

The problem is proletarianisation, not capitalism

A critique of Bernard Stiegler's contributive economy

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In the wake of the *Gilets Jaunes* movement, the late Bernard Stiegler proclaimed, in one of his final interviews: 'what I'm interested in is to put down capitalism, for good. Or to do something else in the meanwhile.'¹ Stiegler's anti-capitalist statement signals his debt to Marx, who is frequently invoked in his writings. Indeed, in the general introduction to the first volume of his imposing three-volume work, *Technics and Time* (1994–2001; trans. 1998–2011), Stiegler grounds his philosophical project on a footnote from *Capital*, taking his cue from Marx's regret that a 'critical history of technology', which would match Darwin's 'history of Natural Technology', had yet to be written.² *Technics and Time* seeks to fulfil this task with a theory of technological evolution. Reflecting back on his intellectual trajectory in 2003, a few years after completing *Technics and Time*, Stiegler also acknowledged the formative role played by his membership of the French Communist Party in his youth.³ Yet, despite the importance Stiegler himself accords Marx, the issue of how Marx informs his political and economic presuppositions has been largely overlooked and overshadowed by his debts to Derrida and Heidegger. This probably accounts for why so little critical attention has been paid to the role that capitalism actually plays in Stiegler's work.*

Of the few who have addressed Stiegler's analysis of capitalism, Ross Abbinnett gives by far the most extensive account, but largely overestimates the importance of capitalism's profit motive in Stiegler's understanding of technology. Stating that, 'the historical develop-

ment of capitalism is conceived [by Stiegler] as a process that begins from the calculative rationality of the M-C-M relationship',⁴ Abbinnett overlooks that, for Stiegler, it is technological innovation which, first and foremost, drives historical change, inaugurating different periods in capitalism.⁵ It is Watt's encounter with the English entrepreneur Matthew Boulton that, for Stiegler, simultaneously kickstarted the industrial revolution and the Anthropocene. This is a technocentrism that ignores economic factors, such as the availability of cheap labour power that was decisive in steam power's historical victory over water.⁶ Tom Bunyard is more sceptical, characterising Stiegler's politics as a form of 'technoreformism', which is marked by a complete 'disinterest in [capital's] need for quantitative profit' and a classless notion of capitalism.⁷ John Hutnyk, showing that many of Stiegler's supposedly new theses on technology had already been anticipated by Marx and Engels, is equally sceptical about Stiegler's claim that 'proletarianisation' is today's universal condition, regardless of actual socio-economic inequalities.⁸

Stiegler's problematic relationship to Marx and to the critique of capitalism can be traced back to his inspiration by Marx's footnote calling for a critical history of technology. What Marx is calling for in *Capital* is a history of 'the productive organs of social man [*der produktiven Organe des Gesellschaftsmenschen*]'.⁹ But the French translation that Stiegler cites centralises the question of technology to an extent the German does not. Whereas in the original it is very clear that technology operates as

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a mediator that can uncover the relations involved in the production process, the French can be read to suggest that social relations originate from technology as such.¹⁰ However, this foregrounding of technology is not simply a matter of translation, but rather, I shall argue, an intellectual context in France informed by the reception of Italian Workerism and its attention to the so-called ‘Fragment on Machines’ from Marx’s *Grundrisse*. In this article, I seek to further elucidate Stiegler’s position vis-à-vis capitalism in relation to this context – that is, not only his sidelining of capital’s profit motive, but also the economic presuppositions that underpin and motivate his proposal for a contributive economy, more specifically his belief in the threat of automation and his defence of a specific form of guaranteed income, a contributive income. My argument will be that these claims and convictions are best understood in light of Post-Workerist thought and its interpretation of the ‘Fragment on Machines’.

Whereas parallels between Stiegler’s work and Post-Workerism have been pointed out before, his relocating of anthropology into a technologically neutral domain, requiring a technocratic politics, has not been traced back to its Workerist roots.¹¹ Benoît Dillet is right to notice that Stiegler’s contributive economy echoes the thought of André Gorz and Maurizio Lazzarato, but he does not place it within the context of the longer history of Workerism, and in particular, the reception of the ‘Fragment on Machines’; nor does he further analyse the rationale behind Gorz’s and Lazzarato’s economic proposals in relation to Stiegler’s. Gradually, the *Grundrisse* was pitted against *Capital* by Workerism, culminating in an isolation of the ‘Fragment on Machines’ that allowed for the abandonment of the question of capital accumulation. This trajectory not only led to a disconnection between living knowledge and capital, as Matteo Pasquinelli argues, but equally to a teleological understanding of technological development, which I claim explains Stiegler’s support for economically unjustifiable predictions about the dangers of automation.¹² This does not simply help us to understand the political implications of Stiegler’s work as such but also sheds light on the philosophical rationale behind contemporary automation discourse and post-capitalist visions that have recently received much critical attention, albeit primarily in terms of their economic presuppositions.¹³

The objective of Stiegler’s contributive economy is to offer a solution to the perceived economic threat of robotisation, but its primary aim is to fight the negative consequences Stiegler considers automation to have on individuation, which he also refers to as proletarianisation. As proletarianisation is primarily a problem of reason and knowledge, what a contributive economy seeks to establish is a new valuation system that rewards activities that contribute to society’s general knowledge.¹⁴ After introducing the notion of proletarianisation in relation to Stiegler’s conceptualisation of technology as pharmacological, I will offer in what follows a brief overview of the history of the *Grundrisse*’s Franco-Italian reception that will serve to contextualise my analysis of Stiegler’s engagement with post-Workerist thought, which is primarily mediated through the work of Gorz and Moulrier-Boutang, although connections to McKenzie Wark, Antonella Corsani and Maurizio Lazzarato will also be addressed.

Proletarianisation and *pharmakon*

Proletarianisation is a concept that captures a noetic process, denoting a generalised loss of knowledge of the subject, our gradual becoming stupid. Stiegler uses the notion for the first time in the third volume of *Technics and Time* (2001), drawing upon Gilbert Simondon’s reading of Marx in *On the Mode of Existence of Technical Objects*. In the first volume of *Symbolic Misery* (2004), he starts to develop the concept more rigorously, resulting in a tripartite division of proletarianisation into the loss of *savoir-faire*, *savoir-vivre* and *savoir-théoriser*, which informs his later works, such as *The Re-Enchantment of the World* (2006) and *Taking Care of Youth and the Generations* (2008). In a Heideggerian vein, *savoir-faire* denotes more practical knowledge; *savoir-vivre* corresponds to a certain know-how of living together, which he primarily explores in psychoanalytic terms; *savoir-théoriser* is quite literally a capacity for theoretical thinking. The loss of these three forms of *savoir* rests upon a historical distinction between three different economic eras, namely, that of nineteenth-century industrial capitalism, twentieth-century Fordist consumerism and our current economic paradigm.¹⁵ This does not mean that each loss of *savoir* is mutually exclusive, corresponding to a specific and unique economic epoch. They are in fact



cumulative, and Stiegler argues that we are witnessing the loss of all three forms of knowledge today.

In this periodisation of capitalism, whereas labour in the nineteenth century is primarily considered to be characterised by the loss of artisanal skills, labour in the twenty-first century is seen to cause a loss of cognitive capacities. Stiegler holds that this damage does not only affect workers but everyone, as big data and the crowd sourcing economy replace the producer by the consumer. In 1993, with the introduction to the public of the World Wide Web, our milieu was transformed into a digital one, a milieu of absolute automation, the automation not simply of practical knowledge but also of decision-making. We are now all becoming part of the machine, as artificial organs causing ‘a complete cerebral desertification’.¹⁶ No one escapes proletarianisation in the digital age, not even the likes of Alan Greenspan, the former Chair of the U.S. Federal Reserve, who would have been made redundant by finance algorithms. Stiegler therefore speaks of an age of generalised proletarian-

isation characterised by the automation of everyone’s knowledge, resulting from the material automation of both physical and cognitive tasks.

So, what exactly is the relation between *proletarianisation*, knowledge and automation? Stiegler can draw a direct connection between knowledge and automation because he understands noetic processes as a psychosomatic shaping of the self that is dependent upon retentional technological conditions. Stiegler derives this conceptualisation of technology from Plato’s dialogue on writing in the *Phaedrus*, specifically as interpreted by Derrida in *Dissemination* (1972). Rereading Plato’s text, which Friedrich Schleiermacher had accused of merely being a condemnation of the written word as sophistry, Derrida picks up on the polysemy of *pharmakeia*, denoting the ‘administration of the *pharmakon*, the drug: the medicine and/or poison’.¹⁷ Emphasising writing’s need for a material base, Stiegler considers concrete supports of memory as that which constitutes technology, which, like Plato’s *pharmakon*, can be both medicine or poison.

This interdependency of memory and its own externalisation into an object or, as Stiegler argues, technological objects, leads him to define technology as *hypomnēmata* or mnemotechnics.¹⁸ For Stiegler, technology is a very broad notion ranging from flint tools to smartphones: any material object that serves as a memory support. But Stiegler does not think of technology as merely instrumental or ‘enframing’, following Heidegger, but as fundamentally co-constitutive of the human, its temporal relation to the world.¹⁹

Stiegler distinguishes between three forms of memory, conceived in temporal terms, which he calls retentions, further developing the distinction Edmund Husserl makes between primary and secondary retentions, adding a third category of tertiary retentions. ‘Primary retention is what constitutes the temporal fabric of all perception insofar as it lasts: insofar as, retaining in itself its own duration, it thus enriches its perceptual content.’²⁰ Consciousness has no control over primary retentions. They are purely accidental and happen to the subject. Secondary retentions are the recollections in the mind of those first retentions, which in turn are shaped by further primary retentions. Stiegler explains this back and forth process using Husserl’s example of melody. When I listen to the same melody a second time, I will hear it differently from the first time since my ear has been affected by my initial experience: consciousness has altered between the two hearings.²¹ In this way, secondary retentions are recollections of past lived experience, which can be spatialised, according to Husserl, in what he calls ‘image-consciousness’, such as art, sculptures or any other form of the expression of recollections: devices Stiegler qualifies as technological objects.

However, Stiegler identifies a problem in Husserlian phenomenology’s exclusive focus on lived experience, namely, that it forgets the question of the historicity of objects.²² From a Heideggerian perspective it would overlook a historical conception of temporality, as the already-there is always already inherited.²³ Hence, Stiegler uses the term tertiary retentions to denote those mnemotechnics in which knowledge is accumulated, not only in an individual’s lifespan but intergenerationally.²⁴ According to Stiegler, it is this cyclical movement of the exteriorisation and internalisation of knowledge, a self-reflective dynamics that simultaneously unfolds over the timespan of an individual’s life, as well as transgener-

ationally, that constituted reason in opposition to the rationality and calculability he criticises as characteristics of modernity. Because of the historical and collective dimension of memory retention the ‘I’ is always a ‘we’ temporally and spatially. The conceptually close notions of proletarianisation, disindividuation and denoetisation, and the automation of reason, all capture the short-circuiting of this cyclical noetic process.

In the third volume of *Technics and Time*, Stiegler draws a link between Marx’s understanding of technology and his own conceptualisation of the movement of memory and knowledge, a reading that primarily draws on Gilbert Simondon’s interpretation of alienation in *On the Existence of Technical Objects* (1958).²⁵ Marx, in the *Grundrisse*, and more specifically in the ‘Fragment on Machines’, describes machines as an externalisation of knowledge, or in Stieglerian terms a mnemotechnic or a tertiary retention, which deprives the worker of their skills or knowledge.²⁶ This total loss of knowledge is what, for Stiegler, turns workers into the proletariat. What Marxists fail to see is that ‘the proletariat is not the working class, but the non-working class [la classe des désœuvrés], that is, the downgraded, the class of those who are declassified. They are those who no longer know, but serve, systems that exteriorize knowledge.’²⁷ Following Simondon, Stiegler considers alienation to be the effect of a rupture of the fundamental continuity between the human and technology. Although he already states in the third volume of *Technics and Time*, again building on Simondon, that ‘this process of worker enslavement leads to the worker’s loss of individuation and displacement into the machine’,²⁸ the cyclical nature of proletarianisation is best captured in *Automatic Society* (2015), where Stiegler describes it as ‘an exteriorization without return, that is, without interiorization in return’.²⁹

More concretely, the human knowledge of how something is produced is exteriorised in a machine. As a result, the worker operating the machine no longer practices the initial skills that were needed to produce whatever products the factory at that moment produces: literal automation. No longer having to learn how to master a certain skill, the worker remains skill-less, without *savoir-faire*, and becomes dependent upon technological instruments. Technical automation thus provokes the automation of knowledge, dissolving its self-reflective process. What distinguishes workers from proletarians, according

to Stiegler, is that the latter are subjected to the disruption of the cyclical movement of the noetic process, the short-circuiting of memory. Harking back to the critique of modernity and its suspicion of calculability, proletarianisation explains the reification and fragmentation of reason as resulting from a disruption in memory retention that would otherwise require long-term, qualitative and reflective engagements.

The Franco-Italian reception of the 'Fragment on Machines'

Written between 1857 and 1858, the *Grundrisse* is generally considered to be the draft that lays the foundation for *Capital*. Although two sections had been published by Karl Kautsky in the early 1900s, the *Grundrisse*'s influential status in twentieth-century debates on technology took off much later due to its obstructed publication and circulation history.³⁰ Most importantly, for my concerns here, one section of the *Grundrisse*, the 'Fragment on Machines', became the centrepiece of post-war Italian Workerist theory: an anti-trade union and spontaneist current. Its emergence coincided with the publication of the journal *Quaderni Rossi* in June 1961, but should be understood against the larger backdrop of changes in capitalist production and social revolt.³¹ The Italian focus was militant and served as a strategic fulcrum for wildcat strikes and sabotage.³² Exploring the effects of mechanisation, Marx's distinctive arguments in the 'Fragment on Machines' resonated with the struggles that Italian workers were facing following post-war changes in manufacture.

After the Second World War, Italy saw an exodus of people from the agricultural South to the industrial North. This fundamentally changed the composition of the working class, from a body of skilled workers into unskilled workers. Workerism's proponents came up with a set of new concepts in an attempt to grasp this new working class. The 'craft worker', possessing more artisanal skills, was replaced by the unskilled 'mass worker' as the new revolutionary subject. The 'mass worker' was constituted by the assembly lines of the Fordist mode of production, which made everyone replaceable. But the assembly line also meant that small strikes were more effective. Seemingly out of touch with these developments, the trade unions persisted in their attachment

to professionalism and continued to pursue their traditional bargaining techniques using the workers' skills as leverage to get capital to meet their demands. Workerists saw the mass worker as a force that could be mobilised against both capital and unions.

In 1964, Renato Solmi published the first translation of the 'Fragment on Machines' in the fourth issue of *Quaderni Rossi*.³³ Its subsequent reception history came to reflect Workerism's attempts to rethink the relations between changing class composition and technological developments driven by, and constitutive of, capital's ongoing mutations. Whereas early Workerism still read the text in the light of *Capital* – in particular the fourth section of the first volume and the previously unpublished chapter on the 'Results of the Immediate Process of Production' – it later inspired a consideration of technology increasingly independent from capital accumulation, which became characteristic of Post-Workerist thought and its diagnosis of the 'social worker'. Although in the text itself Marx foresees that science and technology will become increasingly determined by the need for capital accumulation, the replacement of the mass worker by the social worker in the 1970s prepared the way for a reading of Marx's text that only kept its teleological narrative afloat.³⁴ In the wake of the 1974 recession, Antonio Negri argued, for example, that, because of the tendential rate of profit to fall, capital would be pushed to the massification of abstract and intellectual labour, thereby absorbing the whole of society into the proletariat.³⁵ Even before Negri, Franco 'Bifo' Berardi and Romano Alquati had already written about a new class characterised by intellectual and technical labour. Negri considered the social worker to be the incarnation of a new revolutionary subject, and he saw its struggle anticipated by 'The Fragment on Machines', namely, the overcoming of the labour theory of value as a consequence of technological innovation. Building upon the notion of the 'general intellect', Negri expected capitalism's new class composition to give rise to 'a human individuality capable of communism [which would] conclude that social, proletarian, reappropriation is ... necessary'.³⁶ The technology question had thus always been central to Workerism's understanding of class relations, but gradually started to gain more ground as the new locus of struggle from the 1970s.

After the fall of the Berlin Wall, the 'Fragment on Ma-

chines' acquired a renewed impetus in which the antagonism to capital was no longer required. Instead, transformations in the production process, said to mark a transition from a Fordist to a post-Fordist model, were welcomed as potentially revolutionary. In 1996, Maurizio Lazzarato coined the term 'immaterial labour': a form of labour that demands workers develop new skills in relation to the emergence of new technologies and that mobilises them as subjects.³⁷ Instead of condemning the ways in which this new form of employability blurs the boundaries between work and non-work, Lazzarato welcomes it as a "silent revolution" taking place within the anthropological realities of work and ... the reconfiguration of its meanings.³⁸ Immaterial labour is seen as opening up space for creativity and the development of workers' autonomy, beyond the distinction between work and non-work, and mental and manual labour. Traditionally reserved for the middle and upper classes, this new potential for workers to express their creativity would thus contribute to the troubling of class relations.

It is these mutations of labour that Negri and Michael Hardt in their co-authored works consider to be a transformative force of capitalism from within, resisting commodification. Whereas in the late 1970s, Negri still held that immaterial or cognitive forms of labour could potentially function as a vector for class consciousness, in *Empire* (2001), written with Hardt, he views them as holding creative and cooperative potentials in and of themselves, planting a seed for a 'spontaneous and elementary communism', and hence abandoning an antagonistic stance vis-à-vis capital.³⁹ The novel infrastructures of the information economy that make workers cooperate, irrespective of their geographical location, would give rise to creativity and common action beyond measure, thus spelling out the antithesis of capitalist calculability and subverting the notion of property. Acquiring novel skills, 'the productive subject ... brings with itself, at the level of the General Intellect, an extraordinary energy that is able to break the capitalist relation.'⁴⁰ Workers would thus be able to become producers independently from capital relations. As Isabelle Garo shows, this eliminates the formal and legal dimension of ownership, reducing property to appropriation.⁴¹

Stiegler does not draw directly on Negri and Hardt's work, but he does on Yann Moulier-Boutang's, in particular his idea of the 'pollen economy', a notion that

is conceptually very close to Hardt and Negri's thought. This proximity is not coincidental. Moulier-Boutang has worked in close cooperation with Negri since the early 1970s. Moulier-Boutang was the first to introduce Workerism into France, founding the group *Matériaux pour l'invention* (Materials for Invention) which translated texts by Negri, Mario Tronti and Oreste Scalzone.⁴² Like Hardt and Negri, Moulier-Boutang is convinced that capital's growing dependence on cognitive forms of labour will lead to the emergence of communistic relations from within capitalism itself. He maintains that cognitive capitalism does not simply change the way commodities get produced, but unsettles the very substance and shape of value itself.⁴³ Extracting surplus value from knowledge and skills obtained outside the walls of the company, cognitive capitalism captures an extra-economic activity – an activity he compares to bees pollinating. What generates value in cognitive capitalism is not the honey, but the pollination process. This is a theory Gorz equally embraces.

Hacker euphoria and deproletarianisation

Within this line of thought, a great admiration for hackers and the free software movement emerged, an admiration that Stiegler shares with Moulier-Boutang, Gorz and McKenzie Wark. In *A Hacker Manifesto* (2004), Wark writes that the hacker, whom she considers constitutive of a new hacker class, produces new abstractions out of raw data. In order for the 'vectoralist class' – those who 'control the vectors along which information is abstracted' – to lay claim over intellectual property rights, the hacker always needs to produce a 'qualitatively new creation'.⁴⁴ Gorz, who adopts Moulier-Boutang's notion of cognitive capitalism, welcomes capital's new extraction model, as it means that the survival of enterprise increasingly relies upon self-organisation, creativity and the ability of people to cooperate and to excel in networks. According to Gorz, this leads to the emergence of 'positive externalities', namely, 'a collective outcome that transcends the sum of individual contributions'.⁴⁵ These positive externalities transcend quantifiability, making the subordination of human activity to the market impossible, and thereby giving rise to a new space for the full development of human capacities, to *Bildung* or the cultivation of minds. It is in free software activists and hackers that

Gorz sees potential agents for the ‘transcendence of capitalism’. Gorz insists that these agents present a form of actually existing anarcho-communism, which does not seek to take power but instead demonstrates that a different world is already possible: ‘There will be no revolution through the overthrow of the system by external forces. The negation of the system spreads within the system itself by the alternative practices, to which it gives rise.’⁴⁶ We are thus back at the Post-Workerist trope of the hope of change from within capitalism itself, making antagonistic politics essentially redundant.



Bearing in mind Stiegler’s notion of deproletarianisation as the de-automation of knowledge, it is not a surprise that he draws on the work of Post-Workerists and thinkers inspired by this tradition, such as Gorz, Moulier-Boutang and Wark. It is exactly in their analysis of post-Fordist capitalism giving rise to a pollinating residue that Stiegler sees a new horizon of possibilities for deproletarianisation. According to Stiegler, Moulier-Boutang shows that cognitive capital positively reconfigures reason, because increased computation now makes it possible to distinguish between that which is and that which is not codifiable.⁴⁷ He considers these new technologies to enable activities that hold interpretative and deproletarianising capacities. As such, Stiegler’s contributive economy seeks to implement a reconfiguration of capitalism’s underlying conception of value and the remuneration model upon which it is based. Following the classic Post-Workerist understanding of capitalism’s mutations, Stiegler maintains that the labour theory of value is no longer valid since value is no longer related

to actual productive activities that can be measured in labour time. Instead, he maintains that wealth under post-Fordism is generated by the human activity that precedes the production of commodities, the equivalent of Moulier-Boutang’s pollen, Gorz’s positive externalities and Wark’s notion of abstraction.

In order to describe this shift in the form of value, Stiegler rethinks the notion of work by making a distinction between work (*le travail*) and employment (*l’emploi*). He considers work to be ‘that by which we cultivate knowledge’. Employment, or the hegemonic form of salaried work under capitalism, destroys this work. Employment is a proletarianising activity, whereas work is its antidote.

Employees do not work, in the sense that working, which means to individuate oneself, which means to invent, to create, to think, to transform the world. Work is that which we used to call *oeuvre* [*l’ouvrage*]. In the word ‘oeuvre’ [*ouvrage*], you can hear the verb ‘to open’ [*ouvrir*], ‘to work’ [*ouvrer*] meaning to operate. A worker opens a world that can be a very small world but nonetheless a world.⁴⁸

Work is thus that which enables the subject to individuate themselves, to become singular. In Stiegler’s thought, the subject shapes itself in relation to its environment, a process that is always thought as psychosomatic. Ultimately, this means that the potential of a subject can only unfold when they are engaging with their milieu and shaping it, as much as it shapes them. Although not directly referring to Gorz when making the distinction between work and employment, Stiegler cites him when defining true work as a *poiesis* that answers an individual’s need, in Gorz’s words, ‘to appropriate the surrounding world, to impress his or her stamp upon it and, by the objective transformations he or she effects upon it, to acquire a sense of him- or herself as an autonomous subject possessing practical freedom’.⁴⁹

The teleology of technology

The hope of the Post-Workerist tradition that technological development would bring forth communist relations from within capitalism has been criticised for its teleological vision of technology. Frederick Harry Pitts, for example, notes how Hardt and Negri’s imaginary of the overcoming of capitalism is driven by ‘a teleology ... which suggests that social actors rise to prominence

because of the forces of production and can only reshape the relations in so far as the forces permit.⁵⁰ Whereas Pitts places an emphasis on the deterministic tendencies of their vision, Riccardo Bellofiore and Massimiliano Tomba recognise how Hardt and Negri uphold a linear scheme anticipating ‘the quantitative extension of so-called immaterial labour’, which they argue is not supported by any actually existing economic tendencies. The problem with this account for Tomba and Bellofiore is that it ‘is blind to how different forms of surplus-value extraction intersect with one another’.⁵¹ Even if it is true that technological innovation does not automatically translate into a universal and homogenous profit model or a global standardisation of forms of labour, the assumption that underlies this reductive view of the world economy is its isolated understanding of technological development, disconnected from larger political questions and macroeconomic dynamics.

To some extent, Stiegler nuances this optimistic teleology by adding his notion of the *pharmakon* to the equation. Indeed, Stiegler criticises the Post-Workerist tradition and concepts such as cognitive capitalism and immaterial labour for their idealism, that is, their failure to take into account the materiality of new technologies, seeing them as a neutral mediation allowing for the expansion of mental and affective work.⁵² Directly opposing Gorz, Stiegler criticises the notion of the immaterial, stressing that the type of employment that these technologies allow still requires the actual existence of material devices. According to Stiegler, we should thus not consider capitalism’s industrial phase as a story of the past, since an information driven economy in fact requires the mass production of material supports. He uses the term ‘hypermaterial’ to denote that matter and form are no longer distinguishable in today’s energy and information complex. Within this logic, information would present itself as a form but is inseparable from its material base, the technological object that allows for its dissemination. Since technology is the support of memory, of its externalisation, but equally that which allows it to unfold, it is irrelevant to separate matter from the supposedly intangible faculty of knowledge. Hence, taking into account how a material object can both trigger the curative and toxic dimensions of itself, Stiegler avoids falling into the trap of predicting a future that will necessarily be devoid of alienated labour.

There is however another teleology of technics central to the thought of Gorz and Moulier-Boutang that Stiegler does not question, and which forms one of the pillars of his contributive economy: the inevitability of unemployment caused by automation.⁵³ Both Gorz and Moulier-Boutang consider technological innovation to be the cause of job destruction. Moulier-Boutang even predicts an unprecedented catastrophic wave of unemployment caused by the automation of mental tasks.⁵⁴ To support this, Stiegler refers to the commonly cited 2013 study by Carl Frey and Michael Osborne, in which it is claimed that 47% of US jobs are susceptible to being automated within the next decade or two.⁵⁵ As Aaron Benanav and Kim Moody show, however, even if labour conditions are worsening, automation can hardly be held responsible for it.⁵⁶ In fact, rather counter-intuitively, technological innovation and automation typically bring about a boost of employment, as prices fall in relation to productivity.⁵⁷ This was also the case in the automobile industry. In 1961, when General Motors introduced the first robot, the unimate, employment grew in that sector. The same holds true for logistics and warehousing today. The countries that have the highest levels of robotisation equally have the highest trade surplus, helping to maintain jobs rather than destroying them. Of course, this does not mean that the phenomenon of technological unemployment is entirely non-existent, but it is complex, involving periods of economic crisis, low investment in technology, deepening stagnation and financialisation.

When looking at the specific case of France, which is nonetheless representative of a general tendency in high-income countries, unemployment drastically rose in the 1970s. This fall in employment was primarily the effect of globalisation and competition, itself part and parcel of cold war history. Wanting to prevent the spread of communism, the US decided to share its technological advantage with its competitors Japan and Germany. Devaluating their currencies, European and Japanese products became more competitive, which in turn put pressure on the US. It became a race to the bottom, competing for market shares, leading to an overall plummeting of growth and thus also a drop in investments in new technologies at the expense of long-term investment in fixed capital.⁵⁸

Even if, historically, there is no evidence that automation is the absolute cause of mass unemployment, this

does not necessarily mean that it could not happen in the future, but there are few indications that this will in fact be the case. For the moment, technologies that are often cited as having the potential to put people out of work *en masse*, such as self-driving vehicles and trucks, are very unlikely to see the light of day during our lifetimes.⁵⁹ Even on a purely technological level, as Jason Smith also observes, robots are still very far from performing simple tasks.⁶⁰ The economic problem behind this is perhaps not the inherent complexity of certain tasks, but rather investment. Given the current global market's unpredictability, firms tend to favour short-term investments. This leads to capital expenditure on already existing technologies. A survey led by the World Economic Forum even shows that senior executives themselves do not think technological innovation will bring most changes to working conditions and employment. Rather they expect above all short-term profitability, pressure by shareholders and new management methods to alter the future of work.

As Pasquinelli points out, Workerism's gradual isolation of the 'Fragment on Machines' from the rest of Marx's oeuvre made it possible to separate the question of living knowledge from capital. He shows that Marx drew deeply on Charles Babbage's project to mechanise mental labour, a project underpinned by what Pasquinelli refers to as Babbage's labour theory of the machine, which states that 'a new machine comes to imitate and replace a previous division of labour.'⁶¹ Whereas Marx follows Babbage in his analysis of the division of labour of physical tasks, the history of Artificial Intelligence underwent the same process, derived from the division of labour in mathematics.⁶²

If the history of mechanisation is the history of the standardisation of tasks, including mental tasks, this problematises Stiegler's hopes for new technologies being able to de-automate knowledge. Wark, looking back on *A Hacker Manifesto*, recalls that the millennial dream of escaping commodification was perhaps too romantic a view.⁶³ The information economy has led to anything but the weakening of reification. The real problem in the history of the reception of the 'Fragment on Machines' is perhaps not the separation of the question of living knowledge from that of capital, but rather the more general isolation of the question of technology from capital accumulation. As Stiegler's work demonstrates, the

afterlife of the text made it possible to analyse the materiality of knowledge completely independently from the problem of profitability, which is more complex than productivity rates, especially in a globalised and financialised economy.

Contributive income

Nonetheless, Stiegler's philosophy should not simply be dismissed on the basis of an inaccurate understanding of the global economy. It is also a response to the deteriorating state of capitalism today, which revealed itself with the 2007-8 financial crisis, and to the restraints that today's politico-economic status quo impose on our lives. Although Gorz, Moulrier-Boutang and Stiegler justify the urgency of a form of guaranteed basic income because of automation's immanent threat, Stiegler's main concern is the degrading conditions of possibility for the unfolding of people's lives. Basic income is politically conflicted. Once promoted by Milton Friedman, it is currently defended by Silicon Valley gurus Elon Musk and Zuckerberg, as opposed to the more progressive proposals on the Left that typically stress its potential to liberate time from the logic of the market.⁶⁴ In the Post-Workerist tradition, basic income is a response to the condition of immaterial labour and Moulrier-Boutang's pollen economy, but it has roots in the earlier Workerist concept of the 'social factory', coined by Mario Tronti, according to which value extraction under post-Fordism largely takes place outside of the factory's walls.⁶⁵

Stiegler's model for a basic income is most directly indebted to Gorz's proposals for a 'second cheque' and Corsani and Lazzarato's study of the French social support system for workers in the arts and entertainment industry, *L'intermittence du spectacle*.⁶⁶ Gorz imagines a two-part redistributive system that seeks to reduce labour time, creating free time for human flourishing. Renumeration would be based on the contribution to society's general productivity and would be complemented with a second cheque.⁶⁷ With the advent of the internet and the expansion of immaterial labour, Gorz however came to support an unconditional form of basic income, on the basis that technological development would decrease the need for productive labour.⁶⁸

Whereas Gorz insists that a guaranteed form of income needs to be absolutely unconditional to avoid the

risk of the commodification of tasks once you link remuneration to an obligation, Stiegler is concerned that liberated time will be captured by the market turning it into a time of consumption, which again proletarianises the consumer.⁶⁹ He therefore turns to Corsani and Lazzarato's research on entertainment workers to supplement his blueprint for a contributive income, the aim of which is to gradually expand the intermittence redistribution system to the whole of society.⁷⁰ Stiegler's contributive income is a conditional form of income that remunerates the transmission and acquisition of knowledge and know-how. It rewards deproletarianising activities or general knowledge contribution to society. Like Gorz's second cheque and *L'intermittence du spectacle*, contributive income complements other sources of income, such as temporary forms of salaried labour.⁷¹ What Stiegler finds appealing in this system is that it rewards non-commodified activities that are valuable to society as whole, in their deproletarianising potential.

In principle, this conditionality of contributive income does not bother me. Because it is this income that would allow the system to become solvent, by encouraging the free sharing and valorisation of knowledge in all layers of society and for all types of jobs, in the way it is happening in free software.⁷²

Oddly, since a cap is never mentioned, the objective is to incite people to devote ever more time to work rather than to employment, whether this is considered in economic or non-economic terms. Like the intermittence model, Stiegler's contributive economy envisages a highly flexible individual, who could never have a clear indication of their monthly income, as it varies according to what extent they manage to combine a set of varied tasks, which are not excluded from the corporate sector. Besides the fact that it does not fundamentally question capitalism itself and opens up a way of working with corporate business, it offers no guarantee against self-exploitation.

The implementation of the contributive income would seek to remunerate 'individuals in terms of the development of their knowledge and capacities outside of working hours and on the condition that they valorise periods of intermission within the contributive economy's activities'.⁷³ Instead of advocating a right to laziness, Stiegler conceives of the deproletarianisation of knowledge not only as a right but also as a duty.⁷⁴ How

this legal aspect of this duty would concretely be realised is unclear, but he envisages it as constitutive of a new order of law that should not be enforced using its habitual institutional framework. This raises the question of who will lose out in this new social valuation system. What happens to those people who are not able to become the agile and self-innovating individuals that Stiegler envisages? He acknowledges that not everyone can contribute to society in this way – people to whom he somewhat degradingly refers to as 'fragile characters' – which is the reason why he equally supports an initial minimum and unconditional subsistence income.⁷⁵

Realising a contributive economy

Stiegler's proposal for a contributive economy has been experimented with in a conglomeration of three communes (Saint-Ouen, Saint-Denis and Aubervilliers) of the Metropolis of Greater Paris: Plaine Commune, also referred to as a 'contributive learning territory', primarily financed by the general budget for Greater Paris. Counting nearly half a million inhabitants, they are also the most precarious of the Île-de-France region.⁷⁶ Building upon pre-existing infrastructures, the first steps taken by Plaine Commune are to improve the employability of its inhabitants, educating them for a changing labour market that increasingly demands digital skills. Plaine Commune works with the research group Ars Industrialis (AI) and L'Institut de Recherche et de l'Innovation (IRI), which was formally directed by Stiegler, and the project directly draws on Stiegler's thought, referring to his concepts of proletarianisation and transindividuation throughout.⁷⁷ Collaborating with the companies Orange and Dassault Systèmes, the aim is to build new online platforms that seek to deproletarianise its inhabitants. Involving researchers, AI and IRI try to bend public education into a professionalising orientation, adapting to the corporate demands related to technological innovation and smart city urban transformation. Unsurprisingly, Orange and Dassault help to finance these research positions because they get guaranteed market shares in return. The general scheme appears to be that of making the region attractive for investors and employers, which corresponds to Stiegler's conviction that profit is absolutely necessary for investment. Mirroring the overall Post-Workerist faith in working from within capitalism

itself, this blending of the private with the public sector is more reminiscent of a neoliberal rationale than it is of the Marxian notions it nonetheless mobilises.

The importance of tracing Stiegler's economic presuppositions is thus not only to understand his thought better but to interrogate its wider political implications and shortcomings. When ideas affect people's lives directly, implemented by the city of Paris, they are not to be taken lightly. As Bunyard writes, what Stiegler's notion of a contributive economy shows is that what he was ultimately interested in was promoting 'good' capitalism over 'bad' capitalism, the dividing line being proletarianisation. The good and the bad, the proletarianising and the deproletarianising, are never fought by opposing capitalism. Deproletarianisation is fought from within and by working with capital. Proletarianisation is the problem, not capitalism. As Stiegler declares: 'the aim is to envisage that which is beneficial for society, as well as to the market, but in a sustainable way'.⁷⁸ Consequently, it is unclear whether there is any attempt to be found in Stiegler's work 'to put down capitalism, for good'. Instead, it is preoccupied with what to do in the meanwhile.

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Notes

1. Bernard Stiegler: "Le capitalisme conduit à une automatisation généralisée", interview for *Ballast*, January 3, 2019, <https://www.revue-ballast.fr/bernard-stiegler-le-capitalisme-conduit-a-une-automatisation-generalisee>.
2. Bernard Stiegler, *Technics and Time, 1: The Fault of Epimetheus* (Stanford: Stanford University Press, 1998), 26.
3. Bernard Stiegler, *Acting Out*, trans. David Barison, Daniel Ross and Patrick Crogan (Stanford: Stanford University Press, 2009), 31–2.
4. Ross Abbinnett, *The Thought of Bernard Stiegler: Capitalism, Technology and the Politics of Spirit* (London: Routledge, 2017), 64.
5. Bernard Stiegler, *Technics and Time, 3, Cinematic Time and the Question of Malaise*, trans. Stephen Barker (Stanford: Stanford University Press, 2011), 191–2.
6. Andreas Malm, *Fossil Capital: The Rise of Steam Power and the Roots of Global Warming* (London: Verso, 2016).
7. Tom Bunyard, 'Technoreformism', *Radical Philosophy* 174 (July/Aug 2012), 36.
8. John Hutnyk, 'Proletarianisation', *New Formations* 77 (Winter 2012), 127–49.
9. Karl Marx, *Capital: A Critique of Political Economy*, vol. 1,

trans. Ben Fowkes (London: Penguin, 1990), 493. Translation amended.

10. Stiegler, *Technics and Time*, 1, 26.
11. This is absent from the parallels drawn by Bunyard, 'Technoreformism', 33–6; Benoît Dillet, 'Proletarianization, Deproletarianization and the Rise of the Amateur', *Boundary 2* 44:1 (2017), 79–105; Jason Read, *The Politics of Transindividuality* (Leiden: Brill, 2016); Shawna Vesco, 'Collective Disindividuation and/or Barbarism: Technics and Proletarianization', *Boundary 2* 42:3 (2015), 85–104.
12. Matteo Pasquinelli, 'On the Origins of Marx's General Intellect', *Radical Philosophy* 2.06 (Winter 2019), 43–56.
13. See Aaron Benanav *Automation and the Future of Work* (London: Verso, 2020) and Jason Smith, *Smart Machines and Service Work* (London: Reaktion Books, 2020).
14. Bernard Stiegler, *L'emploi est mort, vive le travail! Entretien avec Ariel Kyrrou* (Paris: Mille et une nuits, 2015), 114–5.
15. Bernard Stiegler, *Automatic Society: Volume 1, The Future of Work*, trans. Daniel Ross (Cambridge: Polity Press, 2016), 25.
16. Stiegler, *Automatic Society*, 164.
17. Stiegler, *Automatic Society*, 70.
18. Victor Petit, 'Vocabulaire d'Ars Industrialis', in *Pharmacologie Du Front National* (Paris: Flammarion, 2013), 381–2.
19. Ian James, 'Bernard Stiegler and the Time of Technics', *Cultural Politics* 6:2 (2010), 207–28.
20. Bernard Stiegler, *States of Shock: Stupidity and Knowledge in the 21st Century* (Chichester: Wiley-Blackwell 2015), 157.
21. Stiegler, *Technics and Time*, 3, 16–20.
22. Stiegler, *Technics and Time*, 3, 20–1.
23. Stiegler, *Technics and Time*, 1, 245–50.
24. Petit, 'Vocabulaire d'Ars Industrialis', 381–2.
25. Gilbert Simondon, *On the Mode of Existence of Technical Objects*, trans. Cecile Malaspina and John Rogove (Minneapolis: Univocal, 2017).
26. Stiegler, *Technics and Time*, 3, 82–7.
27. Stiegler, *States of Shock*, 128. Stiegler, *États de choc: bêtise et savoir au XXIe siècle* (Paris: Mille et une nuits, 2012), 210.
28. Stiegler, *Technics and Time*, 3, 86.
29. Stiegler, *Automatic Society*, 28.
30. Eric Hobsbawm, 'Foreword', in *Karl Marx's Grundrisse: Foundations of the Critique of Political Economy 150 Years Later* (London: Routledge, 2008), xxiv.
31. See Maria Turchetto, 'From "Mass Worker" to "Empire": The Disconcerting Trajectory of Italian Operaismo', in *Critical Companion to Contemporary Marxism* (Leiden: Brill, 2007), 285. For the larger backdrop, see Razmig Keucheyan, *The Left Hemisphere: Mapping Critical Theory Today*, trans. Gregory Elliott (London: Verso, 2013), 79–85.
32. Steven Wright, *Storming Heaven: Class Composition and Struggle in Italian Autonomist Marxism* (London: Pluto, 2002), 107–114.
33. See Massimiliano Tomba and Riccardo Bellofiore, 'The "Fragment on Machines" and the Grundrisse: The Workerist Reading in Question', in Marcel van der Linden and Karl Heinz eds., *Beyond Marx: Theorising the Global Labour Relations of the Twenty-First Century*, (Leiden: Brill, 2014), 346.
34. Karl Marx, *Grundrisse* (London: Penguin, 1993), 704.

35. Wright, *Storming Heaven*, 163.
36. Antonio Negri, *La classe ouvrière contre l'état* (Paris: Éditions Galilée, 1978), 277–8. Translation my own.
37. Maurizio Lazzarato, 'Immaterial Labour', in *Radical Thought in Italy: A Potential Politics*, ed. Paolo Virno and Michael Hardt (Minneapolis: University of Minnesota Press, 1996), 133–47.
38. Lazzarato, 'Immaterial Labour', 140.
39. Compare Negri, *La classe ouvrière*, 277–8 with Antonio Negri and Michael Hardt, *Empire* (Cambridge, MA: Harvard University Press, 2000), 294.
40. Antonio Negri, *Goodbye Mr Socialism: Radical Politics in the 21st Century* (London, USA: Seven Stories, 2008), 168.
41. Isabelle Garo, *Communisme et stratégie* (Paris: Éditions Amsterdam, 2019), 126.
42. See Antoine Aubert, 'Multitudes: aux origines d'une revue radicale', *Multitudes* 3:67 (2017), 34–5.
43. Yann Moulier-Boutang, *Cognitive Capitalism* (Cambridge: Polity Press, 2011), 161–4.
44. McKenzie Wark, *A Hacker Manifesto* (Cambridge, MA: Harvard University Press, 2004), 29, 76.
45. André Gorz, *The Immaterial: Knowledge, Value and Capital*, trans. Chris Turner (London: Seagull Books, 2010), 108.
46. Gorz, *The Immaterial*, 127.
47. Stiegler, *Automatic Society*, 209–13.
48. Stiegler, *L'emploi est mort*, 36. Translation my own.
49. André Gorz, *Capitalism, Socialism, Ecology* (London: Verso, 2012), 69.
50. Frederick Harry Pitts, 'Beyond the Fragment: Postoperismo, Postcapitalism and Marx's "Notes on Machines", 45 Years On', *Economy and Society* 46:3-4 (2017), 337.
51. Tomba and Bellofiore, 'The "Fragment on Machines"', 356.
52. Bernard Stiegler, *Économie de l'hypermatériel et psychopouvoir. Entretien avec Philippe Petit et Vincent Bontems* (Paris: Mille et une nuits, 2008), 109–112.
53. Although Ian James argues that Stiegler's conception of historical time is anything but teleological as it does not include a notion of necessary progress, Stiegler's engagement with automation theory is another facet of his thought on technology that is undeniably teleological. See Ian James, 'Bernard Stiegler and the Time of Technics', *Cultural Politics* 6:2 (2010), 207–27.
54. Yann Moulier-Boutang, 'L'automation intellectuelle, la mort de l'emploi et le revenu de pollinisation', *Multitudes* 1:58 (2015), 17–27.
55. Kim Moody, 'High Tech, Low Growth: Robots and the Future of Work', *Historical Materialism* 26:4 (17 December 2018), 6. In fact, Stiegler never directly cites the study, but simply refers to Frey and Osborne's institutional affiliation, the University of Oxford.
56. Aaron Benanav, 'Automation and The Future of Work – I', *New Left Review* 119 (October 2019), 5–38; Benanav, 'Automation and the Future of Work – 2', *New Left Review* 120 (December 2019): 117–46; Kim Moody, 'High Tech, Low Growth: Robots and the Future of Work', *Historical Materialism* 26:4 (17 December 2018), 3–34;
57. Benanav, 'Automation and The Future of Work – I', 17.
58. Benanav, 'Automation and The Future of Work – I', 35.
59. Moody, 'High Tech, Low Growth', 16–7.
60. Smith, *Smart Machines and Service Work*, 130.
61. Pasquinelli, 'Origins of Marx's General Intellect', 45–6.
62. Lorraine Daston, 'Calculation and the Division of Labour, 1750–1950', *Bulletin of the German Historical Institute* 62 (Spring 2018), 9–30.
63. McKenzie Wark, *Capital is Dead: Is This Something Worse?* (London: Verso, 2021), 51.
64. For a good overview of the history the idea of Universal Basic Income, see Anton Jäger and Daniel Zamora, *Basic Income: An Intellectual History*, forthcoming with the University of Chicago Press, 2021. On its promotion by Musk and Zuckerberg, see Aaron Benanav, *Automation and the Future of Work* (London: Verso, 2020), 16. For progressive proposals on the Left, see Federico Chicci and Emanuele Leonardi, 'Rethinking Basic Income', *Radical Philosophy* 2.19 (2021), 81–9.
65. Mario Tronti, 'Factory and Society', in *Workers and Capital*, trans. David Broder (London: Verso, 2019), 12–36.
66. Antonella Corsani and Maurizio Lazzarato, *Intermittents et précaires* (Paris: Éditions Amsterdam, 2008).
67. André Gorz, *Critique of Economic Reason*, trans. Gillian Handyside and Chris Turner (London: Verso, 1989), 203–8.
68. Gorz, *The Immaterial*, 122–4. Walter Van Trier, 'Do Firms Need to Be "Third Places" for Jobs to Be Good? Some Comments on André Gorz's Justification of Unconditional Income Guarantees', in *Between the Social and the Spatial: Exploring the Multiple Dimensions of Poverty and Social Exclusion*, ed. Katrien De Boyser (Ashgate: Farnham, 2009), 89–110.
69. Stiegler, *Automatic Society*, 219–21.
70. Bernard Stiegler and Ariel Kyrou, 'Le revenu contributif et le revenu universel', *Multitudes* 63:2 (July 2016), 54.
71. Stiegler, *L'emploi est mort*, 103.
72. Stiegler and Kyrou, 'Le revenu contributif et le revenu universel', 54. Translation my own.
73. *Faire de Plaine Commune un territoire d'expérimentation du revenu contributif*, a report published in 2017 by Plaine Commune addressed to M. Thierry Mandon, Minister of Higher Education and Research (2015–2017), 11.
74. Stiegler, *Automatic Society*, 215.
75. Stiegler, *L'emploi est mort*, 76–7.
76. *Faire de Plaine Commune*, 4.
77. See *Faire de Plaine Commune*, throughout.
78. Stiegler, *L'emploi est mort*, 116.



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of the move from
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organizations to
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Peter Hallward (CRMEP, Kingston University)
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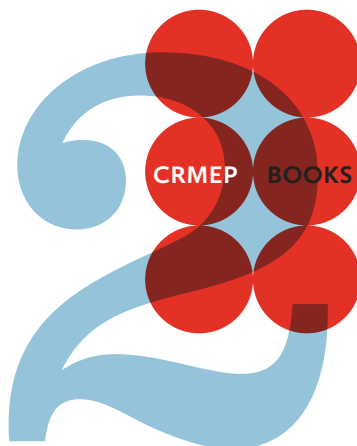


**Vocations
of the political**
Mario Tronti & Max Weber

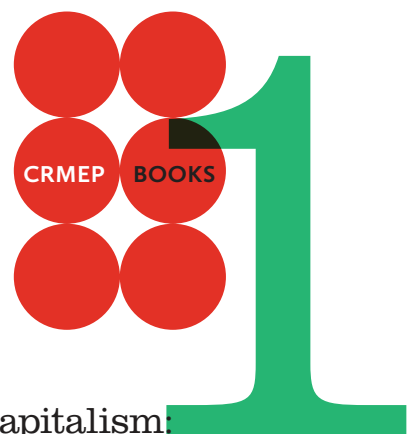
CRMEP BOOKS

Asserting in 1966 that 'Lenin was closer to **Max Weber**'s *Politics as Vocation* than to the German working-class struggles', the Italian radical philosopher and political theorist **Mario Tronti** set about rethinking 'the autonomy of the political'. These essays and translations of texts by Tronti reflect on the conjunctions of his thought with Max Weber's.

Contributors Howard Caygill, Alex Martin, Elettra Stimilli, Alberto Toscano, Mario Tronti (4 essays)



Thinking art
materialisms, labours, forms



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