

Rediscovering the cash nexus, again: Subsumption and the labour–capital relation in platform work

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Abstract

This article proposes a re-theorisation of the main social relations of platform work, based on two concepts drawn from Marx: subsumption of labour and the cash nexus. Platform work research to date is heavily empirical in character, with little theoretical development. As a result, the social relations of platform work are treated descriptively, using ad hoc or common-sense categories, or platforms' own terminology. This under-theorisation leads to over-estimation of platform work's novelty, decentering of capital in accounts of its development, incipient technological determinism and problematic generalisation from emergent trends. In place of the commonly assumed 'triangle' of platform work relations, this article argues that platform work is best understood in terms of an emerging labour–capital relation, which establishes a cash nexus between platform and worker as a result of a process of subsumption. This re-theorisation, in turn, helps to understand the rapid emergence of platform worker organisation and resistance, and the similarity of its demands with worker resistance in other, more established areas of paid work under capitalist relations of production.

Keywords

cash nexus, labour-capital relation, platform work, platform worker resistance, subsumption

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Introduction

More than four decades ago, John Westergaard (1970) wrote a classic essay of British Marxist sociology, *Rediscovering the cash nexus*. In it, he took aim at a series of celebrated sociological studies of the 1960s; Goldthorpe and Lockwood's (1968a, 1968b, 1969) *Affluent Worker* studies, Runciman's (1966) *Relative Deprivation and Social Justice*; and McKenzie and Silver's (1968) *Working Class Conservatives*. These studies claimed to have identified the underlying cause of the perceived quiescence of British workers at that time; namely their growing affluence during what would now be seen as the Golden Age of post-war capitalism. In response, Westergaard noted the similarity of the 'instrumental' attitude towards work of many workers in these studies to Marx's notion of the 'cash nexus', which Marx used to characterise the relationship between workers and capitalists. In the *Communist Manifesto*, Marx and Engels (1984) wrote

The bourgeoisie, wherever it has got the upper hand, has put an end to all feudal, patriarchal, idyllic relations. It has pitilessly torn asunder the motley feudal ties that bound man to his 'natural superiors', and has left remaining no other nexus between man and man than naked self-interest, than callous 'cash payment'. (pp. 486–487)

Westergaard (1970: 120) argued that rather than seeing the instrumentalism of workers as a source of quiescence and passivity, the narrowing of relations between labour and capital to the 'single-stranded' cash nexus 'implies a latent instability' that, with a small shift in conditions, could as easily lead to antagonism as acquiescence. Westergaard (1970) argued,

the significance . . . of the cash nexus [lies in] its liability to strain or severance, when the dependability of earnings is threatened or increases in pay fail to keep pace with rising demands; and the likelihood, in those circumstances, that other features of the workers' market and work situation, 'normally' borne with indifference, may be transformed into sources of active discontent and conflict. (p. 133)

The major strike wave of the early 1970s bore out much of Westergaard's analysis, as allegedly pacified 'affluent workers' took militant action in defence of living standards. As Westergaard understood, the cash nexus is sometimes the reason for putting up with things, and sometimes the reason to ask for more. Whatever the actual level of class struggle, though, the cash nexus remains a distinctive and characteristic feature of the labour–capital relationship.

What might this have to do with platform work? The answer is: theory. Academic research into platform work – that is, paid work mediated via an online platform – has developed rapidly in recent years. While empirical studies have proliferated, to date these have generated little theory. This lack of theorisation has incapacitated attempts to grasp the nature and dynamics of platform work, contributing to a tendency for over-generalisation from small samples, excessive extrapolation from emergent trends, an overly dichotomised debate between techno-optimists and pessimists and a significant resurgence of technological determinism in general. More specifically, for this article, the weakness of theory presents considerable difficulties for grasping the dynamics of

platform worker organisation and contestation – one of the most active and engaging areas of current research – where analysis tends to lurch between seeing platform technology as the all-powerful dominator of a fragmented working class, and viewing platform worker organisation as the bright new dawn for unions battered by decades of neo-liberalism.

Platform work's theory problem is most obvious in accounts of its principal social relations; that is, relations between those paid to work, those paying for work and the platform mediating the transaction. These relations are usually described as 'triangular' or 'triadic' and are often seen as the defining characteristic of platform work, in contradistinction to the 'binary' relationship of the standard employment relationship. Considering the analytical importance ascribed to these relationships, however, it is striking that there has been no meaningful attempt to theorise them. As will be shown, discussion of these central relationships remains almost entirely descriptive, based on little more than common-sense and ad hoc categorisation.

This article proposes an alternative approach. It argues for rethinking the social relations of platform work in terms of the labour–capital relationship. To this end, it deploys two theoretical categories drawn from Marx: subsumption and the cash nexus. As already mentioned, 'cash nexus' refers to the 'single-stranded' monetary relationship of capital to labour, while 'subsumption' is a term used by Marx to refer to the historical process whereby capital comes to dominate labour processes; importantly, for present purposes, a process that does not require a formal employment relationship. Rethinking platform work in this way brings several benefits. Most importantly, it places capital at the centre of analysis, overcoming its strange absence from recent accounts. Correspondingly, it demotes technology from its usurped position as the main driver of platform work. Re-centring capital also brings a more realistic perspective concerning the social relations of platform work. In reality, the three corners of this 'triangle' are not equal. What is so often – and rather lazily – described as platform work's distinctive triangularity turns out on closer inspection to be a big capitalist company, its workforce and some customers – hardly a novel configuration. The argument made here is that, in the widespread and considerably researched development of platform worker organisation, there is clear evidence of the existence of a cash nexus in platform work and, hence, of the establishment by subsumption of a labour–capital relationship. This article starts with a brief discussion of the problematic 'triangular' characterisation of platform work in recent literature, followed by an outline of Marx's understanding of subsumption, and its applicability to platform work. Finally, the cash nexus is examined in relation platform worker organisation and contestation. The limits of this symposium prevent full development of the analysis but it is hoped that this article provides a sufficiently persuasive outline of the general approach.

Many triangles

The lack of theorisation of the social relations of platform work can be seen most readily in the extraordinary variety of terms used by different authors to specify the platform work triangle. Some accounts simply adopt the preferred terms of the platforms themselves. Thus, studies of Amazon Mechanical Turk refer to 'requesters . . . workers, and the platform provider' (Fieseler et al. 2017: 1), while studies of Uber refer to the 'intermediary

(Uber) and the individual (driver) . . . [and] the client – here the passenger’ (Leighton 2016: 866). Rosenblat (2018) adopts Uber’s terminology wholesale, describing everyone using its app, whether drivers or passengers, as ‘customers’ (pp. 157–160). Where researchers avoid platforms’ own language, triangular terminology is drawn from a mix of common-sense definitions, general sociology or simple description. Harris and Krueger (2015) use ‘independent workers . . . customers . . . intermediaries’ (p. 11). Vandaele (2018) prefers ‘digital work intermediaries . . . producers or providers . . . [and] requesting customers’ (p. 9). For Huws (2015), the triangle comprises ‘the “Variable labor management platform” (VLMP), the service buyer and the independent contractor’ (p. 14). Lehdonvirta et al. (2019) simplify things to ‘a triadic provider-platform-client relationship’ (p. 590). Codagnone and Martens (2016) are more elaborate: ‘users/consumers . . . users/providers, i.e. . . . “micro-entrepreneurs” . . . [and] platform owners’ (p. 4). Elsewhere, though, Codagnone et al. (2016) opt for ‘digital labour markets . . . requesters (employers and/or consumers) and providers (workers)’, suggesting some unexplained change of heart (p. 5). Some authors use different terms within the same article; for instance; Drahokoupil and Jepsen (2017: 105) write of not only ‘platforms . . . customers and suppliers’ but also ‘digital workers’ and ‘platform workers’ (p. 106). Elsewhere, differing terminology seems to reflect institutional disagreements, as when the European Parliament (2017: 9) has ‘platform worker . . . online platform . . . client’, but the European Commission (2016: 3) has ‘service providers . . . users . . . intermediaries’. A final roundup of lexical uncertainty includes ‘on-demand companies . . . labor supply and demand’ (Aloisi 2014: 653); ‘crowdsourcer (. . . requester or client), the intermediary (the platform) and the workers’ (Berg 2016: 2); ‘sharing economy firms . . . consumers and providers of services’ (Calo & Rosenblat 2017: 5); ‘online platform . . . workers . . . customers (Farrell & Greig 2016: 20); and ‘platforms . . . labour supply and demand’ (Fabo et al. 2017: 164). Given the importance attributed to platform triangularity, this variety of formulations is remarkable, indicating a paucity of theory in the aspect of platform work that is claimed to be its distinguishing – indeed, defining – feature.

Historically, however, the lack of a legally bounded, two-party employment relationship is not unique to platform work. As Stanford (2017) reminds us, triangular employment relations were commonplace in the early history of the capitalist organisation of paid work. Well-known examples include the putting-out system (Stanford 2017), the notorious ‘butty’ system seen in British coalmining throughout the 19th century (Webb & Webb 1902) and the ‘internal subcontracting’ system used to organise factory production right through until the early years of the 20th century (Edwards 1986; Littler 1982). If the triangular relationships of platform work are not empirically unique, neither are they beyond the grasp of existing theory. Marx’s notion of subsumption provides a framework for understanding variation in the social relations of paid work under capitalism. The next section gives an overview of Marx’s account and outlines an application of his analysis to platform work.

Subsumption

Marx used the term subsumption to capture the historical process whereby, during the early stages of capitalism, previously existing labour processes were brought increasingly

under the control of capital.¹ The argument here is that this concept provides a useful lens through which to view the social relations of platform work. Marx (1990: 975–1060) distinguishes between formal subsumption, which is historically prior, whereby labour processes remain largely unchanged, but new relations of domination and subordination are introduced as a result of the intervention of concentrations of capital into previously existing patterns of work, and real subsumption, whereby labour processes are entirely transformed by the introduction of new machines, production techniques and forms of work organisation. Furthermore, Marx (1990: 1023) identified ‘transitional sub-forms’, in which formal subsumption is incomplete. In these transitional forms, capital ‘does not intervene in the process of production itself’, ‘the immediate producer still performs the function of selling his wares and making use of his own labour’, but capital is, nevertheless, able to extract unpaid labour as a result of supplying ‘the conditions of labour’ such as money, tools, raw materials or access to markets (Marx 1990: 1026). Here, Marx (1990) includes various forms of independent artisan and handicraft production, where ‘we encounter the loss of an earlier *independence* in the process of production’ (p. 1029, original emphasis), including ‘when the producer is self-employed’ (p. 1025). Other examples mentioned by Marx include not only forms of putting out that preceded the early factory system in Britain and elsewhere, but also forms of colonial exploitation, such as the gradual subordination of Indian peasant farmers to merchant capital (Marx 1990: 1026). Importantly, Marx also argues that the process of formal subsumption is not found only at the birth of capitalist relations. Rather, it is also a recurring feature of mature capitalism, associated with the emergence of new branches of production (Marx 1990: 1025). One important consequence of formal subsumption is that ‘labour becomes far more continuous and intensive’ (Marx 1990: 1026). Moreover, the impact of formal subsumption on labour processes is in proportion to the size of capital involved; that is, the bigger the chunk of capital inserting itself into – or, in platform parlance, disrupting – an existing form of work organisation, the more fully labour is subsumed under its control. While the study of work and workers in the global North has often been preoccupied with the technologies and management systems of factory-based mass production – that is, the realm of real subsumption – as Das (2017) has noted, on a global scale, formal subsumption remains the most common form of the labour–capital relation.

The importance of Marx’s conception of subsumption for the present discussion is that it permits the analysis of labour–capital relations outside of formal employment – which is plainly relevant for understanding platform work. Marx’s discussion suggests a continuum, both historically and theoretically, from non-capitalist labour processes, through ‘transitional sub-forms’ (such as putting out), via formal subsumption to fully developed real subsumption in large-scale, machine-dominated production. While there is no doubt scope for considerable debate over details, the argument of this article is that the various forms of platform work are mainly located in the transitional sub-forms and formal subsumption areas of this continuum. Indeed, the historical examples of formal subsumption cited by Marx bear striking similarities to platform work. The loss of independence by small-scale producers is immediately recognisable where platforms mediate work previously carried out independently, or in small-scale businesses, and where essentially similar work is now conducted under relations of subordination to a large chunk of

(venture) capital. Uber is an obvious example. Likewise, the tendency of platform-ised work to become 'far more continuous and intensive' is a pattern familiar in many accounts (Gandini 2018; Schor & Attwood-Charles 2017; Wood et al. 2019). Furthermore, Marx's account of 'transitional sub-forms', where subsumption is emerging but incomplete, captures important aspects of platforms where freelance-type work is carried out by workers who retain a (shrinking) degree of independence, but where the agencies that once mediated this type of work have largely been replaced by powerful online platforms (Azzellini et al. 2019; Huws 2017). Platforms such as *Upwork* mediate forms of freelance design and other creative work that are conducted much as they always were but with the additional presence of a large concentration of capital that provides workers with 'the conditions of labour' (i.e. the platform infrastructure linking workers with clients in a global market), and which extracts a surplus as a result. As in Marx's account, in this process of platform-isation, important aspects of freelancers' former independence are lost, as the platform sets standards for work through non-transferable rating systems, retains possession of creative workers' production and work is significantly intensified through global competition between workers (Huws 2014; Schörpf et al. 2017; Wood et al. 2019).

In the absence of formal employment relations, then, Marx's concept of subsumption represents an important theoretical resource for re-centring capital in the analysis of platform work. Once it is recognised that one corner of the platform 'triangle' comprises an accumulation of capital that aims to profit from the exploitation of a workforce, many of the key dynamics of platform work – and platform worker resistance – become more easily explicable, in terms of the overall dynamics of labour–capital relations. On this view, for instance, it is not the informational asymmetries of algorithms that explain the power of platforms over workers (*pace* Rosenblat 2018) but rather the power of capital over labour that explains the asymmetries. Conversely, it is no surprise that when the balance of power is altered by emergent worker organisation, challenges to the algorithm are often among the first issues to emerge; for instance, in workers' efforts to reduce arbitrary 'deactivation' (Johnston & Land-Kazlauskas 2018). Furthermore, grasping platform work as a social relationship between labour and capital de-prioritises the legal conceptions of employment that frequently dominate discussion, in favour of a more sociological approach. This is not to deny the importance of employment status for platform workers and their organisations. Rather, it is simply to assert the need to conceptually separate employment as a legal category from employment as a social relation.

On this view, then, platform work – in the global North, at least – can be seen as a large-scale re-emergence of formal subsumption, as big capital (often in the form of venture capital) reorganises existing labour processes under its own domination. Having established forms of the labour–capital relationship through formal subsumption and its transitional forms, however, capital must live with the consequences of its own cash nexus.

Rediscovering the cash nexus in platform work

Insofar, as platform work establishes, through subsumption or its transitional sub-forms, a labour–capital relationship, it follows that relations between worker and platform take the form of a *cash nexus*. For Marx, the cash nexus has a dual nature. As the 'main residual

binding force of capitalist society' (Westergaard 1970: 120), the cash nexus ties workers to a condition of dependency upon capital (see discussion in Vidal 2018). At the same time, however, the reduction of labour–capital relations to 'a *relationship of sale and purchase, a purely financial relationship*' (Marx: 894, original emphasis) places a singular importance on the terms of that trade – how much work for how much pay – and thereby introduces what Westergaard (1970: 120) correctly identifies as a 'latent instability', which is the key driver of worker resistance and contestation discussed in Marx's *Capital* (Schmidt 2017).

Rediscovering the cash nexus in platform work carries important analytical implications. First, it underlines the importance of pay as a mechanism for worker control; something persistently downplayed in accounts of platform work, where controlling capacity is almost universally attributed to algorithms or some other technological trickery. Fashionable discussions of platform 'gamification', or the 'black box' or 'panopticon', however, fail to register the most important thing capital requires of platform workers is not control: it is work, for which workers must be paid, so that work is carried out to a required standard and intensity, and so that workers will come back again and do the same again tomorrow (Moore & Joyce 2019; Woodcock & Johnson 2018). Given the recognised preference of platform companies for payment by piecework, together with the huge literature on piecework (for instance, in chronological order, Schloss 1898; Roy 1952; Lupton 1963; Brown 1973; Edwards & Scullion 1982), it seems extraordinary that there has been no serious attempt to analyse platform work as a piecework payment system.

Second, analysing platform work in terms of the cash nexus helps to explain the remarkably rapid development of organisation and resistance among platform workers, contrary to many predictions that platforms represent the ultimate, technologically enabled domination of fragmented, isolated and continually observed workers, doomed to a downward spiral of individualised, 'dog-eat-dog' competition in a globalised labour market and shorn of employment rights and social protections. It is beyond doubt that there are many retrograde aspects about platform work. But it is simply not the case that platform workers find themselves defenceless. Indeed, in many respects, the energy and self-organisation of platform workers make this area one of the most exciting examples of worker organisation in contemporary capitalism (see, for instance, Cant 2019; Joyce et al. 2020; Tassinari & Maccarrone 2017; Vandaele 2018; Woodcock 2018; Woodcock & Graham 2019).

Time and again, the issue of pay is central to platform worker mobilisation; including rates of pay, the amount of effort required to earn it and how it is calculated. These are key aspects of the wage-effort bargain (Baldamus 1961) that have been characteristic of labour struggles against capital at least since the time of Marx. In other words, observed patterns of platform worker resistance show the characteristic imprint of the cash nexus which, in turn, suggests an underlying dynamic of the labour–capital relationship. This is the case even in platforms such as *Upwork*, which conform more closely with traditional freelance models where a more or less independent, 'self-employed' (Marx 1990: 1025) worker carries out work for numerous clients (who may be individuals or businesses), but where a large block of capital now extracts a surplus by providing the conditions for production viz the platform connecting geographically separated parties. What is striking in such cases is that worker discontent shows a strong tendency to be directed at the new, large block of capital

– the platform – notwithstanding any other unfair treatment by individual clients (Wood et al. 2017). Again, such cases indicate an emerging labour–capital relationship, as a result of the ongoing process of subsumption, even where this process as yet remains at a transitional, partially developed stage.

Indeed, in many respects, contemporary platform work comprises a particularly harsh and naked version of the cash nexus, unadorned by any accretion of legal rights, management accountability or employment and social protection. In his discussion of subsumption in *Capital*, Marx (1990: 1027, original emphasis) echoes comments from the *Communist Manifesto*, cited above, concerning the cash nexus:

[formal subsumption] dissolves the relationship between the owners of the conditions of labour and the workers into a *relationship of sale and purchase, a purely financial relationship*. In consequence the process of exploitation is stripped of every patriarchal, political or even religious cloak.

Today, we might add that, in opting for a self-employed workforce, platforms have ensured that the bond with their workers is *only* a cash nexus. Platform work brings no additional benefits. No pension. No training or promotion. No rights. No security. In some countries, not even health care. If you drive for Uber, there really is only one strand of social bond between you and the venture capital behind the app: the cash nexus. If that gets strained, what would you do? Increasingly, for a growing number of Uber drivers – and other platform workers – the answer to that question is becoming clear, and the dynamic of the cash nexus in platform work is revealed more and more clearly in platform worker organisation and resistance.

Conclusion

While platform work research, to date, has lacked a clear theorisation of its main social relations, this article has proposed an approach based on Marx's account of the labour–capital relation, subsumption and the cash nexus. The argument, here, is that the widespread development of platform worker organisation and resistance is clear evidence of the establishment by subsumption of a labour–capital relationship and cash nexus in platform work. Marx's account of subsumption bears striking similarities with the development of platform work. Marx described the incorporation of previously existing forms of work under the domination of capital. Similarly, in platform work, formerly independent workers – from taxi drivers to graphic designers – increasingly work under the domination of large concentrations of capital in the form of companies running platforms. As a result, it is not at all surprising that the allegedly novel 'triangular' relationships of platform work are systematically producing forms of worker organisation and resistance that share many features with other workers' struggles over the capitalist organisation of work. In practice, the social relations of many forms of platform work are increasingly resolving to a fairly straightforward labour–capital relationship, and a clearly drawn cash nexus.

This is not to say that the social relations of platform work are all identical. In some types of platform work, subsumption is more fully developed, while others exhibit the kind of 'transitional sub-forms' discussed by Marx. Whereas the lack of conventional employment contracts has led many to significantly overstate the novelty of platform

work, and to fall back on descriptive accounts of its social relations, in both history and in theory, 'triangular' relations in the organisation of paid work are by no means unprecedented. The strength of Marx's category of subsumption is that it can encompass forms of the labour–capital relationship both inside and outside the familiar binaries of formal employment. This approach can also encompass the social relations of platforms such as *Upwork*, where some element of triangularity is present alongside a developing labour–capital relation, as well as platforms like Uber, where any residual triangularity is strictly peripheral to the clearly established labour–capital relation and cash nexus. While the question of legal employment status is often important for platform workers and their organisations, the analysis outlined here focuses on social relations rather than legal forms. This rethinking situates platform work theoretically in the wider process of capital's reorganisation of production and exploitation of labour.

Although it has not been possible to elaborate this approach more fully, here, three areas for future development suggest themselves. First, Marx's account of subsumption and its transitional forms clearly indicate a continuum. An obvious next step, therefore, would be to specify such a continuum for platform work, encompassing those forms where a labour–capital relationship and cash nexus have been clearly established as a result of formal subsumption, and those more 'transitional' or intermediate forms, where there is some genuine element of triangularity. Second, rediscovering the cash nexus underlines the importance of pay in the labour–capital relations of platform work, both in controlling labour and in triggering resistance. There is a clear need for more research into the payment systems of platform work and their role in the dynamics of control and resistance. Third, there is considerable scope for integrating the dynamics of subsumption and the cash nexus into accounts of platform worker organisation and resistance. In short, enough with the triangles, already.

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Note

1. In recent years, the concept of subsumption has undergone something of a revival, with much discussion – some of it highly contentious – concerning forms of neoliberal domination. While these debates are beyond the scope of this article, fortunately they do not impinge noticeably on matters discussed here. For a critical overview of recent debates, see Smith (2013).

References

- Aloisi A (2014) Commoditized workers: Case study research on labor law issues arising from a set of 'on-demand/gig economy' platforms. *Comparative Labor Law and Policy Journal* 37(3): 653–690.
- Azzellini D, Greer I and Umney C (2019) Limits of the platform economy: Digitalization and marketization in live music. Working paper no. 154. Düsseldorf: Hans-Böckler-Stiftung. Available at: https://www.boeckler.de/pdf/p_fofoe_WP_154_2019.pdf

- Baldamus W (1961) *Efficiency and Effort: An Analysis of Industrial Administration*. London: Tavistock.
- Berg J (2016) *Income Security in the On-Demand Economy: Findings and Policy Lessons from a Survey of Crowdworkers*. Geneva: ILO.
- Brown W (1973) *Piecework Bargaining*. London: Heinemann Educational Publishers.
- Calo R and Rosenblat A (2017) The taking economy: Uber, information, and power. *Columbia Law Review* 117: 1623–1690. Available at: https://columbialawreview.org/wp-content/uploads/2017/10/Calo-Rosenblat_The-Taking-Economy.pdf
- Cant C (2019) *Riding for Deliveroo: Resistance in the New Economy*. Cambridge: Polity.
- Codagnone C and Martens B (2016) Scoping the sharing economy: Origins, definitions, impact and regulatory issues. JRC technical reports. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2783662
- Codagnone C, Biagi F and Abadie F (2016) The future of work in the ‘sharing economy’: Market efficiency and equitable opportunities or unfair precarisation? JRC science for policy report EUR 27913 EN. *Institute for Prospective Technological Studies*. Seville, Spain.
- Das RJ (2017) *Marxist Class Theory for a Skeptical World*. Chicago, IL: Haymarket.
- Drahokoupil J and Jepsen M (2017) The digital economy and its implications for labour. 1. The platform economy. *Transfer: European Review of Labour and Research* 23(2): 103–107.
- Edwards P (1986) *Conflict at Work: A Materialist Analysis of Workplace Relations*. Oxford: Basil Blackwell.
- Edwards P and Scullion H (1982) *The Social Organization of Industrial Conflict*. Oxford: Blackwell.
- European Commission (2016) *A European Agenda for the Collaborative Economy*. Brussels: European Commission.
- European Parliament (2017) *European Parliament Resolution of 15 June 2017 on a European Agenda for the Collaborative Economy (2017/2003(INI))*. Brussels: European Parliament. Available at: http://www.europarl.europa.eu/doceo/document/TA-8-2017-0271_EN.html?redirect
- Fabo B, Karanovic J and Dukova K (2017) In search of an adequate European policy response to the platform economy. *Transfer: European Review of Labour and Research* 23(2): 163–175.
- Farrell D and Greig F (2016) *Paychecks, Paydays, and the Online Platform Economy: Big Data on Income Volatility*. Washington, DC: JPMorgan Chase & Co. Institute.
- Fieseler C, Bucher E and Hoffmann CP (2017) Unfairness by design? The perceived fairness of digital labor on crowdworking platforms. *Journal of Business Ethics* 156: 987–1005.
- Gandini A (2018) Labour process theory and the gig economy. *Human Relations* 72(6): 1039–1056.
- Goldthorpe JH, Lockwood D, Bechhofer F, et al. (1968a) *The Affluent Worker: Industrial Attitudes and Behaviour* (Vol. 1). Cambridge: Cambridge University Press.
- Goldthorpe JH, Lockwood D, Bechhofer F, et al. (1968b) *The Affluent Worker: Political Attitudes and Behaviour* (Vol. 2). Cambridge: Cambridge University Press.
- Goldthorpe JH, Lockwood D, Bechhofer F, et al. (1969) *The Affluent Worker in the Class Structure* (Vol. 3). Cambridge: Cambridge University Press.
- Harris SD and Krueger AB (2015) A proposal for modernizing labor laws for twenty-first-century work: The ‘independent worker’. *Hamilton project discussion papers*. Available at: http://www.hamiltonproject.org/assets/files/modernizing_labor_laws_for_twenty_first_century_work_krueger_harris.pdf
- Huws U (2014) Expression and expropriation: The dialectics of autonomy and control in creative labor. In: Huws U (ed.) *Labor in the Global Digital Economy: The Cybertariat Comes of Age*. New York: New York University Press, pp. 101–125.

- Huws U (2015) Online labour exchanges, or 'crowdsourcing': Implications for occupational safety and health. *European Agency for Safety and Health at Work*. Available at: <https://osha.europa.eu/en/tools-and-publications/publications/future-work-crowdsourcing/view>
- Huws U (2017) Where did online platforms come from? The virtualization of work organization and the new policy challenges it raises. In: Meil P and Kirov V (eds) *Policy Implications of Virtual Work*. New York: Springer, pp. 29–48.
- Johnston H and Land-Kazlauskas C (2018) *Organizing On-Demand: Representation, Voice, and Collective Bargaining in the Gig Economy* (Conditions of Work and Employment Series 94). Geneva: ILO.
- Joyce S, Neumann D, Trappmann V, et al. (2020) *A Global Struggle: Worker Protest in the Platform Economy*. ETUI Policy Brief, 2/2020. Brussels: ETUI.
- Lehdonvirta V, Kässi O, Hjorth I, et al. (2019) The global platform economy: A new offshoring institution enabling emerging-economy microproviders. *Journal of Management* **45**(2): 567–599.
- Leighton P (2016) Professional self-employment, new power and the sharing economy: Some cautionary tales from Uber. *Journal of Management and Organization* **22**(6): 859–874.
- Littler C (1982) *Development of the Labor Process in Capitalist Societies*. London: Heinemann Educational Publishers.
- Lupton T (1963) *On the Shop Floor*. Oxford: Pergamon Press.
- McKenzie RT and Silver A (1968) *Angels in Marble: Working Class Conservatives in Urban England*. Chicago, IL: University of Chicago Press.
- Marx K (1990) *Capital: A Critique of Political Economy* (Vol. 1). London: Penguin Classics.
- Marx K and Engels F (1984) *Karl Marx Frederick Engels Collected Works* (Vol. 6). Moscow: Progress Publishers.
- Moore PV and Joyce S (2019) Black box or hidden abode? The expansion and exposure of platform work managerialism. *Review of International Political Economy*. Epub ahead of print 7 August. DOI: 10.1080/09692290.2019.1627569
- Rosenblat A (2018) *Uberland: How Algorithms Are Rewriting the Rules of Work*. Berkeley, CA: University of California Press.
- Roy D (1952) Quota restriction and goldbricking in a machine shop. *American Journal of Sociology* **57**(5): 427–442.
- Runciman WG (1966) *Relative Deprivation and Social Justice: A Study of Attitudes to Social Inequality in Twentieth-Century England*. Berkeley, CA: University of California Press.
- Schloss DF (1898) *Methods of Industrial Remuneration*. London: Williams and Norgate.
- Schmidt I (2017) Capital and the history of class struggle. In: Schmidt I and Fanelli C (eds) *Reading Capital Today: Marx After 150 Years*. London: Pluto, pp. 18–35.
- Schor J and Attwood-Charles W (2017) The 'sharing' economy: Labor, inequality, and social connection on for-profit platforms. *Sociology Compass* **11**(8): e12493.
- Schörpf P, Flecker J and Schönauer A (2017) On call for one's online reputation: Control and time in creative crowdwork. In: Briken K, Chillias S and Krzywdzinski M (eds) *The New Digital Workplace: How New Technologies Revolutionise Work*. London: Macmillan International Higher Education, pp. 89–111.
- Smith T (2013) The 'general intellect' in the Grundrisse and beyond. *Historical Materialism* **21**(4): 235–255.
- Stanford J (2017) The resurgence of gig work: Historical and theoretical perspectives. *Economic and Labour Relations Review* **28**(3): 382–401.
- Tassinari A and Maccarrone V (2017) The mobilisation of gig economy couriers in Italy: Some lessons for the trade union movement. *Transfer* **23**(3): 353–357.

- Vandaele K (2018) Will trade unions survive in the platform economy? *Emerging patterns of platform workers' collective voice and representation in Europe*. Working paper 2018.05. Brussels: ETUI.
- Vidal M (2018) Was Marx wrong about the working class? Reconsidering the gravedigger thesis. *International Socialism* 158: 65–80.
- Webb S and Webb B (1902) *Industrial Democracy*. London: Longman.
- Westergaard J (1970) The rediscovery of the cash nexus. *Socialist Register* 7: 111–138.
- Wood AJ, Graham M, Lehdonvirta V, et al. (2019) Good gig, bad gig: Autonomy and algorithmic control in the global gig economy. *Work, Employment and Society* 33(1): 56–75.
- Wood AJ, Lehdonvirta V and Graham M (2017) Workers of the Internet unite? Online freelancer organisation in six Asian and African countries. *New Technology, Work and Employment* 33(2): 95–112.
- Woodcock J (2018) Digital labour and workers' organization. In: Atzeni M and Ness I (eds) *Global Perspectives on Workers' and Labour Organizations*. Singapore: Springer, pp. 157–173.
- Woodcock J and Graham M (2019) *The Gig Economy: A Critical Introduction*. Cambridge: Polity.
- Woodcock J and Johnson MR (2018) Gamification: What it is, and how to fight it. *Sociological Review* 66(3): 542–558.

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