



# Virtue Signaling: Problematizing Creative Labor Within Knowledge Socialism

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## Abstract

This article argues that current scholarship inappropriately utilizes ‘virtue signaling’ to elicit a subjectivist form of de-valorized creative labor within knowledge socialism as a philosophy of praxis. Moreover, it argues that within institutionalized higher education (HE) contexts, knowledge socialism should be reoriented toward the promotion of prosocial-entrepreneurial ‘transitional ecosystems’ of commons-based peer production (CBPP). This sociomaterialist repositioning will outline a path forward for knowledge socialism which better understands, elicits, and valorizes the inherently prosocial-entrepreneurial creative labor contributions of precariously positioned academics within contemporary HE. In order to accomplish this aim, this article first underlines several fundamental concepts (commons-based peer production, collective intelligence, creative labor) before moving on to a more pointed philosophical discussion and critique of these concepts as underlying assumptions within knowledge socialism. Lastly, this article provides an operaismo-based reflexive inquiry into the interplay between the theory of knowledge socialism as experienced in practice within the China HE context, contributing to the development of non-exploitative knowledge cultures within CBPP creative labor processes.

**Keywords** Knowledge socialism · Knowledge cultures · Collective intelligence · Commons-based peer production · Postdigital · Philosophy of education · Praxis

## Knowledge Socialism as a Philosophy of Praxis

Knowledge socialism is a philosophy of praxis which aims to develop an open political economy of knowledge based in collegiality, collective intelligence, and the peer production of knowledge as an irreducible public good. Specifically, Gibbons et al. frame knowledge socialism as a theory of collaboration, sharing, and openness

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whose peer to peer (P2P) editing, writing, and publishing practices represent a ‘philosophy of praxis’ in service to both its practitioners and the public good (2020: 315). Past works have foreground knowledge socialism as a sociality driven by a radically open virtuous community of inquiry which adheres to an ethics of sharing and collaboration (Peters 2019). In this light, knowledge socialism has sought to problematize the Eurocentric discourse of the individual author as supportive of the problematic, norms, values, and institutions under which it was created (Peters et al. 2019). Further, Peters et al. (2020a, b, c, d) have utilized an *Autonomista* (Negri, Lazzarato) approach within knowledge socialism to reconceptualize creative labor as an alternative to human capital within the capitalist knowledge economy. However, Gibbons et al. call into question whether knowledge socialism’s reliance on the increasingly hidden creative labor of exploited and disenfranchised academics might serve to further this exploitation in kind (2020). This issue underscores the contradictions and tensions which exist between the emancipatory aims of knowledge socialism and the social relations of the neoliberal academic paradigm (publishers, universities, ranking agencies, etc.), tensions which highlight knowledge socialism’s current embeddedness within the avaricious social relations of knowledge capitalism. Thusly, while the ‘socialism’ of knowledge socialism is based upon collaboration within a virtuous community of inquiry, the question of how to appropriately impel and valorize the labor contributions of individual authors represents a fundamental concern for knowledge socialism’s socialist-capitalist political economy of knowledge. Specifically, the authors ask: ‘How do we make sense of one individual academic’s significant contribution when that contribution is to challenge the very idea of the individuality of contribution?’ (Gibbons et al. 2020: 302). This tension between revolutionary thought, and the material conditions which it seeks to overturn, has led to the conclusion that knowledge socialism requires further pedagogical development through critical inquiry within the institutionalized higher education (HE) context (Jandrić 2020; Carmichael 2020; Jandrić and Ford 2020).

As noted by Neilson (2020), within the broader context of the capitalist knowledge economy, the commodification of the academy entails an intimately connected process of ‘material-immaterial commodification’ which encompasses the material conditions of production as well as the immaterial knowledge, information, and discourse produced therein. This understanding of the institutionalized HE context should serve to more accurately frame the precarious nature of knowledge socialism as an emancipatory ‘social justice’ (Peters et al. 2021) project for individual and collective social change. Specifically, contemporary scholarship has not yet established how the developing political economy of knowledge socialism intends to foment a non-exploitative means of incentivizing necessary academic volunteerism while adequately valorizing creative labor contributions. Thusly, the main question this article seeks to answer is the most pressing. According to its current praxis, exactly what does a political economy of knowledge look like under knowledge socialism? Answering this question would go a long way toward ensuring that the philosophical underpinnings of knowledge socialism effect non-proletarianizing collaborative practices, improving rather than weighing upon the material lot of academics struggling within and against their own commodification within the neoliberal academy. Toward this end, the article outlines several core facets of knowledge

socialism's developing political economy of knowledge, as understood through a review of commons-based-peer-production (CBPP), creative labor, and collective intelligence. This review allows for a more pointed critique of knowledge socialism's elicitation of virtue-signaled creative labor as a notably problematic philosophical precept. This critique is followed by an experiential accounting of pro-social-entrepreneurial creative laboring, and the positing of a transitional path forward for the political economy of knowledge socialism.

## Commons-Based Peer Production: Upending the Tragedy of the Commons

The commodified state of knowledge within the capitalist knowledge economy is understood within knowledge socialism to represent a contemporary tragedy of the knowledge commons. Hardin (1968) defines the 'tragedy of the commons' as an unfettered pursuit of rational self-interest which leads to the invariable ruination of common resources within societies which allow for such pursuit. Ostrom further outlines that the tragedy of the commons is indicative of human beings' rational desire to maximize self-interest, driving competition for and ultimately leading to the depletion of scarce natural resources (1990). Hess and Ostrom (2007) further state that the term *commons* is a general term which may refer to any number of resources shared by a group of people, noting its more recent use as a catch-all buzzword to describe decentralized digital information (production/consumption) contexts. Most notably, the authors highlight that knowledge represents a 'common-pool resource' which, while prone to commodification, is fundamentally irreducible (Hess and Ostrom 2007). Within the context of knowledge production/consumption based in digitally networked commons, Benkler's (2006) *The Wealth of Networks* provides a seminal definition of 'commons-based-peer-production' (CBPP):

It suggests that the networked environment makes possible a new modality of organizing production: radically decentralized, collaborative, and nonproprietary; based on sharing resources and outputs among widely distributed, loosely connected individuals who cooperate with each other without relying on either market signals or managerial commands. This is what I call 'commons-based peer production.' (Benkler 2006: 60)

Benkler's definition of CBPP is presented in two measures. The first concerns the notion of *commons-based*. Benkler states that the inputs and outputs of 'commons-based' cooperative enterprises are not built around the asymmetric exclusion typical of property, but rather, are shared freely or conditionally within an institutional form that allows for equal use based on individual discretion (2006: 62). The second measure concerns the notion of *peer-production*. Benkler further states that the term 'peer-production', within common-based production practices, refers to systems of production that are dependent upon decentralized, self-selected individual action (2006: 62). Benkler and Nissenbaum's *Commons-based Peer Production and Virtue\** (2006) further elaborates that individual motivation toward pro-social

volunteerism within CBPP practices are often guided by a virtuous desire for positive social relations rather than economic (material) incentives. Specifically, the authors frame Charles Taylor's virtue of 'liberation' as a benchmark of commons-based personal ethics (volunteerism, free-spiritedness, self-directed autonomy), while also alluding to a moralistic 'virtuousness' based in generosity, benevolence and camaraderie as characteristic of those engaging in 'open-hearted' contribution to the commons (Benkler and Nissenbaum 2006). Reflecting a more pragmatic understanding of virtue within networked CBPP practices, von Krogh et al. (2012) provide an analysis of the complex intrinsic/extrinsic individual motivations behind pro-social open source software (OSS) contributions. Specifically, in highlighting the virtuous ethical precedents which underlie CBPP processes, the authors utilize MacIntyre's *After Virtue* (1981) to provide a notion of social practice which posits that alongside the creation of *external goods*—as individual/institutional property (status, power, capital), social practice produces *internal goods* (public goods) that benefit the wider community and humanity at large. In this light, the authors note the congruence between OSS contributions and the creation of knowledge by the scientific community. Specifically, the authors position scientific knowledge as an internal good produced by the scientific community for the benefit of all, with status, salary, and power of expertise representing the external goods won by the individual after a hard-fought commitment to that community's ethical standards and practice-based virtues (see the authors' specific citing of unpaid academic labor) (Krogh et al. 2012).

Contributing to the production/consumption of both external and internal goods, the understanding that virtuous voluntary laboring within the CBBP process is based in a complex mix of intrinsic/extrinsic motivating factors is expressed more clearly within *The Commons Manifesto* by Bauwens et al. (2019). However, the same may not be said for contemporary scholarship surrounding knowledge socialism, which remains rooted to an understanding of CBPP as a collective production/consumption process based unduly in utopic rhetorical concepts of openness, collegiality, and the virtuous responsibility/desire to volunteer one's creative labor (Peters et al. 2021).

Knowledge socialism is centered around a foundational concern for shifting 'late phase info-tech digital capitalism' (Peters 2020a) toward a 'scarcity defying' (Olssen and Peters 2005) political economy which holds knowledge to be an irreducible public good. In the face of neoliberalism, privatization, and the monopolization of knowledge, knowledge socialism aims to utilize the virtuous ethics of volunteerism framed within digitally networked CBPP processes to establish an alternative 'social democratic' knowledge economy (Peters et al. 2020b) based in a radically open, virtuous 'logic of the public' (Peters 2013). Furthermore, Peters (2020a) states that digital information goods produced through non-rivalrous CBPP production/consumption processes represent symbolic public goods which have the potential to upend traditional economic assumptions of rivalry and excludability. Drawing heavily on Lyotard's *Postmodern Condition* (1984) as a critique of the commodification of knowledge, knowledge socialism aims to unlock the innovative potential of CBPP processes within the digital networked sphere as a means to create knowledge for the public good (Peters 2019). Thus, within a Marxist critique of the neoliberal knowledge

economy, knowledge socialism evinces the desire to usher forth a radically open knowledge economy as based within a virtuous ethic of collaborative voluntary labor contributions as the core productive fulcrum of digitally networked CBPP practices.

By positioning ‘the virtues of openness’ (Peters 2019) as foundational to its alternative political economy of knowledge, knowledge socialism reflects a desire to overcome Lyotard’s postmodern condition and undo our current cognitive tragedy of the commons. However, within this scholarly attempt to affect a revolutionary praxis driven by virtuous CBPP creative laboring, scholars continue to highlight the inherent challenges in presenting utopic cognitive projects such as knowledge socialism within this historic postdigital era (see *postdigital*). Borschke highlights that within the metaphors used to describe CBPP ‘there exists a tension at the heart of theorization’—between a belief in personal and social virtues and the pragmatism which frames CBPP as a more efficient form of production (2021). The author further notes that this tension is visible within ‘utopian rhetoric’ which may serve to mask ethical concerns for agency, property, privacy, and collective rights (Borschke 2021). Thus, Jandrić and Ford (2020) highlight the need to develop new ‘utopias’ (pedagogical, political, and organizational experiments with sociality)—revolutionary forms of praxis—which develop sustainable and just ways of being that account for and resist capitalist, imperialist and techno-deterministic forms of exploitation.

## Knowledge Cultures: Collective Intelligence and Creative Labor

Within the overriding theoretical conceptualization of knowledge socialism and its practice, creative labor rather than human capital is positioned as the core of collective intelligence (CI) (Gibbons et al. 2020). In an interview with Michael Peters,<sup>1</sup> Pierre Lévy outlines a definitive understanding of CI within the digital information age as the opposite of artificial intelligence: ‘It is a way to grow a renewed human/cultural cognitive system by exploiting our increasing computing power and our ubiquitous memory.’ (Peters 2015) This notion of CI, as a direct rival to artificial intelligence, belies an earlier (Internet age) concern with augmenting rather than replacing human intelligence (Halpin and Monnin 2014). Specifically, this view is understood through cognitive extension thinking, wherein ‘biological brains and bio-external scaffoldings work together as integrated processing ensembles which extend cognition into the world’ (Halpin and Monnin 2014: 24).

However, Peters et al. (2018) have highlighted that the non-hierarchical, distributive and collective ‘open’ framework of Internet communication technologies (ICT)s, which once held the hope of catalyzing an age of ‘radically open’ collective knowledge, have continuously been used to develop, maintain, and expand closures’, which limit the emancipatory potential of knowledge as a public good. Highlighting Lyotard’s postmodern innovation/commodification paradox once

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<sup>1</sup> Described as the ‘primer inter pares’ of the knowledge socialism community within Peters et al. (2021).

more, Unger (2019) explains that while the technologically and entrepreneurially advanced production practices of the knowledge economy have spread to all major economies of the world, its inherent transformative benefits continue to be restricted by elite ‘insular vanguards’ who confine the knowledge economy and stagnate innovation as they consolidate their market positions.

Peters et al. (2018) speak to a more specific institutionalized HE context, stating that the restriction and confinement of knowledge may be witnessed within the presence of journalistic paywalls which limit access to academic articles and the wealth of knowledge therein as a public good, to fee-paying students and faculty. In his interview with Jandrić, Peters provides an essential accounting of *knowledge cultures* as an attempt to ‘drive a wedge between the economy and society’ through epistemic communities of inquiry whose ‘radically open co(labor)ation’ evinces that knowledge is rooted in social relations rather than human capital (Jandrić 2017: 51). Within a greater historic program aimed at the emancipation of human knowledge, Peters et al. (2018, 2020b) have further outlined the concept of knowledge cultures, as a flat, non-hierarchical sociality which utilizes CBPP as a model of CI based in the open and free exchange of ideas. However, Bauwens et al. state that ‘P2P logic is improbable at the front end if the back end is under exclusive control and ownership’ (2019: 36). Analogous to this understanding of user-oriented techno-social P2P systems, current CBPP processes within institutionalized educational contexts (specifically collective writing for publication) represent front-end processes of CI (open, decentralized collaboration) that are regulated and appropriated by the back end (opaque, restrictive academic publishing regimes) of neoliberal HE.

Nevertheless, Peters has put forth an approach to CI based in the concept of creative labor (as opposed to human capital) as the philosophical core of the ‘creative university’—a university model based on the political economy of radical openness (2019). A desire to create such a university mirrors Illich’s call for a convivial institutionalized framework of HE based in action, participation, and self-help rather than in service to the technocratic commodification of humankind (1972). Peters has stated that creative labor (co-creation, co-production/peer production) constitutes the backbone of commons-oriented CI within knowledge cultures as a new radically open sociality of knowledge (Peters 2019). However, as previously noted, knowledge socialism’s problematic philosophical framing of creative labor requires a more careful unpacking from the perspective of those laboring within knowledge socialism’s stratified socialist-capitalist political economy. The previous sections have outlined that the praxis of knowledge socialism aims to foment a political economy of knowledge socialism that is driven by the production/consumption process of CBPP as an open/decentralized, digitally networked collaborative process of CI borne from virtuous creative labor contributions. Moving forward, the following section will outline that much scholarship surrounding knowledge socialism evinces a continued overreliance on normative virtue signaling as the unproblematized philosophical core of knowledge socialism.

## Virtue Signaling: Subjugation of the Individual Within the Virtuous Collective

To be clear, virtue signaling is a pejorative used to describe a disingenuous expression of moral values for the purpose of enhancing one's own image (Wikimedia Foundation 2020). Within this context, I use the term *virtue signaling* to highlight and frame my critique of 'virtuousness' within knowledge socialism as a normative rhetorical device which allows for the unproblematized elicitation, subjectification, and de-valorization of 'free' creative labor. Moreover, I argue that knowledge socialism's reliance on a problematic notion of creative labor, as the foundation of CI, is incongruously married to a utopic understanding of contemporary scholastic pursuit which stretches thin its Marxist philosophical heritage. As stated by Luke (2020: 61), 'perverse problems' may arise within the seemingly democratic, liberatory, socialist P2P foundations of a knowledge socialism that functions inextricably within the workings of global capitalism. Specifically, I contend that knowledge socialism's most notable flaw lies in its overreliance on moralizing/virtuous 'obligatory volunteerism' (a term not unfamiliar to those who might have been 'volunteered' for less savory janitorial assignments throughout their military service)—a captive appeal to 'duty' which resembles the 'rule through debt' kleptocracy that knowledge socialism aims to undo.

Moulier-Boutang (2012) succinctly defines the division of labor within cognitive capitalism, i.e., knowledge capitalism as the cooperation of brains working on a digital web of interconnected computers to produce non-rivalrous, non-excludable knowledge which is then quickly regulated by a monopoly of exploitation based in patents, trademarks and copyrights. Perversely, the production of fettered CI within knowledge capitalism may also serve to highlight knowledge socialism's underlying open front end/closed back end production/consumption context. Specifically, Gibbons et al. (2020: 307) note that were it not for managerial capitalist forces which disrupt the material conditions of knowledge workers (striving toward 'knowledge for knowledge's sake'), the ideal of knowledge work as an inherently unselfish creative collective/collaborative 'workless' laboring might otherwise reign supreme. As an example of this notion of worklessness, the recent editorial titled 'Collective writing: introspective reflections on current experience' (Arndt et al. 2020) asks its contributors to 'look within' as a means to develop a more holistic understanding of what creative labor means to those volunteering their individual services to the cause of CI. The authors describe the act of collective writing as a tension between work and worklessness, a pedagogy of unselfishness, a self-inflicted duty and obligation, a creative synergy within new forms of corporeality which challenges the imperialistic relationship between self and other inherent to traditional academic writing (Arndt et al. 2020). To put this squarely in Marxist terms, despite the fact that cognitive labor within contemporary HE continues to exist within what Marx would call the 'realm of necessity' (Sayers 2011), knowledge socialism currently frames, elicits and utilizes creative labor to usher forth an end-stage utopian political economy of knowledge, wherein work—as humanity's truest expression of artistic freedom, transcends physical and material need (Sayers 2011).

In plain terms, the current expression of knowledge socialism's political economy of knowledge effects radically open collaborative processes, driven by volunteer creative labor, which is then funneled into the closed back end of institutionalized knowledge commodification. This understanding has been expressed clearly by Peters et al. (2021) who state that the process of collective writing aims to promote 'innovation in academic publishing on the academic side rather than the production side' (2021). However, it is disingenuous to believe that front end processes of creative collective laboring can be disassociated from the back end commodification of knowledge. If this point is still not clear, consider the fact that authors of academic research articles are barred (through copyright agreement) by academic publishers from sharing their work as they had like. And more pointedly, consider that the edited volumes<sup>2,3</sup> produced by such virtuously open front end efforts within knowledge socialism are often fettered by rapaciously inaccessible paywalls on the back end. In this way, knowledge socialism fails to engage academic laborers with the core tenant of CBPP, which is that user generated content should be freely utilized by those engaged in its productive process, and that these efforts should be open to the public at large. It is important to note that recent attempts have been made to rectify this oversight, with the positioning of smaller, less lucrative open access journals providing a more legitimizing commitment to open front end/back end CBPP driven political economy of knowledge (Peters et al. 2021). Perhaps more critical than the previous oversight, is the fact that within this primarily open/closed political economy of knowledge, knowledge socialism aims to subjectivize individual labor contributions within the virtuous collective. Yet another collective piece, 'Philosophy of Education in a new Key: A collective project of the PESA Executive' (Peters et al. 2020a), further develops the notion of CI to include 'collective intentionality, collective responsibility and collective action' as a means to dissolve the binaries between self and other ('we're in this together'), a drive toward 're-collectivization' as a counter to the divisive individualism of contemporary educational settings. Moreover, scholars position CI within knowledge socialism as borne of the collective intentionality, responsibility and action witnessed within the 'unselfish' creative labor of 'we intellectuals' (Lévy 2020) who voluntarily engage (self-select) with the pedagogy/methodology of collective writing as a prosocial obligation or responsibility toward the public good (Peters et al. 2021).

In framing creative labor as the work of Marxist 'social individuals' (whose work is so satisfying it will be done for its own sake), knowledge socialism's understanding of creative labor hinges on the volunteerism of a mythical 'post-scarcity creative class' (Brouillette 2009). Moreover, in subjectivizing the academic within a virtuous collective—wherein they continue to carry the modes of production within them (human capital), they are also further 'proletarianized' through an onus (responsibility) to volunteer their 'unacknowledged and devalued' creative labor (McCarthy and

<sup>2</sup> See <https://www.springer.com/gp/book/9789811381256>. Accessed 16 April 2021.

<sup>3</sup> See <https://www.routledge.com/The-Methodology-and-Philosophy-of-Collective-Writing-An-Educational-Philosophy/Peters-Besley-Tesar-Jackson-Jandric-Arndt-Sturm/p/book/9780367775803>. Accessed 16 April 2021.



Song 2016). Rather than representing a ‘care-free’ creative class, academics within the field of institutionalized HE labor tirelessly within a prosocial-entrepreneurial political economy which demands of them an ever-increasing amount of hidden labor. Peters et al. (2021) have stated that the praxis of knowledge socialism adheres to an Aristotelian ethical mindfulness toward the oppressed and not the oppressor, with a specific concern for financial stability rather than the financialization of knowledge. However, the use of virtue signaling to elicit collectively subjectivized creative labor from precariously positioned academics (developing country, gender, minority, early-career, children, etc.) evinces otherwise, highlighting a potentially exploitative flaw within knowledge socialism as a philosophy of praxis. I would like to add here that the notion of the ‘entrepreneur’ within HE is meant to reflect Peters and Besley’s (2009) understanding of entrepreneurship as change-based ‘teamwork and other forms of collaboration embedded within networks and systems’ (75).

Indicative of this understanding of entrepreneurship, many upstart scholars, myself included, cherish the opportunity to pool our labor with other prosocial-oriented scholars toward an overthrowing of the neoliberal capitalist system. However, this propensity for prosocial volunteerism should be understood within an entrepreneurial desire and/or need to succeed within a neoliberal context. Thus, as a contested concept within knowledge socialism, creative labor (rather than cognitive labor/human capital) should be repositioned as more than just a moralizing call toward a self-exploitative prosocial ‘duty’ within the virtuous collective. Specifically, as a core philosophical tenet, knowledge socialism’s conceptualization of creative labor must adequately valorize and appropriately impel volunteerism from a precariously situated prosocial-entrepreneurial academic class. Such a stance would contribute greatly to the development of a political economy of knowledge which negates the neoliberal postulate that self-interest and the common good are antithetical to one another (Olssen 2020).

## **Is Knowledge Socialism Promoting a (Self)-Exploitative Ethic of CBPP Creative Labor?**

Precariousness, hyperexploitation, mobility, and hierarchy are the most obvious characteristics of metropolitan immaterial labor. Behind the label of the independent ‘self-employed’ worker, what we actually find is an intellectual proletarian, but who is recognized as such only by the employers who exploit him or her. It is worth noting that in this kind of working existence it becomes increasingly difficult to distinguish leisure time from work time. In a sense, life becomes inseparable from work. (Lazzarato 1996:136-137)

Much has been written about both the neoliberalization of the academy and the casualization of the academic profession. While the vanishing career stability of academics (myth of the tenure track position) continues to sound alarms within public discourse, the vision of higher education as expressed in performance data, and strategic university vision statements remains disconnected from the practical experiences of a growing number of academics fighting to hold on to short-term, sessional

academic work (Hall and Bowles 2016). Further the recent global pandemic has further blurred the lines between work and home life, with universities calling on tenuously positioned faculty members to devote ever more time to developing ‘quality online content while simultaneously being at risk of mandatory furloughs and decreased material gain (Anwer 2020). Within this context, knowledge socialism’s reliance on a virtuous ethos to elicit the volunteerism of creative labor within a post-scarcity creative class, supports Brienza’s (2016) argument that HE represents a continued site of precarious/creative labor exploitation/self-exploitation.

Brienza (2016) argues that academic work is akin to cultural work in both ideology (valorization of knowledge and creative expression) and its contentious relationship to capitalism, and as such ‘learning to labor’ within the neoliberal university requires a ready acquiescence to exploitation and a willingness to self-exploit. This notion has already been clearly expressed within an aforementioned collective piece. Wherein, one author highlights specifically the anguish and anxiety experienced by many academics attempting to write for publication. The author explains that an invitation to contribute to a collective piece ‘became twisted in my mind into a self-inflicted duty and obligation’ which eventually resigned into a committed desire to contribute to a collective ‘*esprit de corps*’ (Arndt et al. 2020). Another author reflects on the fact that ‘writing does not come easy to me. It is a laborious process’ (Arndt et al. 2020). While clearly stating that the process of collective writing is a pleasure, they provide a tangible reference toward the creative labor process entailed within collective writing as the foundation of CI within knowledge socialism: ‘Editing the work and writing of 10 philosophers of education nears the impossibility of possibilities; deciding on the order of things, the flow of the argument, the methodology of collective thinking.’ (Arndt et al. 2020)

Within institutionalized HE, labor power (as the creativity and expenditure of human labor) represents a critical dynamic commodity that is valorized through academic products (teaching, grading, reviewing, editing, etc.) and research outputs (scholarly publications) which are both useful in and of themselves but also may generate new forms of exchange or profit in a market (Hall and Bowles 2016). This understanding brings our discussion back to Lazzarato who describes that while immaterial labor is defined as the labor which produces the informational and cultural content of the commodity, it involves a series of activities that are not normally recognized as ‘work’ (hidden labor) (1996). Hinz et al. (2020) outline that academia represents an ‘attention economy’ rich in information (scholarly publications) but limited in the resource which it consumes (the attention of peer researchers). Hall’s *The Uberfication of the University* describes the ‘reputation economy’ within institutionalized HE as a career trajectory (tenure, promotion, chair) that requires constant self-monitoring, self-assessment and self-comparison (self-scrutiny/self-exploitation) to the point that ‘many academics suffer from stress, anxiety, loneliness, psychological exhaustion, depression and distress’ (2016: 47).

Jandrić et al. (2018) note that the current ‘crisis of academic publishing’ (Peters et al. 2016) is marked by a dearth of reflexivity toward consequences (ethical, epistemic) which have arisen as a result of our contemporary postdigital ‘mashup of human and non-human activity’, allowing for the perpetuation of a techno-deterministic lens of instrumentally efficient academic labor which further marginalizes and dehumanizes

the academic creative laborer. Within the problematic postdigital relationship between technology, the creative laborer and the neoliberal knowledge economy, the notion of CI has been utilized to effect non-hierarchical patterns of work relations that encourage creativity, team-working, the sharing of information and knowledge toward successful innovations (Avis 2002). However, Terranova highlights that the foundations of CI are built within a ‘social factory’ which glamorizes, enjoys and exploits the ‘free’ (voluntary, unaged) creative cultural and technical work of immaterial labor (2000).

It is important to note here that Olssen (2020), in seeking to revitalize the notion of the public good, states that the construction of ethics need not fall prey to moralizing transcendentalism, requiring only self-attendance, the continuation of life, and avoidance of self-harm. However, academics within knowledge socialism are being tasked with self/exploitation through a moralizing call to de-value the individual contributions of their immaterial creative labor—a collectivist self-immolation (within the aforementioned attention/reputation economy) of sorts which will (ostensibly) benefit the overall public good. Specifically, Peters et al. (2019) draw heavily on Foucault within their call for scholars to engage with the ‘experiment of collective writing’ as an exercise in ‘subjectification’—shifting away from individualist notions of authorship and claims to knowledge as a means of reconstructing oneself toward a collective liberation project. Gildersleeve (2016) notes that Foucault has labeled four technologies of biopolitics/biopower: hyper-individualism, hyper-surveillance, economic determinants of productivity, and competitive entrepreneurialism. Gildersleeve (2016) further notes that these technologies are evinced within neoliberal higher education, requiring an academic subjectivity based in an ethics of competitive entrepreneurialism and individual performativity.

Thusly, the call by Peters et al. (2019, 2020a) for the re-collectivization of individual authorship (as an experiment in collective subjectivity) seems to be aimed at affecting the establishment of a political economy of knowledge which counters technologies of neoliberal biopolitics/biopower within the field of higher education. As evinced within these works, the authors can be assured that this call is currently being answered. Specifically, the author of a section titled ‘Worklessness, within ‘Collective writing: introspective reflections on current experience’ (Arndt et al. 2020), details a desire to cast aside feelings of ‘self-sufficiency’, ‘individual identity’, and a sense of ‘self-possessiveness’—a worklessness they conceptualize as a form of collective intentionality toward the piece as a whole rather than self-satisfaction toward their individual contribution. Peters et al. (2019) are careful to note that this continued experiment in collective subjectivity will require constant renegotiation on the path toward an ‘even playing field’. However, within both cognitive capitalism’s exploitation of immaterial labor, and the self-exploitation/inhabited precariousness of the neoliberal academic, it is difficult to understand knowledge socialism’s ‘nameless virtuous academic’ without paralleling Lazzarato’s description of the postindustrial hyper-exploited precarious intellectual worker (1996).

Lazzarato (1996) highlights that the post-Taylorist immaterial labor cycle requires that notions of the individual ‘author’ must lose their individualist dimension and be oriented toward the economic process of organized intellectual activity. Therefore, knowledge socialism’s concept of collective subjectivity (‘become subjects’) echoes Lazzarato’s description of the precarious postindustrial worker—bound to a productive

subjectivity (cooperation, collective coordination) rooted in the struggle against Fordist notions of work, and more recently, cultural self-valorization (1996). This ‘struggle against work’ positions creative immaterial labor within a joyful, virtuous ‘worklessness’ which allows the ‘nurturing, exhaustion, and exploitation’ of a self-sacrificing, self-motivating labor force who freely offer their immaterial labor because it is a non-laborious pleasure or moral compulsion (Terranova 2000; Brouillette 2009).

Peters (2020b) claims that through the Autonomist school, he has attempted to marry Marx and Foucault by focusing on the question of digital labor within cognitive capitalism’s transforming labor/capital relationship. He evinces this concern by lamenting the fact that income is being decoupled from education and work, even while labor within the knowledge economy is increasingly framed as the source of creative value. If redressing the exploitation of cognitive labor is of primary concern, why is knowledge socialism eliciting the volunteerism of creative academic labor within a moralizing call for de-valorized/subjectivized collective anonymity?

It seems evident that attempting such a historic project of collectivist liberation based in these efforts may continue to function within the current neoliberal climate to further alienate the academic from their individual labor contributions. To be clear, this critique understands these flaws to be critical but not fatal to the future of knowledge socialism as a philosophy of praxis. Specifically, Bauwens et al. (2019) highlight that there need not exist a dichotomy between the extractive neoliberal notion of the entrepreneur and a more emancipatory Marxist understanding of the social entrepreneur as both generative and extractive within a CBPP political economic context. Specifically, Michel Bauwens, in a recent interview with Petar Jandrić, outlines that within the capitalist system, corporations like Google, Facebook, Uber, Airbnb, etc. co-opt the commons (free exchange of information between citizens) to extract surplus value (Bauwens and Jandrić 2021). With this understanding, Bauwens proffers the notion of ‘reverse co-optation’ as a mode of thinking aimed at using the market and the state to generate value for both the commons and commoners—a way to translate capital into commons through a ‘transvestment’ process which transforms one value into another (Bauwens and Jandrić 2021). The following will highlight the implications of this critique for the future theoretical, philosophical and practical development of knowledge socialism within the field of higher education.

## A Sociomaterialist Critical Praxis of Knowledge Socialism

Expressed through various neologisms, Braidotti outlines that the diverse field of posthuman scholarship reflects a concerted effort to recognize the important roles played by ‘in/non/posthuman actors and objects of study’ within ‘posthuman knowledge production’ (2019: 168). Representing such a neologism, *postdigital* is a term which underscores the need for humanity to reflect upon the vast implications of its increasingly complex relationship with digital technologies—a drive to understand and ‘hold to account’ human-technology associations (Jandrić et al. 2018; Knox 2019). Sociomateriality is a poststructural/posthumanist theoretical framework which takes practice as the unit of analysis when attempting to understand

social organization/ordering(s), allowing for an understanding of the ‘social’ as the outcome of interactions between human and non-human elements (de Moura and de Souza Bispo 2019). In light of this understanding, Jandrić (2020) proffers that the theorization of knowledge socialism requires a sociomaterialist engagement with the messy and unpredictable spaces of our contemporary postdigital reality, entailing the avoidance of dualistic or oppositional approaches such as knowledge capitalism vs. knowledge socialism, or *homo economicus* vs. *homo collaborans*, etc. This sentiment is reflected within the work of Bauwens et al. (2019), who update Benkler’s (2006) notion of networked CI by noting that peer production currently represents a ‘prototype’ for an emerging mode of production that is still tied to a material dependence with capitalism. Moreover, Bauwens et al. (2019) are careful to note that contributions to the commons often represent the entrepreneurial activities of those aiming to secure their own ‘lively-hood’ in the process. To put this into context, the field of HE may still represent a professional ‘cultural class’ within the knowledge economy, one which most are drawn to for immaterial rather than material gain. However, while prestige, esteem, and the desire to contribute ‘meaningful work’ toward the common good loom large within the psyche of most academics (Victorino et al. 2018)—material concerns remain ever-present.

In holding onto hope that technology can affect non-capitalist ecologies of unfettered (open) knowledge and civic discourse (Jandrić 2017: 35), we must remain acutely vigilant against developing moralizing ‘digital logics’ (virtuous, open, networked, efficient) which take for granted the individual human cost and complex motivations inherent to creative immaterial labor. Specifically, knowledge socialism must affect a transition to a knowledge economy which elicits both virtuous prosocial volunteerism, while remaining firmly rooted to a sociomaterialist (rather than utopian techno-deterministic) concern for the individual welfare of academics who contribute their creative labor toward the benefit of the commons. Central to any developing alternative political economy of knowledge, Bauwens et al. (2019) note the need for a core commitment to *lively-hood* as ‘the good life’, i.e., the ‘thrivability’ of its commoners (2019: 17). This sociomaterialist understanding of the importance of ‘good living’ is also expressed clearly by Olssen who alludes to the necessary incorporation of ‘self-interested’ developmental values within knowledge socialism which promote the concern for human survival and well-being (2020: 169). This understanding highlights that the philosophical foundations of knowledge socialism must be open to augmentation from a sociomaterialist understanding of individual creative laboring toward the public good. However, what exactly does a sociomaterialist perspective entail, and how does it benefit our current discussion surrounding the knowledge socialism’s problematic notion of creative labor? It may be said that Lazzarato (1996) advances a sociomaterialist theory of the immaterial labor cycle which holds that the meaning of ‘productive’ (meaningfulness of work, valorization) is directly borne out of the relationship between ‘author-work-audience’. Bauwens et al. (2019) further note that notions of economic freedom, openness and excellence function within the digital commons to propagate a false narrative of the ‘Schumpeterian quasi-heroic entrepreneur’ which serves as a ‘smokescreen for precarity and self-exploitation’.

This sociomaterialist understanding is further extended within a study conducted by Symon and Whiting surrounding the notion of labor and the digital social

entrepreneur. The authors highlight that a personal understanding of ‘meaningful work’ arises from a complex negotiation between the material (digital technology), the self (intent, agency, emotion, values, beliefs), and others (social norms, institutional pressures, organizational structures) (Symon and Whiting 2018). The authors further this argument by positing that social entrepreneurs (those who find meaning in their work through its relation to the creation of social value) are simultaneously driven and disempowered by the self-sacrificing ‘hero trope’ ideal-type, wherein both the practice and meaningfulness of work is culturally constructed within a discourse of moral and emotional ‘responsibilization’ (Symon and Whiting 2018).

In this light, knowledge socialism’s construction of creative labor within a virtuous ‘ideal type’ (virtuous scholar, self-sacrificing hero) of ethical responsabilization, may serve to further disempower and distance the academic social entrepreneur from a more personally meaningful form of labor practice. Therefore, knowledge socialism’s ‘authorless’ and ‘workless’ conceptualization of creative labor reflects an ‘exaggerated and false human significance’ (Sayers 2011) within a dematerialist<sup>4</sup> philosophical vacuum of unfettered yet meaningless human expression. In this way, knowledge socialism’s overly ‘techno-deterministic’ approach to creative labor represents a post-scarcity vision of current immaterial laboring which fails to deliver ‘any real detail’ about the material plight of creative laborers within its transition political economy of knowledge (Bauwens et al. 2019).

However, knowledge socialism needs not continue to suffer within a dichotomous notion of creative labor. Rather than avoiding the economic determinants which frame its current socialist-capitalist relationship to the cognitive economy, its praxis should aim to provide a material foundation of support for increased social entrepreneurialism. Within CBPP processes, Bauwens et al. (2019) express the need to develop new techno-social solutions which crystalize new socially embedded notions of value, using generative market practices that captures capital and uses it for the emancipatory development of financially stable and independent ‘commonsers’. The authors outline several models (Sensorica,<sup>5</sup> FarmHack,<sup>6</sup> and WikiHouse<sup>7</sup>) of commons-oriented practice which simultaneously develop the commons while providing lively-hood opportunities that allow those involved to devote more creative energy toward commons-based productive processes. The crux of their work centers around the understanding that the proliferation and promotion of commons-based technologies and commons-oriented practices should center around building an emancipatory counter-economy wherein humans create, contribute and maintain shared resources while benefitting from them. So, what exactly does this entail for the political economy of higher education within knowledge socialism?

This question belabors the point that there exists a need to develop a praxis of knowledge socialism which contributes to the development of a ‘transitional’ emancipatory political economy of knowledge within the realm of institutionalized HE.

<sup>4</sup> See <https://wiki.p2pfoundation.net/Dematerialism>. Accessed 14 March 2021.

<sup>5</sup> See <https://www.sensorica.co/>. Accessed 17 March 2021.

<sup>6</sup> See <https://farmhack.org/tools>. Accessed 17 March 2021.

<sup>7</sup> See <https://www.wikihouse.cc/>. Accessed 17 March 2021.

Jandrić (2020) has posited that the search for a knowledge socialism ‘philosophy of praxis’ requires further engagement with both the high theory of academic capitalism and the low theory of knowledge socialism as a practiced resistance within contemporary HE contexts. Moreover, Jandrić and Ford (2020) note that institutionalized societies have institutionalized systems of education, and that institutionalized education reduces actors therein to producers and consumers. Thusly, Jandrić (2020) argues that within this understanding of institutionalized knowledge capitalism, the development of knowledge socialism as a critical (and revolutionary) pedagogy within the postdigital HE context, requires further understanding of the interplay between high and low theory as a means to problematize the experiences of subaltern actors situated within. Jandrić and Ford deplore the rise in US-led opposition ‘to work being done in China that could provide alternative routes away from the domination of western imperialism’. Thusly, the following highlights a contemporary subaltern account of exploitation/self-exploitation within institutionalized HE, followed by a discussion of China HE and its relation to the future development of knowledge socialism, and lastly describes a experiential vision of knowledge socialism within a transitional knowledge economy that utilizes a non-exploitative form of CBPP-based creative labor.

## Understanding the Academic Prosocial-Entrepreneur

Helgesson (2020) highlights that within a competitive academic environment where publications listed on a CV represent a show of academic merit, and collaboration and co-authorship is standard practice, academics have strong career incentives to make sure that order of authorship reflects their relative contributions. While the author notes that there is no uniform understanding of the significance of different authorship positions, they outline that the Karolina Institut in Stockholm Sweden uses a precise form of bibliometric scoring as a measure (valuation) of individual research contribution (Helgesson 2020). Lim (2019) develops this understanding further within a study which argues that recent technological developments have created a growing sense of ‘the bibliometric self’<sup>8</sup>—a form of ‘big data’ governmentality based in academic performativity, audit technologies and rankings which increases the anxiety felt by academics concerning ‘how much and how well they write’.

In the past, much international attention was given to China’s dependence on such quantitative metrics to promote domestically competitive international scholarship (Tian et al. 2016), allowing several of their ‘double first class’ universities to achieve a rapid pace within international higher education rankings tables (Huang 2020). However, two recently published policy documents by the ministry of education outline China’s desire to ‘bid farewell’ to quantitative metrics which ‘worship

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<sup>8</sup> It is important to note here that this notion of the ‘bibliometric self’ is a concept which knowledge socialism is inherently concerned with undoing—as evinced within Petar Jandrić’s conversation with Michael Peters (in Jandrić 2017: 30).

SCI' (Science Citation Index) (Zhang and Silversten 2020). While the policy outlines 'peer review' as the new standard of research valuation, it is as yet unclear how and when this standard of valuation will be fully implemented within China's centrally planned yet localized institutional context. Currently, there seems to be no consensus on what this move toward peer review entails for students and early career scholars within China HE. While Zhang and Silversten (2020) note a shift away from previously used quantifiable metrics (number of first author SCI publications within high impact international journals) toward both central and institutional forms of weighted 'peer review', the emphasis on the establishment of a 'Citation index with Chinese Characteristics' suggests more of the same—albeit with a nationalistic twist.

This quantitative framework of research valuation is part and parcel to the neoliberal 'publish or perish' paradigm (Tian et al. 2016). Understandably, knowledge socialism aims to unseat this marketized framework of researcher and knowledge commodification. However, this is where utopian ideals aimed at dissolving the individual author (within a framework of collective subjectification) smacks up against the reality of students and early career scholars fighting to gain access to the 'care-free' post-scarcity bohemian intellectual class alluded to by the architects of knowledge socialism.<sup>9</sup> Thusly, this article argues that scholarship regarding knowledge socialism must adequately account for the sociomaterial reality of developing scholars (both developing country and early career) who are faced with both increasingly abysmal future career prospects (institutionalized HE) and increasingly de-valorized calls (knowledge socialism) to contribute 'free' immaterial labor within the knowledge economy.

While revolutions are often thought of as movements and periods defined by sudden change (Leroi et al. 2020), 'revolutions are ultimately about rearranging the parts of already existing wholes to meet new challenges' (Fuller 2020: 132). Thusly, current research on CBPP provides a transitional, yet revolutionary, and non-exploitative path forward for knowledge socialism. Specifically, Bauwens et al. (2019) highlight an understanding of CBPP ecosystems as 'transitional lively-hood organizations'—productive communities that contribute to a project in coordination to create a shared resource. The authors outline what they call a 'commons oriented entrepreneurial coalition' which attempts to create either profits or 'lively-hoods' by creating added value for the market based on shared resources (Bauwens et al. 2019). Moreover, the authors state that within the continuously ruptured dichotomy between capitalism and entrepreneurship, there exists a precarious class of workers who aspire toward a Marxist form of autonomous self-expression (meaningful work in contribution to the commons) while advancing a capitalist lively-hood based in economic profit.

It is this class of prosocial-entrepreneur that best represents the contemporary neoliberal scholar, and it is the volunteering of their creative immaterial labor that is most necessary to ensure a viable transition to knowledge socialism's political economy based in radical openness and peer-to-peer exchange. Thus, knowledge

<sup>9</sup> See Jandrić's (2020) definition of uncomfortable high/low theory interplay.



socialism must foment a liberating non-deterministic transitional commons-based political economy, one based in a CBPP process which allows academic prosocial entrepreneurs to build a livelihood around their individual contributions. The following section provides experiential pedagogical insights into how exactly a shift toward this transitional political economy might take place.

## The Unfinished Pedagogy of Collective Writing

Through the work of Autonomists Alquati and Negri, Carmichael (2020) proffers a postdigital notion of *operaismo* (workerism) as a form of co-research and educational inquiry which allows for the development of critical insights into the practices of those who labor within the material, technological, and performative confines of neo-liberal HE. Thusly, within a radical praxis of *operaismo*-centered educational self-inquiry—that is neither incidental nor subordinate to theory building (Carmichael 2020), this final reflexively oriented chapter answers Jandrić's (2020) call for research into 'high/low theory interplay'. To put this into clearer terms, most (if not all) of the research cited herein frames knowledge socialism in experimental terms. Analogous to the postdigital era in which it is being developed, knowledge socialism as a praxis is messy, unpredictable, and most certainly incomplete (Peters et al. 2021). Yet, in the spirit of the postmodernists thinkers from which it gains its critical thrust, knowledge socialism has been positioned as inherently self-reflexive (Peters et al. 2021). If this claim is to hold true, the collective of scholars responsible for this experiment must ensure that their commitment to metaphysical self-reflexivity does not result in an overall disassociation from the material plight and the stinging extrinsic pressures felt by the precarious scholars described herein. The episteme of knowledge socialism is often positioned within the dissipating lines between human/non-human/transhuman. However, as a posthuman experiment whose fruition requires the participation (creative labor) of human beings, knowledge socialism is still subject to the ethical and moral boundaries of any sociological experiment worth its salt. Thusly, and perhaps a bit naively, I would recommend that future collective efforts surrounding knowledge socialism commit to a return to the notion of 'do no harm', i.e., benevolence and non-maleficence as enshrined within the American Psychological Association's (APA) Ethical Principles and Codes of Conduct.<sup>10</sup> Within this context, this experiential section may serve as a form of 'ethical review' that is based on an initial institutional pilot study of the pedagogy of knowledge socialism within China HE.

I previously mentioned the China HE context because it represents a dynamic, shifting environment based in both eastern and western philosophical notions of what HE should represent for the state, society, and the individual. Moreover, as classes have been conducted entirely online since the early 2020 outbreak of Covid-19 (still true at the time of this writing), it embodies well the postdigital and its concern with human/non-human relationships and their resultant effect on the production of knowledge. China HE also constitutes the primary context in which

<sup>10</sup> See <https://www.apa.org/ethics/code>. Accessed 16 April 2021.

Michael Peters is currently conducting the on-site (high/low theory) experimental collaborative work of developing knowledge socialism into a revolutionary philosophy of praxis at Beijing Normal University (Peters et al. 2020c, d). Papers cited in this article (Peters et al. 2020c, d) represent the first of several published journal articles as based in a form of CBPP described within the aims of knowledge cultures. Both of these articles were conceptualized by Peters, collaborated upon within a classroom setting (both in real life and online), and edited (largely) by either PhD or Master's degree students within Beijing Normal University. Both of these articles represent a critical first publication for many of the contributing young scholars (both Chinese and international) within Michael Peters' courses on the 'Belt and Road Initiative (BRI)' and 'International Education.

The CBBP process within both of these courses reflects the work of Meza et al. (2016) who describe CI in education as a strategy and pedagogical design which allows students to conduct semi-directed research toward collectively created and shared content. This process is described in-depth within the article titled 'Education in and for the Belt and Road Initiative: the Pedagogy of collective writing' (Peters et al. 2020c). However, missing from both these articles, and knowledge cultures' description of the CI-based CBBP pedagogy/methodology, is a collective discussion surrounding both the front-end organization and distribution of labor, and the subsequent back-end valorization of said labor within an order-of-authorship framework. This should come as no surprise, given the aforementioned aim of re-collectivized author subjectification and immaterial labor virtue-signaling within knowledge socialism.

Notwithstanding, as a result, throughout the process, of writing, editing, publishing, and beyond (institutional valorization metrics for grants and scholarships), there was exhibited a tension between knowledge socialism's notion of the nameless virtuous scholar, and the neoliberal performativity required of us as academic prosocial entrepreneurs within the field of HE. Specifically, paralleling the institutionalized field of HE, many of the students involved expressed a primary concern for both contributing to the field of knowledge, as well as a desire to have their contributions appropriately valorized (order of authorship). In, fact one such student questioned why anyone would volunteer for such a labor-intensive process (drafting, editing, copyediting), only to have their contributions dissipated within a collective pool of some 30-odd students. The answer to this question was that this process provided the student a chance to volunteer their creative labor in service to the commons. Benkler and Nissenbaum (2006) describe that volunteerism and self-selection constitute the essential feature of peer-production. However, my experiences with the experimental process of collective writing within Michael Peters' courses at BNU are colored by a CBPP processes (designed and built around quasi-mandatory/graded contributions) which stretched both the ethical-philosophical notion of CBPP, while also contributing to a host of practical CBPP issues surrounding editorial ability, free ridership, organization, and governance.

Benkler and Nissenbaum (2006) state that peer-production is organized around the self-identified pooling of individual contributions—a virtuous behavior of 'to each according to their contribution'. However, Hess and Ostrom (2007) have outlined that commons based in reducible scarcity suffer from difficult questions of

governance, sustainability, free-riding, competition, and over-harvesting (as reflective of human beings' characteristic self-interest). Thus, given the ruptured ontology of the neoliberal academic prosocial entrepreneur, participants may wish to contribute as a means of securing a higher order-of-authorship (scarce and reducible) by volunteering to the CBPP process as editor or proofreader. Given the overriding material pressures, these prosocial entrepreneurial actors may seek to secure a higher order of authorship (despite the established capacity or acumen to do so) regardless of its overall effect on quality of output.<sup>11</sup>

Benkler and Nissenbaum (2006) state that free-ridership, malicious intent, and incompetent contributions may ostensibly be 'weeded out' by organizational processes. However, within a collaborative classroom context, it remains difficult for either the instructor or any individual student to single out such malicious intent or incompetent ability. Moreover, it could be argued that doing so would further contribute to the commodified nature of HE, while also promoting positivistic/ethnocentric language-based exclusionary academic practices. This understanding should highlight the continued central concerns surrounding notions of organization, motivation, and quality within CI-based CBPP efforts (Benkler et al. 2015). Moreover, this difficulty should also help us to understand further the inherent challenges to creating utopic pedagogical practices—'which account for all forms of exclusion' within the complex, fractious, and messy reality of our postdigital age (Jandrić and Ford 2020).

The future development of knowledge socialism as a philosophy of praxis will require a careful synthesis between institutionalized high theory in form, and knowledge socialism as a low theory aimed at developing CBPP-based knowledge cultures in practice. Specifically, practitioners of knowledge socialism, as the vanguard of revolutionary praxis, must seek to understand and harness the individual motivations, skills, and acumen of voluntary contributors within decentralized, non-hierarchical organizational structures, ensuring that both the individual and the commons benefit from knowledge socialism as the non-exclusionary philosophical (see knowledge cultures) core of the CBBP process. Thusly, within a postdigital institutionalized HE context, the development of a pedagogy of knowledge socialism requires a cautious, pragmatic and (most importantly) practiced sociomaterialist approach to CBPP processes as dependent upon precarious, creative academic laboring. Therefore, this article stresses that knowledge socialism requires a fundamental reorientation toward the critical mass of precarious scholars who require a transitional political economy of knowledge which valorizes the production of external/internal goods, as well as impels volunteerism through an engagement with intrinsic/extrinsic motivating factors. In this way, knowledge socialism, as a revolutionary philosophy of praxis, may effect a transitional commons-oriented economy of knowledge organized around a 'benevolent heterarchy' (sociality) which protects the integrity of the whole, establishes a participatory non-coercive process of coordination, and valorizes individual labor contributions in support of the commons (Bauwens et al. 2019).

<sup>11</sup> For deeper insights into these quality issues (grammar, coherence, novelty) see Peters et al. (2020d).

## Conclusion

This article represents a critical engagement with knowledge socialism, not as a monolithic entity which is complete or inaccessible to those who wish to contribute to its development, but as a ruptured, incomplete and democratic philosophy of praxis that reflects the postdigital condition in which it has emerged. Knowledge socialism is a truly interdisciplinary philosophy which has yet to reach a form of praxis required by those who would most be served by its inclusive and emancipatory aims. Specifically, I have outlined that knowledge socialism's current overreliance on virtue signaling promotes a subjectivizing and self-exploitative virtuous duty to volunteerism that today's precarious class of academics can ill-afford. Thusly, in order to provide a non-exploitative sociomaterialist path forward for knowledge socialism, this article has drawn from and positioned itself within the work of contemporary postdigital scholars. Moreover, this article has shown that contemporary work within the CBPP, Commons, P2P movement coalesces around the understanding that commoners need not sacrifice their well-being to contribute to the common good. The wealth of knowledge produced by scholars within this movement highlights that a collective co-opting of the commons is required to affect a sustainable, non-exploitative, non-reducible political economy of knowledge. Moreover, within a personal, subaltern perspective of the collective writing process, I have shown that the development of knowledge socialism into a true philosophy of praxis will require a careful, practiced pedagogical negotiation within the material, organizational, motivational challenges inherent to institutionalized HE. Finally, it is important to note that knowledge socialism's aim of collectively effecting a 'radically open knowledge commons', ultimately hinges on the development of a political economy of knowledge that supports the individual creative labor contributions of lynchpin prosocial-entrepreneurs.

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