value. The difference between billboards and online advertising space is that the latter, due to developments in digital technologies, is being targeted towards individual users based on the data generated by their online activities as well as the analysis of this data conducted by data scientists (Fuchs 2012b, 713; Fuchs 2022, 232). Thus, as Huws also admits, in our contemporary, digitally mediated capitalist economy, “the borderlines between production, distribution, and consumption become increasingly fuzzy and the same activity can be carried out interchangeably by paid and unpaid workers” (Huws 2014, 167). We should therefore acknowledge how previously unproductive activities can become productive by being integrated into processes of production of immaterial commodities while remaining unpaid.

Importantly, the designation of a specific activity as productive labour, as Alexis Moraitis and Jack Copley have convincingly argued, should not be considered something immutable, because “[w]hether any particular labour falls within the sphere of production or not is a changeable and indeterminate question that depends on whether the use-value created is commodified” (Moraitis & Copley 2017, 107). Whether a supermarket cashier in the sphere of circulation performs labour productive of value “has nothing to do with the concrete qualities of the labour”, but rather to do with the circumstance that the labour performed “assumes the form of a use-value consumed by the capitalist” (Ibid). If, however, the cashier is outsourced from a job agency, the labour performed turns into productive labour, because “despite performing the same concrete labour, the product of the cashier’s labour is now sold as a commodity by the job agency to the supermarket” (Ibid).

Furthermore, as Izquierdo has noted, because “the same concrete labour may be regarded as productive or unproductive depending on its relation to the valorization process”, we should be careful in considering whole sectors of the economy, such as trading, finance, real estate, or advertising as consisting purely of unproductive activities (Izquierdo 2006, 57). Rather, all sectors of the economy might contain different proportions of both productive and unproductive labour. The argument presented here, then, is not that all labour involved in the digital media sector is productive of value but rather that the activities of digital media users, specifically, can be considered productive of value, because their activities are integrated into a process of production of commodities that are sold for profit on the market.[7]

To analyse whether new types of digitally mediated activities can be considered productive of value, we should therefore be attentive to whether the result of these activities have become commodified, i.e., whether they assume the social form of value-bearing commodities, which, in the case of digital media usage is arguably the case. This also demonstrates the importance of connecting the question of exploitation on digital media to analyses of the so-called “enclosure of the digital commons”, i.e., the privatisation and commercialisation of digital platforms and the internet more generally, which enables the emergence of new types of immaterial commodities,

[7] For an analysis of the business model of Facebook that attempts to combine the theorisation of digital media usage as productive labour with the theorisation of rent-extraction, see Böhm et al. 2012.

processes of production, and unwaged productive labour (Andrejevic 2013, 84). Indeed, as Beverungen et al. have argued, digital media users are separated from their means of socialisation and communication, which have become privatised in the form of proprietary digital platforms (Beverungen et al. 2015). Importantly, digital media usage is not conducted as a pure leisure activity in a completely free online space but is managed and organized to become productive through different forms of "protological control" (Beverungen et al. 2015, 475). It is therefore important to recognise that:

> "When Facebook employees code algorithms for data extraction, or develop protocols like the 'Like' button, they are effectively managing. They are guiding user behavior in such a way that it is more likely to create marketable data, or generate content that will draw other users' attention, which can subsequently be commodified via advertising" (Beverungen et al. 2015, 483).

While digital media usage cannot be directly equated with waged labour, it is therefore also erroneous to conceptualise it simply as a form of free and self-expressive leisure activity. This tendency towards the blurring of the distinction between work and leisure has long been noted by several critical scholars, with, e.g., Fisher arguing that "[i]t is not only the café that penetrates the workspace; it is also work that penetrates the café" (Fisher 2010, 86, see also Boltanski & Chiapello 2005, 155; Gill & Pratt 2008, 18). When analysing leisure-time activities and consumer culture we should therefore be careful not to fall into the ideological portrayal of leisure as a realm of freedom, and, as Fuchs (2014, 112) also stresses with reference to Harry Cleaver, we should acknowledge the ways in which capital "tries to shape all 'leisure', or free-time, activities [. . .] in its own interests", meaning that:

> "rather than viewing unwaged 'non-labour time' automatically as free time or as time completely antithetical to capital, we are forced to recognize that capital has tried to integrate this time, too, within its process of accumulation. [. . .] Put another way, capital has tried to convert 'individual consumption' into 'productive consumption' by creating the social factory" (Cleaver 2000, 123).

The fact that so many commentators are dismissive of the argument that digital media usage can be considered productive of value, then, might have something to do with the view of leisure-time as a sphere of human activity that is not subsumed under the valorisation process, and where users of digital media simply leave behind a "trail of digital footprints" (Rigi & Prey 2015, 397; see also Couldry & Mejias 2019, 7; Bilić 2023, 7; Reveley 2013, 514f). This idea that digital media corporations are simply expropriating some preexisting data part of a "universal information commons" leaves completely unnoticed the spatiotemporal human activities and the programmed sociality that constitutes the productive basis of the creation of such data (Rigi & Prey 2015, 399; Bucher 2013). Data is not just a naturally occurring resource free for the taking, but rather something produced by the activities of digital media users, with digital media corporations making sure that "behavior leaves a trace that can be valorized" (Beverungen et al. 2015, 484).

In sum, the main argument presented here is thus that the current transformations in value creation and exploitation based on the development of digital technologies should prompt us to investigate more closely the increasingly porous boundaries between the spheres of production, circulation, and consumption, and, significantly, what exactly constitutes a value-bearing commodity in contemporary capitalism. This

is necessary because an overly rigid application of the production/circulation and productive/unproductive dichotomies to different processes of commodification might risk overlooking how capital is utilising digital technologies to generate value in unprecedented ways, as well as the novel processes of production and unpaid, productive labour that might spring from this utilisation.

8. Concluding Remarks

This paper has contributed to the digital labour debate by categorising, analysing, and problematising six different positions regarding the free digital labour thesis. It has attempted to synthesise the most convincing arguments from these different positions into a coherent theorisation of digital media usage as a form of productive labour. One of the main points of the paper has been that the critique of the Autonomist Marxist approach makes it clear that we should be careful in extrapolating conclusions regarding capitalist social forms from changes in the "material substrate of labour" (Pitts 2018, 199). We should therefore be careful to avoid some of the problematic theoretical baggage of this approach, especially the inattentiveness to social form and the attendant over-optimistic emphasis on the autonomy of labour from capital (Steinhoff 2021). What matters to the theorisation of digital media usage as a form of productive labour is not the material or immaterial character of that activity, but whether it is performed as part of a capitalist process of production, where the workers are separated from the means of production, and their surplus-labour appropriated to produce commodities, whose value is realised through exchange on the market (Andrejevic 2013, 81). Contrary to Fuchs, however, this theorisation does not imply that all human activities are productive of value, as it is only that labour which results in value-bearing and saleable commodities, that can be considered value-producing labour exploited by capital.

Nevertheless, we should also acknowledge that technological developments can form the conditions of possibility of changes in the social form assumed by the concrete content of human social interaction, such that activities formerly not productive of value assume the form of value-producing labour exploited by capital. In other words, technological developments in contemporary capitalism, as Huws has also observed, entail that "new economic activities are generated from areas of life that were traditionally seen as beyond the scope of any market" (Huws 2014, 149). We should therefore direct special analytical attention to the shifts in contemporary capitalism entailed by the increasing commodification of social life, whereby previously unproductive activities are transformed into unpaid labour productive of value (Huws 2014, 155f).

Thus, while the conceptualisation of the social factory retains analytical utility in highlighting different forms of unpaid, productive labour, both Fuchs' overly broad theorisation of productive labour as well as the Autonomist Marxist theorisation of the breakdown of the law of value should be viewed with a high degree of scepticism. What is needed today is not an overly optimistic view of the potential of digital technologies, but a communist pessimism that "seeks to uncover contemporary constraints on elaborating the communist prospect" (Steinhoff 2021, 236; Pitts 2018, 259). It is only by analysing these constraints, without inflating them as omnipresent, that we might find ways to struggle and organise against the attempt by capital to commodify and subsume all social life under the imperative to accumulate value.

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