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Revolution 4.0: Assessing Labour and Welfare

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Abstract

As technological progress, automation, and digital platforms have entered the labour market and are expected to progressively change its dynamics, material and discursive neoliberal practices are directing technology towards the maintenance of the socio-economic status quo. This thesis aims at demonstrating that, albeit technology has the potential to contribute to the building of a post-neoliberal society, the neoliberal narrative has managed to appropriate critical arguments to legitimize exploitative practices aimed at avoiding the shift to an alternative order.

The first chapter introduces the issue of automation and the main studies that have been led about the topic, together with an analysis concerning how the conception of a future without work has changed after the neoliberal turn in the late 1970s and 1980s.

The second chapter addresses the notion of platform capitalism, notably the practices through which digital platforms are utilized to foster underpaid and unpaid labour as well as surplus value extraction and the narrative utilized to justify those practices. After the analysis of the digital and gig economies, the chapter concludes with a brief outlook of a set of proposals for the future of the digital economy.

The third and concluding chapter addresses future perspectives concerning welfare and economic policies, highlighting the risk of neoliberal appropriation of counter arguments and proposals, providing the Universal Basic Income (UBI) as an example.

Abstract (Italian)

Nonostante le visioni ottimistiche adottate nel passato, specialmente durante il XX secolo, riguardo al futuro, solitamente dipinto come un tempo caratterizzato da condizioni di vita migliori, progresso tecnologico e diminuzione del lavoro, il presente nel quale viviamo non sembra essere stato all'altezza delle aspettative. Mentre il progresso scientifico è progredito e si trova tutt'ora in via di sviluppo, il mercato del lavoro tende verso una maggiore precarietà: uno dei ruoli chiave in questo passaggio è stato ricoperto da un'insistente deregulation portata avanti dalle politiche neoliberali che a partire dagli anni Settanta e Ottanta hanno impedito l'avverarsi delle richieste di autonomia avanzate in quegli anni dai movimenti sociali di lavoratori e studenti. Gli strumenti tecnologici, siano essi oggetti materiali o spazi digitali, anziché essere utilizzati con il fine di sprigionare il loro potenziale per obiettivi collettivi e collaborativi, hanno visto le loro capacità prevalentemente confinate nel campo del profitto privato. Questa tesi intende focalizzarsi sui modi in cui la tecnologia potrebbe indirizzare il futuro del lavoro e delle politiche di welfare, interpretando tuttavia lo sviluppo scientifico non come autonomo, ma come un processo dipendente – come tutti gli altri processi sociali –

dall'ordine socio-economico entro cui si sviluppa. Sotto questa prospettiva, il progresso scientifico e tecnologico, come quello del futuro del lavoro, del welfare, e delle relazioni sociali in generale, sembrerebbero destinati a rimanere orientati verso la conservazione dello status quo socio-economico, rappresentato da quello che viene comunemente chiamato "neoliberismo". Questo macro-sistema, i cui principi centrali sono rappresentati da processi di deregulation, privatizzazione, e individualizzazione, è infatti caratterizzato da una notevole capacità di adattamento alle trasformazioni economiche e sociali, nonché dalla promozione di una retorica altamente capace di autogiustificazione e creazione di consenso, che gli permettono di perpetuarsi e mantenere in vita la centralità del capitale: in termini gramsciani, si potrebbe descrivere come un ordine egemonico. Questa egemonia spiegherebbe dunque l'abilità del sistema capitalista di neutralizzare processi potenzialmente rivoluzionari - come quello tecnologico, o come quelli che potrebbero sprigionare da proposte di cooperazione in ambito economico o di allargamento delle misure di welfare - per includerli entro i confini delle norme neoliberali, lasciando quest'ultime largamente incontestate.

La tesi centrale di questo lavoro è che, in modo da preservare e perpetuare la sua posizione egemonica, l'ordine neoliberale esercita, attraverso pratiche sia materiali che discorsive, processi di appropriazione (a) di strumenti e conoscenza tecnici (tecnologia e, più generalmente, general intellect) che potrebbero potenzialmente essere utilizzati per fini diversi dal profitto privato; (b) di argomenti e proposte originariamente avanzati dalla critica (sia sociale che artistica).

Il primo capitolo affronta i processi noti come "automazione" e "computerizzazione", attraverso cui macchine e algoritmi stanno via via sostituendo il lavoro vivo e trasformando il mercato del lavoro, e le aspettative riguardanti il loro potenziale ruolo futuro di promotori di disoccupazione. A seguito di una breve descrizione del progresso tecnologico a livello storico intesa a far emergere le peculiarità della "Rivoluzione 4.0" che stiamo attraversando, il capitolo presenterà un'analisi comparata degli studi più rilevanti che sono stati redatti attorno all'argomento dell'automazione, cercando di tenere conto sia delle diverse prospettive che delle incertezze legate a questo tipo di previsioni. L'analisi seguirà con alcune considerazioni a livello storico riguardanti la prospettiva di un futuro senza lavoro, dovuto a dinamiche di distruzione occupazionale causata da processi di automazione: la percezione di questa idea sembra infatti aver affrontato una trasformazione profonda a livello collettivo durante il passaggio dall'ordine fordista a quello post-fordista. Questa sezione interpreta questo cambiamento del sentito comune in luce dell'implementazione di politiche neoliberali avvenuta durante quel periodo (specialmente nei paesi occidentali a partire dagli anni Ottanta del Novecento), che hanno contribuito in maniera consistente alla conversione dell'idea di riduzione del lavoro da una prospettiva positiva di futuro senza fatica a una minaccia di disoccupazione e povertà imminenti.

Il secondo capitolo presenta un quadro generale delle varie forme di lavoro attuate all'interno dell'ambito dell'economia digitale delle piattaforme. Partendo dal concetto di platform capitalism ("capitalismo delle piattaforme") e da una classificazione delle diverse piattaforme, questa parte intende dare luce alle pratiche attraverso cui le aziende digitali ricavano profitto utilizzando le piattaforme come fonte di forza lavoro e, conseguentemente, di plusvalore,

cercando di espandere il proprio potere monopolistico e promuovendo una crescente deregulation nel mercato del lavoro digitale e non. In primo luogo, verranno analizzate le forme di lavoro pagate all'interno del platform capitalism, prestando particolare attenzione allo sviluppo dell'occupazione instabile, irregolare e sottopagata promossa dalle lean platforms operanti in quella che viene denominata "gig economy". Ampio spazio verrà dato al riconoscimento legale dei lavoratori della gig economy (che di norma non vengono riconosciuti come dipendenti dalle aziende attraverso cui operano, ma come autonomi) attraverso un'analisi di casi giuridici significativi provenienti da diverse giurisdizioni nazionali, specialmente dal sistema giuridico britannico, che si è dimostrato maggiormente avanzato su questi temi rispetto ad altri (uno su tutti, quello italiano). In secondo luogo, l'analisi si sposterà a una forma di lavoro digitale non pagato comunemente chiamato "data labor". Il termine si riferisce alle interazioni e alle attività svolte a titolo gratuito dagli utenti delle piattaforme digitali che vengono convertite (spesso all'insaputa dei loro produttori) in plusvalore successivamente estratto dai proprietari delle piattaforme. Attraverso la descrizione del lavoro sottopagato e non pagato nell'arena digitale, il capitolo si pone l'obiettivo di evidenziare come, a discapito della narrazione ottimistica neoliberale che descrive l'economia digitale con termini a valenza positiva quali "sharing", "peer-to-peer", "collaborative", ecc., sotto queste pratiche discorsive si cela una realtà di precarietà e disuguaglianze socio-economiche sostanziali.

Il terzo e conclusivo capitolo affronta l'appropriazione neoliberale di argomenti propri della critica, focalizzandosi sulle – attualmente largamente dibattute - proposte di reddito di base universale (UBI - Universal Basic Income). Fornendo un resoconto sia della proposta neoliberale di basic income, solitamente promossa dai rappresentanti della Silicon Valley e in linea con le politiche di deregulation e privatizzazione, che di un progetto di reddito di base conflittuale di sinistra basato su tre caratteristiche chiave (universale, incondizionato, supplementare), il capitolo evidenzia sia l'indesiderabilità del primo che le carenze del secondo. L'argomento centrale, per quanto concerne l'UBI, è che se queste politiche non vengono precedute o accompagnate da una trasformazione diretta ad investire l'intero ordine economico, le proposte di reddito di base sono destinate ad essere appropriate dalla narrazione neoliberale ed implementate in linea con i suoi principi. La tesi conclude con il suggerimento di spostare il focus del dibattito dai progetti di basic income, ritenuti da chi scrive insufficienti a ribaltare lo status quo, a una più profonda analisi delle relazioni che stanno alla base delle ineguaglianze socio-economiche globali, sottolineando la necessità di riappropriazione di tematiche centrali che devono essere volte a creare prospettive e progetti alternativi per il futuro.

Introduction

In recent and current history, progressive and rapid technological development, intervening in both the private and social sphere, has contributed to the transformation of various aspects of human life, including social interactions, production processes, individual self-identification. This thesis will focus, above all, on the ways technology is currently transforming the labour market and how it is likely to shape the future of work and welfare. Nonetheless, rather than interpreting technology as an independent autonomous process, the analysis made in this paper will be based on – and attempt to provide evidence for – the assumption that technological development, as other social processes, is directed and shaped by the overall socio-economic order in which it occurs, rather than acting autonomously from external forces. From this perspective, the development of technological progress as well as that of the general future of work and social relations seem likely to remain oriented towards the conservation of the socio-economic *status quo*, represented by what we call “neoliberalism”. This system, whose main principles include market deregulation, privatization, and individualization, is indeed characterized by its impressive capacity of adaptation to social and economic changes as well as by a highly consensus-creating, self-justifying narrative: in Gramscian terms, it could be suggested that it has developed into a hegemonic order.¹Neoliberalism, facing continuous technological innovation,

¹ Gramsci (1971)

is managing to limit the possibilities of such development within the boundaries of its rules, transforming technology into an instrument mostly directed towards private profit generation. Moreover, as value-generation and production processes have changed accordingly to this development, labour-capital relations have faced significant transformations as well, especially further deregulation of the labour market to be interpreted in line with other free market policies. At the same time, opponent political positions and proposals – concerning technology as well as the future of labour and society as a whole – are subject to attempts of neutralization, in order to maintain neoliberal policies largely uncontested.

I argue that, to preserve and perpetuate the hegemonic position of neoliberalism, this order exercises appropriation of (1) technical knowledge and instruments (technology) that could potentially be used for aims different from private profit and (2) the arguments advanced by the critique² through its discursive and material practices.

The first chapter will address the processes known as *automation* and *computerization*, and the expectations concerning their role as potential factors of unemployment creation. After a brief description of scientific progresses from an historical perspective and of the peculiar characteristics of the current “Revolution 4.0”, a comparative analysis will be led between the major studies conducted on the topic. Such examination will be followed by historical considerations concerning

² The term “critique” utilized in this thesis is to be intended as comprehensive of both the “social” critique, focused on social rights e.g. workers’ rights, including minimum wage, holiday pay, etc., and the “artistic” critique, centred on demands of freedom and independency, including freedom from work. (Boltanski, Chiapello: 2007)

the transformation that the common perception of job destruction dynamics due to automation has faced after the neoliberal turn – especially after the 1980s in Western countries. In particular, the section aims at interpreting the dissolution of the understanding of automation as a liberating factor in connection with the implementation of neoliberal policies occurred since the last decades of the 20th century.

The second chapter provides an outlook of various forms of labour taking place within the digital economy. Starting from the notion of “platform capitalism”³, this section highlights the methods through which private firms utilize digital platforms as a source for their revenues, expanding monopoly power and promoting labour deregulation. Firstly, paid labour in platform capitalism will be analysed, particularly the spreading contingent work fostered by lean platforms operating in what is known as “gig economy”. Gig workers’ legal recognition will be given particular attention through an analysis of significant case law from national jurisdiction, especially that of UK – which has proven to have developed consistently in this juridical field, in contrast with other juridical systems (such as the Italian one). Secondly, the analysis will move to unpaid labour in the digital environment, which is called by scholars of the field “data labour”. The term refers to the activities led by users within the digital realm: albeit provided freely⁴, users’ activities are turned into surplus value extracted by platform owners. Through the description of underpaid and unpaid labour in platform capitalism, the chapter

³ Srnicek (2017)

aims at evidencing how, despite the neoliberal rhetoric refers to the private digital field with positive terms such as “sharing”, “collaborative”, “peer to peer”, and so forth, under these neoliberal discursive practices lies a context of substantial socio-economic insecurity and inequality, as well as a “consensus-creating machine”⁵ that contributes to the construction of neoliberal subjects.

The third and concluding chapter addresses neoliberal appropriation of critique arguments, focusing on the (currently highly discussed) proposals of universal basic income (UBI). Providing an account of both the neoliberal proposal of basic income - usually backed by Silicon Valley representatives and aligned with market deregulation and welfare privatization - and a conflictual⁶ leftist proposal of UBI based on three core characteristics (universal, unconditional, supplemental)⁷, the chapter highlights the undesirability of the former as well as the flaws of the latter. The section concludes with the suggestion of shifting the focus from basic income proposals to a deeper analysis of the roots of socio-economic inequality, contemporarily evidencing the necessity to overcome neoliberal appropriation of further future proposals through the development of counter-hegemonic discursive and material strategies.

⁴ In the sense that it is both unpaid and voluntary (Terranova: 2000)

⁵ Terranova (2000), p.39

⁶ Chicchi, Leonardi (2018)

⁷ Srnicek, Williams (2015)

Chapter 1: Automation and Computerization under the Neoliberal Order

The words “automation” and “computerization” are increasingly being used in the debate on labour market and the future of labour, often related to the expected rise of unemployment due to the substitution of human performances by industrial robots or computational algorithms. These two terms, albeit indicating similar processes and activities, are not synonyms: indeed, while *automation* refers to the use of “automatic equipment” in the production process⁸ and to the general “use of machines or computers instead of people to do a job, especially in a factory or office”⁹, *computerization* is a more specific term, focused on the conversion from analogic to computerized processes, which means to “use a computer to do something that was done by people or other machines before”¹⁰ or “to convert information to a form in which it is stored or processed by computer.”¹¹ Therefore, throughout this dissertation I will use “automation” to refer to the general substitution of human labour by new technologies (be them machines, robots or computers), while “computerization” will be employed to indicate the same substitution when it is exclusively operated through computers.

⁸ Definition of “automation” in Oxford dictionary <https://en.oxforddictionaries.com/definition/automation> accessed: 10 May 2018

⁹ Definition of “automation” in Cambridge dictionary <https://dictionary.cambridge.org/dictionary/english/automation> accessed: 10 May 2018

¹⁰ Definition of “computerization” in Cambridge dictionary <https://dictionary.cambridge.org/dictionary/english/computerize?q=computerization> accessed: 10 May 2018

¹¹ Definition of “computerize” in Oxford dictionary <https://en.oxforddictionaries.com/definition/computerize> accessed 10 May 2018

This chapter will focus on data and researches available about the expected job automation/computerization and the implications these processes could have on our understanding of the future of labour and the possibilities and challenges they represent for the national and global economies as well as for the individual subject who will have to deal with a new economic and social environment.

1.1 Technological progress: what's new?

As previously mentioned, when analysing automation and computerisation, concerns over unemployment often appear, rising questions about how and by whom the problem will have to be dealt with, the principal and most important being “what will people whose job has been automated do?”. Other uncertainties are related to the changes that could affect national economies and their welfare systems, as well as the transformations that will occur at the global level. Opinions and proposed solutions are numerous and divergent, and data and researches differ from each other: this creates an intellectual environment in which doubts seem to overcome certainties, and where the only point of agreement is that, to a certain degree, automation will affect a number of workers in the next decades. Technology, hence, represents a core challenge for the future of the labour market, as it has already been in the past. However, uncertainties and disagreements concerning technological consequences on labour, first and foremost unemployment percentage, can be interpreted as a signal that the technological

progress we are experiencing will not replicate the pattern of the previous revolutions, but it could instead represent a different and new process whose consequences are difficult to estimate and predict.

To understand one of the principal characteristics that raises doubts about the future of workers and which can be viewed as a feature that differentiates the current technological revolution from the previous ones, it is useful to focus on job destruction and job creation dynamics and on the shifts displaced workers have historically made from old to new economic sectors.

1.1.1 First shift: from agriculture to industry

Destruction and creation of jobs following the agricultural and industrial revolutions is certainly not a novelty: as it is well known, displaced workers have shifted from sector to sector every time some innovation entered the production process. Peasants who were replaced by agricultural inventions and machines during the agricultural revolution tended to move to urban centres, becoming part of the emerging working class that would be the protagonist of the First Industrial Revolution, which was fed by former agricultural workers, artisans and domestic workers. Progresses in agriculture, moreover, resulted to have helped the following industrial development in at least four ways: feeding a growing population, increasing the purchasing power necessary to buy industrial products, moving people from peripheral to urban areas, contributing to the creation of the capital

needed for industrial investment.¹² Increasing productivity in agriculture fostered productivity in industry, allowing for the forthcoming increase in employment and wages. If we shift for a moment on today's developments, it is interesting to notice that statistics show that, while technology is developing and increasingly used in production, wages in Western countries (but also in some developing countries)¹³ remain stagnant, jeopardizing the purchasing power of the employed and representing a sort of anomaly if compared to other economic revolutions' trends.¹⁴ As noted by Rifkin:

“For more than a century, the conventional economic wisdom has been that new technologies boost productivity, lower the costs of production, and increase the supply of cheap goods, which, in turn, stimulates purchasing power, expands markets, and generates more jobs. This central proposition has provided the operating rationale for economic policy in every industrial nation of the world. Its logic is now leading to unprecedented levels of technological unemployment, a precipitous decline in customer purchasing power, and the spectre of a worldwide depression of incalculable magnitude and duration.”¹⁵

Between the end of the 20th and the start of the 21st century, technological developments have not boosted purchasing power. Instead, to make consumption rise, banks started to allow consumer credit: overproduction was balanced by

¹² De Simone (2014), pp. 57-58

¹³ Balliester, Elsheikhi (2018), p. 25

¹⁴ OECD (2017) <http://www.oecd.org/employment/oecd-employment-outlook-19991266.htm> accessed: 15 May 2018

¹⁵ Rifkin (1995), p.15

increasing consumer indebtedness, which would later represent the basis for the forthcoming crises and depression.¹⁶ Technology, despite increasing productivity, has not allowed better living wages as expected. When the financial bubble burst, it was clear that well-being was apparent, fed by financialization rather than productivity.¹⁷

Returning to job creation and destruction dynamics, we can now briefly retrace the developments occurred after the First Industrial Revolution, focusing on the emergence of mass production and new “scientific” management approaches at the beginning of the 20th century. Gravitating around Taylor’s division of labour¹⁸ and Fordism, these new ways of dealing with management, while changing deeply the overall production system and its hierarchical structure, did not displace factory workers significantly. Instead, as the Fordist assembly line first appeared in 1913, the task division it implied, while de-skilling them, augmented the number of workers required for the production of the so-called T-model: “what had previously been a one-man job was turned into a 29-man worker operation”.¹⁹ The Fordist factory therefore allowed to put into work huge de-qualified masses, who could learn how to do their single task in few hours, creating the basis for mass

¹⁶ Albeit extremely important to understand the financialization of the economy and the developments which occurred in those years and which have led to the current global economic situation, this topic is too wide to be discussed in this thesis, although it will be mentioned quite often throughout the next chapters.

¹⁷ Dyer-Witford (2015), p.169

¹⁸ Theorized in Frederick Taylor’s *The Principles of Scientific Management*, 1911

¹⁹ Bright (1958) cited in Frey and Osborne (2013), p.9

production and scale economies.²⁰ Moreover, as electricity allowed for increasing mechanisation of production, it also increased the demand for both blue-collar skilled operators and white-collar workers,²¹ who would have taken an higher position in the factory hierarchy.

1.1.2 From mass production to lean production

The second half of the 20th century saw the gradual decline of the application of Taylorism accompanied by the rise of a new production management model known as *Toyotism*, first invented and utilised by the Japanese corporation Toyota. Shifting the focus from production to consumption, the *lean production* of Toyotism and its “Just-In-Time” (JIT) system aims at reaching symmetry between demand and supply, substituting the standardized production with a more flexible production of small series which can be personalised according to consumers’ preferences. The assembly line continues its existence, but it can be stopped by the operators, who can arrest it if they find something that needs to be adjusted, and it is shaped like a U so that the entrance and exit are next to each other.²² During this phase, modern industrial robotics begins entering the factories, firstly in Japan and the US.²³ Production becomes lighter, and the increasing reliance on technology and attention to the demand side imply a focus on customers and their preferences, allowing a boom of the service sector.

²⁰ Nicoli (2017) p. 101

²¹ Goldin and Kants (1998) quoted in Frey, Osborne (2013), p.72

²² Nicoli (2017), pp. 149-150

1.1.3 Second shift: from industry to services

While the so-called lean production was born in Japan, it was the US the nation that, between the 1920s and the 1930s, begun to build its economy around consumption, turning its population into a mass of “dissatisfied consumers” who would perceive every new product as a necessity. To do so, the business community not only had to develop advanced advertising methods, but they also had to lead a wider project aimed at changing people’s habits and values, reorienting them towards the “new economic gospel of consumption” – to quote a paper by Edward Cowdrick.²⁴ During the 20th century (especially its second half), together with a shift from mass production to mass consumption, from standardization to *flexibility*, a shift from industry and agriculture to the services sector occurred for many workers, engaged in analysing consumers’ preferences, advertising, and selling both material and non-material commodities; but also serving clients through unskilled, precarious, part-time jobs such as the waiter, the cleaner, the cashier. Marketing acquires in this period a new, central role in corporate management²⁵: it becomes a necessity for every business, since it is needed to attract purchasers through the development of advertising, customer care and the analysis of customers’ preferences. These trends then spread, firstly, through other developed countries and, later, worldwide, feeding the service sector, “a sprawling category including retail, transportation and logistics,

²³ Reynolds (2018), p.61

²⁴ Cowdrick (1927)

²⁵ Rifkin (1995), p. 20

information technology services, finance, business services, education, healthcare, hotels and restaurants, and government employees – as opposed to the goods-producing sectors.”²⁶ Cognitive tasks are more and more performed than manual activities, to the extent that terms such as “cognitive workers” or “cognitariat” have increasingly been used to describe the new composition of the workforce.²⁷ With the following graph it is possible to notice the astonishing increase in employment in the service sector throughout the past decades at the global level, and to understand why it has been described, among other terms, as an “explosion of services”.²⁸

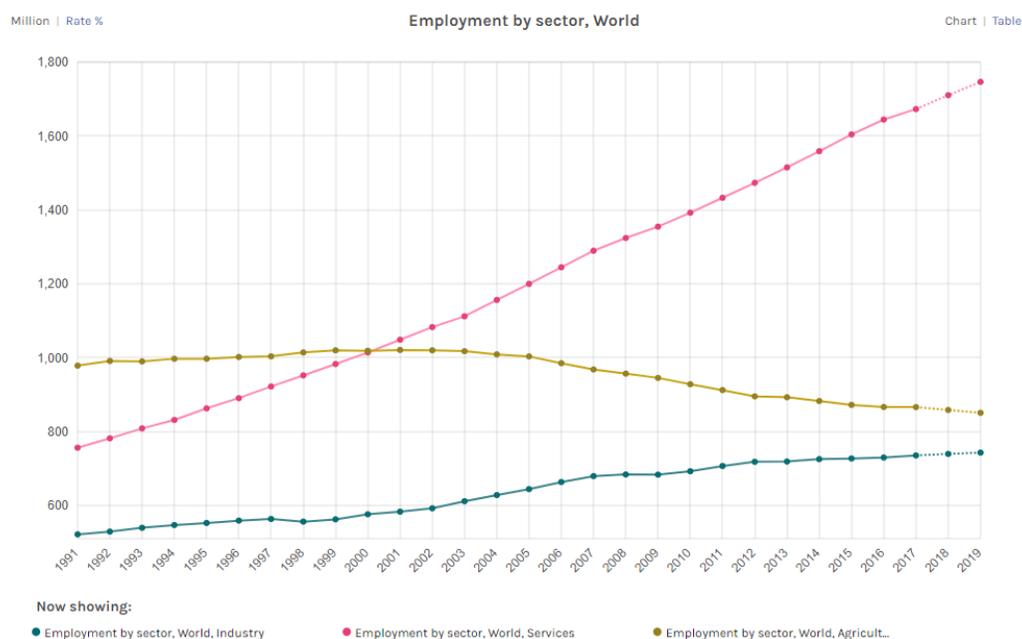


Figure 1- Employment by sector, World

Source: International Labour Organization

²⁶ Reynolds (2018), quoting the Bureau of Labor Statistics

²⁷ Srnicek (2017), p. 38

1.1.4 Third shift: from services to automation

At this point, the general pattern of sector shifting and job replacement following technological development and management reconstruction is clear: from agriculture to industry, from industry to services; from the Fordist blue-collar worker to the contemporary pink-collar service worker.²⁹ What is not clear is whether the job destruction caused by current technological developments will lead to job creation: the core problem, indeed, is that it is the service sector the one which is experiencing automation and computerization, and we do not know with certainty to what extent existing human tasks and jobs are going to be replaced by machines and computers and whether automation will be followed by the creation of new jobs or not. Here uncertainties rise about the future of work. Job elimination is nothing new: for instance, Luddite revolts against steam-power looms that were replacing human labour in the 19th century remain a well-known example concerning workers' substitution by machines. What is new is that, as pointed by Bejija Ma, while "over the past 200 years and more, societies have eventually found ways of turning technological developments to their advantage"³⁰, today it is not certain whether we will be able to reorganize the labour market and the society as a whole around the next developments in technology. Opinions regarding job replacement are various and divergent, but it seems that, while there is agreement about the fact that some percentage of work in services will certainly be automated,

²⁸ Durand (2004) quoted in Nicoli (2017), p. 158

²⁹ Foti (2017), p.73

no study or research has provided proof that a sector large enough to employ the totality of out-of-work people could develop. Positive expectations about the likelihood of job creation of course exist: for example, a 2017 ILO employment policy brief, examining a study on automatic teller machines (ATM)³¹, pointed out that even though the implementation of ATMs has reduced by about 1/3 the number of bank tellers per bank branch, the total number of employees in the industry increased around 10%, since those who were able to keep their job have specialized in “relationship banking”, a term that refers to communication and consumer counseling.³² Other studies argue that, since historically – as mentioned previously – technological change has brought to positive job adjustment, the developments we are experiencing will expand labour demand in different and/or new sectors as well³³, especially in creative jobs around areas like architecture, engineering, computer, media, management and mathematics.³⁴ Agreement exists on the fact that jobs that require creativity and relation capabilities are less likely to become automated: indeed, one of the most quoted studies, led by Oxford University, calculated the probability of computerization basing its research on the assumption that jobs which require high levels of social intelligence, creativity and

³⁰ Steward, *The Guardian* (2015) <https://www.theguardian.com/technology/2015/nov/05/robot-revolution-rise-machines-could-displace-third-of-uk-jobs> accessed: May 2018

³¹ Bessen (2015)

³² ILO (2017)

³³ WEF (2016); Smith, Anderson (2014)

³⁴ Balliester, Elsheikhi (2018)

perception and manipulation abilities face lower risk than other occupations.³⁵ However, the existence of tasks and jobs that have fewer probability of being automated does imply neither a certain forthcoming increase of such occupations in the total employment demand nor the assurance that they will not be automated in a more distant future. For example, only 4 percent of total employment in the US is represented by “creative” jobs³⁶: it seems improbable that such small share could give employment to the future unemployed, especially if they are not specialized in the creative field. As a matter of fact, a large share of studies on automation and unemployment claims that, even though technological development requires an increase in employment in areas such as computer and engineering, it would be naïve to assume that these relatively small sectors could absorb the enlarging share of unemployed and to ignore that those made redundant by automation would be in great part low-skilled workers who would find it difficult or even impossible to enter high-skilled creative professions sheltered from computerisation.³⁷ The potential rise of new markets, too, would not save workers from unemployment: even though new inventions and tools comparable to the television, the computer or the smartphone spread through global markets, their production would be automated as in other industries.³⁸ Moreover, even optimists fear that the creation of new jobs might not grow fast enough to keep pace with rapid unemployment.³⁹

³⁵ Frey, Osborne (2013)

³⁶ Chiusi, *Valigia Blu* (2016), <http://storie.valigiablu.it/robot-e-lavoro/> accessed: June 2018

³⁷ Rifkin (1995); Raynolds (2018); Harari (2015)

³⁸ Rifkin (1995), p.288

³⁹ Balliester, Elsheikhi (2018), p.8

In addition to the probability of automation, to understand job creation dynamics it is necessary to take into consideration the rising precarity of the labour force. Flexibility, which has grown into an imperative of the labour market (particularly from the 1980s, when neoliberal policies were widely implemented in Western countries), has shaped the hiring habits of employers to the point that, today, many people are hired through atypical forms of employment – such as short-term, part-time jobs, internships, daily contracts, informal work, and so on. This means that, even when data show a rise in people employed, on the one hand, these workers often lack a good pay – that is, sufficient purchasing power to boost consumption as well as the material conditions to lead a decent standard of living – and, on the other hand, the total hours worked by the workforce as a whole and the totality of jobs have not risen significantly. Atypical employment fosters the division of the job among different workers, who will work less hours for a lower pay: the number of employed increases, but the number of new jobs and the well-being of workers do not rise at the same pace. In addition, even when new careers are created, the working force that operates in the digital economy is often precarious, self-employed and self-exploited. The composition of workforce tends to become divided between an increasing number of underemployed⁴⁰ or unemployed and

⁴⁰ I am referring here to time-related underemployed, which is defined by ILO as follows:

“Persons in time-related underemployment comprise all persons in employment, who satisfy the following three criteria during the reference period: a) are willing to work additional hours; b) are available to work additional hours i.e., are ready, within a specified subsequent period, to work additional hours, given opportunities for additional work; and c) worked less than a threshold relating to working time i.e., persons whose hours actually worked in all jobs during the reference period were below a threshold, to be chosen according to national circumstances.”

those who work longer hours for fear of losing their position.⁴¹ Thus, to study the consequences of computerisation it is crucial to consider - besides the quantity - the quality of the professions that are eliminated and created: if technological development grows in parallel with decreasing job security and job quality, it is not possible to claim that it is leading to better labour conditions. Furthermore, the rise of flexibility and precarity will be fundamental in the way work is perceived and organized as a response to the ongoing technological revolution. Nonetheless, before addressing the options that technology opens for the future, the next paragraph will discuss a number of researches and data on automation, together with a reflection on their heterogeneity and an analysis that aims at going beyond the numbers proposed by the studies.

1.2 Expected automation: a comparative analysis of the main studies

Addressing studies that have been conducted on automation can be particularly difficult not only because, as previously mentioned, they are heterogeneous, but also because each of them gives to “automation” or “computerization” slightly different meanings, studying the issue from different perspectives. It is possible to try to estimate whether jobs could be automated in the long, medium or short term; whether they could be fully or partially automated; whether a job is at low, medium or high risk; whether technology to automate already exists and is economically feasible or, instead, could be developed in the future but it is not available yet. This

⁴¹ Rifkin (1995), p.223

section, therefore, besides presenting the main researches, aims at considering different aspects of the topic.

1.2.1 Robotics and production

The imaginary built around automation links this term mainly to robots, most of all to robots used in factories to substitute manual tasks. Although robotics represents only an aspect of overall automation, it is certainly a core issue, especially in industry and agriculture. These sectors have historically faced automation due to scientific progresses: current developments in technology are no exception, as robots are increasingly used in manufacturing to substitute human labour, either completely or partially (i.e. through human-machine cooperation and division of tasks, also known as “cobotization”). Since robot costs are declining due to continuous progress in technology and are expected to decrease rapidly in the future⁴², automation costs are declining accordingly. Progresses in advanced robotics could impact 320 million manufacturing workers (12% of global workforce) as well as other professionals, such as doctors performing surgeries.⁴³ 3D printing technologies could affect employment even more significantly, since they could create customized products more rapidly than human workforce.⁴⁴ 3D printing, moreover, it is not limited to small objects, but it allows to produce any kind of good from aircrafts components to buildings: at Milan Design Week 2018,

⁴² Frey, Osborne (2013), p.21

⁴³ MGI (2013)

⁴⁴ Hammex (2016), p.5

for example, a 3D-printed house was presented to the public.⁴⁵ Last years have witnessed a rise in robotics demand, not only in the industrial and commercial sectors but also in the domestic and military domains, which is a signal of the ongoing wave of robotization occurring worldwide. To make a broad classification, it is possible to distinguish between industrial robots and service robots.⁴⁶ The overall market is estimated to be worth almost \$70bl by 2025 (figure 2).

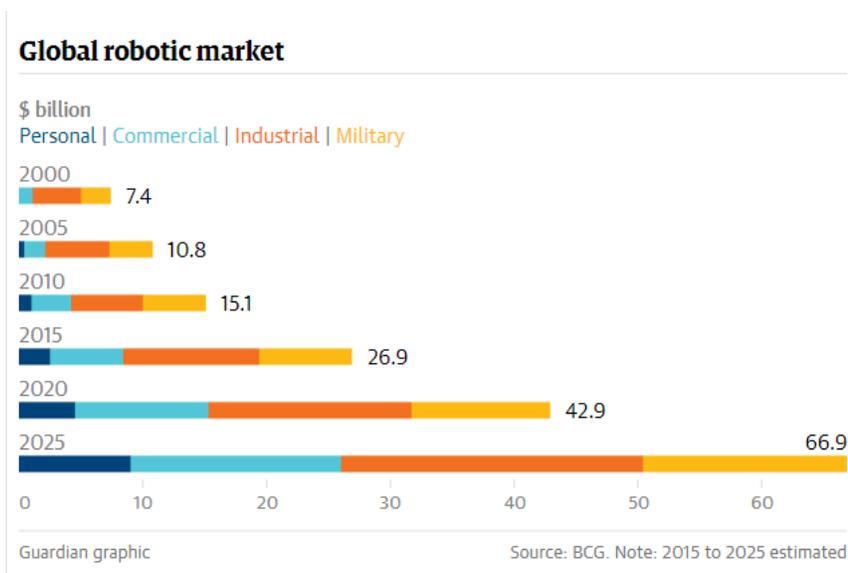


Figure 2 - Global robotic market

Graphic: The Guardian; Source: BCG⁴⁷

⁴⁵ Gunn, Janice. "Massimiliano Locatelli has designed a 3D printed house for Milan design week", *Designbooms*, May , 2 2018, <https://www.designboom.com/architecture/massimiliano-locatelli-salone-del-mobile-04-20-2018/>

⁴⁶ Dyer-Witthford (2015), p. 171

⁴⁷ Steward, *The Guardian* (2015) <https://www.theguardian.com/technology/2015/nov/05/robot-revolution-rise-machines-could-displace-third-of-uk-jobs> accessed: May 2018

1.2.2 Beyond robotics: automating routine and non-routine tasks

A common assumption about automation is that it jeopardizes low-skilled, high-routine jobs: a common example is the assembly-line industrial worker, whose manual repetitive tasks can be performed by more productive machines and robots. In the service sector, an example could be represented by cashiers, whose number has been reduced by electronic cash registers - which, at first, accelerated human work and now are highly substituting it.⁴⁸ If automation were limited to highly-routinized jobs, however, the problem of unemployment would be limited, too. Shift to other occupations would be less problematic, as in the previous industrial revolutions, where the share of non-automatable jobs was increasing in relation to those automatized. In addition, the existence of less monotonous tasks could be viewed in a positive way, as a chance for low-skilled workers to move to more interesting and self-fulfilling occupations: from this perspective, automation would represent a sort of liberation from tediousness and lack of better working conditions and perspectives. Nevertheless, on the one hand, advancements in robotics are displacing more and more middle-skilled factory workers who are losing not only their jobs but also their socio-economic status and purchasing power⁴⁹; on the other hand, computer revolution and the increasing development of Artificial Intelligence (AI) through research on fields like Machine Learning (ML), Computer Vision, data mining, etc. is allowing to expand computerization to numerous and different non-routine jobs. That is, it is now possible to make a

⁴⁸ Frey, Osborne (2013), p.5

⁴⁹ Stone *et al.* (2016), p.39

computer perform cognitive tasks that were thought to be a prerogative of the human brain.

1.2.3 AI developments: Machine Learning

Through the employment of specialized kinds of algorithms, AI is capable of performing tasks and reaching goals “learning” from the experience and memorizing enormous amounts of data from which it deduces and recognizes the patterns needed to perform a specific task. For instance, AI can recognize images (and the single subjects on them, too) because it has memorized other similar images, and it is able to extrapolate the patterns that these pictures have in common. To put it simple, once the algorithm is given a certain amount of classified images (e.g. some pictures of a cat under the classification “cat” and some other pictures of a dog under the classification “dog”), it can deduce their patterns and, thus, be able to classify new pictures by itself. This is the basis of *supervised learning*, in which human help is needed to make the algorithm more performing: indeed, in case the computer failed, it is the human that instructs it (e.g. if AI classifies the picture of a cat under the description “dog”, the human can rectify the error. After this revision, the algorithm will be more precise in the following classifications). With *unsupervised learning* methods, algorithms process data organizing them according to common features, but cannot label them because this input was not previously given. Human intervention, in this case, comes later: the

human labels data only after AI has classified them in clusters.⁵⁰ Unlike Google or other search engines, which find images that are attached to the words that have been searched, these kinds of ML algorithms *recognize* images, and are even capable of describing them learning how to use memorized words and grammar rules.⁵¹ The more images and information are stored and processed, the more AI will be performing: for this reason, the gathering and storage of the so-called *big data* have become essential in computer development. The memorization and learning capacity of a computer is virtually infinite, and it obviously does not limit to images: instead, AI can store any kind of data and task, and the more it performs, the better it works - which is why we refer to Machine *Learning*. A well-known example is the case of a AlphaGo, a computer program developed by Google DeepMind that beaten the world-champion of Go⁵², which is an extremely articulate game (more complex than chess)⁵³: before this historical event, only humans were thought to be qualified to play a match. AI was able to win the game “by experience”, playing millions of matches against itself through what is called *reinforcement learning*, memorizing every move, every sequence and virtually every possible situation in order to perfectionate its algorithm so that it could win

⁵⁰ Machado (2016), <https://medium.com/@machadogj/ml-basics-supervised-unsupervised-and-reinforcement-learning-b18108487c5a> accessed: 15 May 2018

⁵¹ Jeremy Howard’s TED Talk, TEDxBruussels , December 2014
https://www.ted.com/talks/jeremy_howard_the_wonderful_and_terrifying_implications_of_computers_that_can_learn-218579 accessed: 15 May 2018

⁵² Mozur, *The New York Times* (2017) <https://www.nytimes.com/2017/05/23/business/google-deepmind-alphago-go-champion-defeat.html> accessed: 15 May 2018

⁵³ Muoio, *Business Insider* (2016), <http://www.businessinsider.com/why-google-ai-game-go-is-harder-than-chess-2016-3?IR=T> accessed: 15 May 2018

in virtually every possible circumstance, something simply impossible for a human.⁵⁴ What is interesting about this experiment is that the algorithm did not need human help to understand how to perform the task, but it recognized itself the patterns needed to win a Go match: in reinforcement learning, the only thing the algorithm needs is a reward to understand when it is reaching the assigned goal. AI did it itself, without human intervention - or better, overcoming human capacities: the world champion himself, who was defeated by the computer, admitted that he would have never been able to make the same moves, and declared to be fascinated by the capacity of his opponent, describing it as the “Go god”.⁵⁵

1.2.4 ML and cognitive tasks automation

The fact that a computer can *recognize* subjects and *learn* how to execute an assignment and achieve a goal means that it can perform a *cognitive* task, which is revolutionary from every perspective, most of all if we take into consideration that further developments in ML and more generally in AI are still occurring rapidly and will occur in the future. As far as the labour market is concerned, it is clear that Artificial Intelligence represents a deeply changing factor in the meaning of automation, since AI “goes far beyond automation as we have known it”.⁵⁶ In the

⁵⁴ Chui *et al.* (2018)

⁵⁵ *The Guardian* (2017), <https://www.theguardian.com/technology/2017/may/23/alphago-google-ai-beats-ke-jie-china-go> accessed: June 2018

⁵⁶ Kissinger, *The Atlantic* (2018), https://www.theatlantic.com/magazine/archive/2018/06/henry-kissinger-ai-could-mean-the-end-of-human-history/559124/?utm_source=atlfb June 2018

21st century, automation does not only imply a substitution of human labour by machines that perform mechanical tasks, but also a substitution of human cognitive tasks by learning algorithms: as robotics is linked to automation in factory and manual jobs, AI represents a menace of computerization in cognitive jobs.⁵⁷ This consideration brought different authors to claim that a great number, if not the majority, of jobs could be automated in the near future.

According to historian Yuval Noah Harari, it is not an overstatement to theorize that “organisms are algorithms. Every animal — including Homo sapiens — is an assemblage of organic algorithms shaped by natural selection over millions of years of evolution”⁵⁸ and, consequently, non-organic algorithms – as long as they are provided the information and instructions necessary - can replicate the same patterns and even outperform organic algorithms. Furthermore, adds Harari, the simplification of modern life and the specialization of jobs are permitting computers to reproduce the same tasks as humans without the need of complex mechanisms: to borrow an example the author used for his TED article, while for AI it would be extremely complicate to repeat the numerous and complex skills mastered by a primitive hunter-gathered to survive, the specific tasks and jobs done by the 21st-century-worker imply fewer obstacles for Machine Learning. For this reason, Harari predicts the “rise of the useless class”, a growing mass of

⁵⁷ Stone *et al.* (2016), p.39

⁵⁸ Harari, Yuval Noah, *The rise of the useless class*. TED, 24 February 2017, <https://ideas.ted.com/the-rise-of-the-useless-class/> accessed: 18 May 2018

unemployed whose jobs will be performed by non-organic (computer) algorithms.⁵⁹⁶⁰

Albeit less extreme in their consideration, Frey and Osborne wrote in their highly-discussed research for Oxford University: “we argue that it is largely already technologically possible to automate almost any human task, provided that sufficient data are gathered for pattern recognition.”⁶¹ Relying on O*NET data and focusing their research on computerization, they estimated that 47% US employment is at high risk (>70%) of automation. Starting from the assumption that “occupations that involve (1) complex perception and manipulation tasks, (2) creative intelligence tasks, and (3) social intelligence tasks are unlikely to be substituted by computer capital over the next decade or two”, they concluded that “the probability of an occupation being automated can thus be described as a function of these task characteristics.”⁶² Following this reasoning, jobs in the elderly care field or in education are less likely to be automated, since interaction among humans represents a key feature of this kind of occupations, usually considered fundamental by the people who receive those services.⁶³ Creatives, such as painters, fashion designers, actors, writers, etc. have little to fear, too. However, there is no certainty about the limits of AI: for instance, although creative writing

⁵⁹ Harari (2015)

⁶⁰ Sample, *Guardian* (2016), <https://www.theguardian.com/technology/2016/may/20/silicon-assassins-condemn-humans-life-useless-artificial-intelligence> accessed: 5 June 2018

⁶¹ Frey, Osborne (2013), p. 23

⁶² *Ibid.*, p.27

⁶³ Finkel, quoted in Balliester and Elsheikhi (2018), p.12

capacities are surely a human prerogative, computational algorithms are now able to write short reports, descriptions and even essays. In 1993, the first computer-generated novel, entitled *Just This Once*, was released by Steven Schraggs, of the Carol Publishing Group⁶⁴: it was not, of course, a masterpiece, but it gave the idea of the capacities of the new technologies. Harari is even more radical in his positions, claiming that “according to the life sciences, art is not the product of some enchanted spirit or metaphysical soul, but rather of organic algorithms recognizing mathematical patterns. If so, there is no reason why non-organic algorithms couldn’t master it.”⁶⁵ Frey and Osborne highlight that even education, usually thought to be an area immune from automation thanks to the relational and communicative capacities needed to teach, is not really sheltered from computerization. The rise of MOOCs (Massive Open Online Courses) has introduced ML into the educational field. Not only are these courses useful to people who cannot attend classes physically, but they also represent a wide pool of information and data about students’ performances, preferences and interactions.⁶⁶ The development of teaching algorithms is not futuristic: the Georgia Institute of Technology programmed an algorithm to work in an online course as an assistant to students, naming it “Ms. Watson”. At the end of the course, none of the students guessed their assistant was not an actual person.⁶⁷ To make more practical

⁶⁴ Rifkin (1995), p.159

⁶⁵ Harari, *TED* (2017), <https://ideas.ted.com/the-rise-of-the-useless-class/> accessed: 25 May 2018

⁶⁶ Frey, Osborne (2013), p.18

⁶⁷ Hammex (2016), p.8

examples, recognizing hand-writing and translating from both written text and spoken language are among the numerous non-routine tasks that algorithms can master sufficiently to allow predictions about their future full automatization. AI has proven useful to lead at least part of lawyers' and judges' tasks, since it can memorize and analyse more documents than a human at a lower cost through text-mining techniques, as well as carrying an activity continuously at a constant performing level.⁶⁸

1.2.5 Job categories at higher risk

As far as job categories are concerned, low-skilled and medium-skilled workers seem to be more at risk.⁶⁹ The threat does not only involve workers employed in production and manufacture, but – as highlighted in the first paragraph – it is expanding among service workers, particularly those involved in sales, administration and office occupations.⁷⁰ According to the World Economic Forum, 4.9% of the world's office and administration employees will lose their jobs by 2020.⁷¹ In sales, purchasing online has become a common action that allows to “skip” the passage that involves personal interaction with store assistants, whose job is becoming more and more purposeless. Revenues from Business-to-Consumer (B2C) e-Commerce sales have increased significantly worldwide, and they are

⁶⁸ Markoff, *The New York Times*, (2011), <https://www.nytimes.com/2011/03/05/science/05legal.html> accessed: 3 June 2018

⁶⁹ Frey, Osborne (2013), p.45

⁷⁰ Balliester, Elsheikhi (2018), p.12

⁷¹ WEF (2016)

expected to rise to US\$4.88 trillion by 2021.⁷² Cashiers, according to Frey and Osborne, are in fact a category at high risk of automation – namely 97 percent. Waiters are under threat, too: as Reynolds (2018) reported, for example, “Briggo, a US company, created an automated barista system capable of creating anything one might normally order in a coffee shop. The system is reliable, precise and flexible. Users can order their drinks remotely over the Internet, specifying minute details, and pick up their drink when it is ready. The machine learns the customer’s preferences over time, so that a network of the machines would remember their usual order wherever the customer went”, while in Kura’s 262 restaurants, a Japanese sushi chain, “robots help produce sushi, while waiters have been totally eliminated by conveyor belts.”⁷³ In HR departments, computers are more reliable than man at scanning information about potential recruits⁷⁴, and specific online platforms and applications such as LinkedIn are increasingly being used by both companies and individuals to create professional links and to find job opportunities. Online storage of books and essays, which started from Project Gutenberg in 1971, has reduced significantly the work of librarians⁷⁵: nowadays almost every library – from those of the biggest universities to the local ones – disposes of online-catalogues, many have scanned and uploaded their paper archives, and academic research is principally made through online databases.

⁷² Statista, <https://www.statista.com/statistics/379046/worldwide-retail-e-commerce-sales/> accessed: 3 June 2018

⁷³ Reynolds (2018), p.68

⁷⁴ Rifkin (1995), p.149

⁷⁵ Rifkin (1995), p.158

Transportation and material moving represent a service which seems most likely to become automated in the short period. With Google’s first driverless car, a wave of development of autonomous vehicles has begun, to the extent that self-driving cars are expected to enter the market by 2020-2025.⁷⁶ The following graph shows the estimated penetration time for autonomous cars:

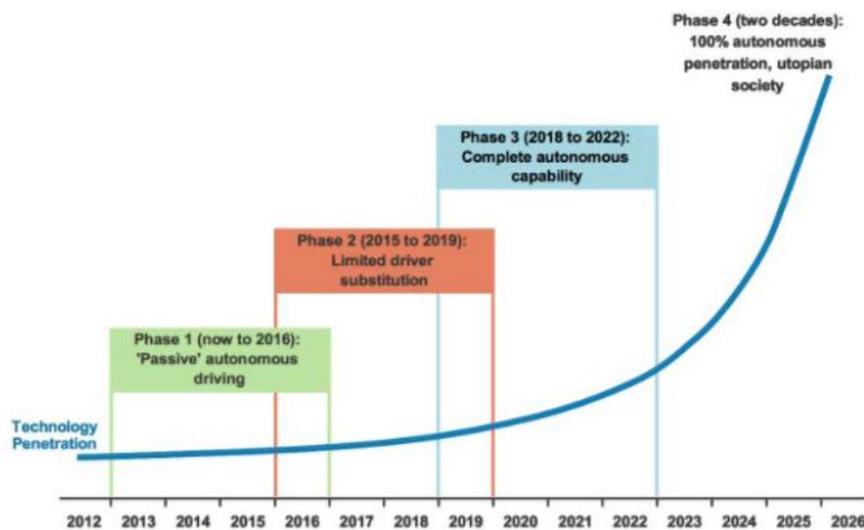


Figure 3 - Estimated penetration of self-driving cars in global market

Source: Estevadeordal, A. *et al.* 2017⁷⁷

Drones, too, will likely perform transportation tasks replacing human labour: Amazon, indeed, is developing its so-called PrimeAir, a drone-based delivery system that aims at transporting orders within thirty minutes from the customer’s

⁷⁶ Silver, *The Guardian*, January (2017) <https://www.theguardian.com/technology/2017/jan/15/driverless-cars-12-things-you-need-to-know> accessed: 6 June 2018

⁷⁷ Estevadeordal *et al.* (2017)

request. Tesla has presented its first fully electric semi-automated truck⁷⁸; Uber, to cut labour costs, aims at substituting drivers with self-driving vehicles. It seems clear that, while representing an impressive progress and a revolutionary invention for the 21th century, drones and self-driving cars, buses, and trucks, besides the impact they will have in the military sector, will imply the destruction of the job of millions of people around the world that work in both private and public transports.

1.2.6 Task-based approaches

Other studies have theorized less problematic predictions: according to McKinsey Global Institute, only 5% of occupations can be fully automated⁷⁹; OECD, instead, claims that only 9% of OECD countries employment is at high risk of automation.⁸⁰ Nevertheless, these researches used a task-based approach, studying the possible automation of the diverse tasks that are carried *within* a job. Hence, they made a distinction between jobs that can be fully automated (formed exclusively or in large part by automatable tasks) and jobs in which automatable tasks represent a small or medium share of the total occupation. Focusing on the overall share of tasks at risk, the picture slightly changes: McKinsey showed that 60% of all occupations have at least 30% or more automatable activities, and concluded that 45% of activities for which individuals are paid for can be automated. OECD, too, besides

⁷⁸ Marshall, *Wired* (2017), <https://www.wired.com/story/what-does-teslas-truck-mean-for-truckers/> accessed: 3 June 2018

⁷⁹ MGI (2013)

⁸⁰ Arntz *et al.* (2016)

suggesting a low percentage of fully automatable jobs, states that between 50 and 70 percent of tasks are at risk. McKinsey, moreover, showed that possible task automation can also affect high-paid jobs. According to MGI, while some highest paid occupations imply a certain percentage of risk (e.g. more than 20% of CEOs working time could be automated), other lower-paid jobs (such as maintenance workers or elderly health aides) are structured around activities that are difficult to automate with currently available technology.⁸¹ Focusing on task automation rather than job automation, these and similar studies suggest that human work, instead of disappearing, will change and adjust according to the tasks that would be automated. The already-mentioned bank tellers that specialized their activities following the spread of ATMs are among those workers who saw one of their tasks become automated and adapted accordingly. To make other examples, interior designers would focus on the creative and relational part of their work while leaving more technical duties – such as ordering materials, digital drawing and measurements – to computers. In the health care sector, AI could analyse and store data, read radiology results and lead other activities that computers are now capable of, advanced robots could perform surgeries, while doctors would concentrate on more complicated tasks.⁸² From this point of view, tasks computerisation would still represent a changing factor for labour, but not a factor that eliminates labour. Following this reasoning, occupations would become more specialized in less-automatable activities such as interpersonal relations and

⁸¹ Chui *et al.* (2015)

⁸² *Ibid.*

communication, creative thinking and digital development. Nevertheless, while this logic can be convincing from a short-term perspective, some could disprove it claiming that there is no certainty that tasks that are human-exclusive today will remain so in the long run. It is not a case, indeed, that MGI led its research basing on data about currently available technology, not on probable future developments. In addition, the risk exists that, once their occupations are restructured, workers will face “wage-restructuring” as well, witnessing their purchasing power fall as a consequence of the lowering of the number of tasks accomplished or the working time necessary to reach an objective. It is not clear, moreover, what destiny these studies draw for low-skilled workers performing fully automatable tasks who could find it difficult to specialize in creative or relational occupations.

1.2.7 Comparative studies among different geographic areas

Researchers have also made comparative studies between different countries and regions. According to OECD, jobs with high probability of being automated (>70% of automatable tasks) are lower in countries like Korea, Estonia, Finland, Belgium, Japan (less than 8%), while Germany and Austria’s occupations at risk represent a larger share (12%).⁸³ The study suggests that these differences depend on a variety of factors, including the technological level already employed, the level of education of the workforce, the workplace organization, and the consequent task structures.

⁸³ Arntz *et al.* (2016), pp.16-17

Focusing on developing countries, World Bank estimated that 66.6 percent (2/3) of their employment can be computerized.⁸⁴ ILO, studying AESAN countries, concluded that 56% of the jobs of those countries will be at risk during the next 20 years.⁸⁵

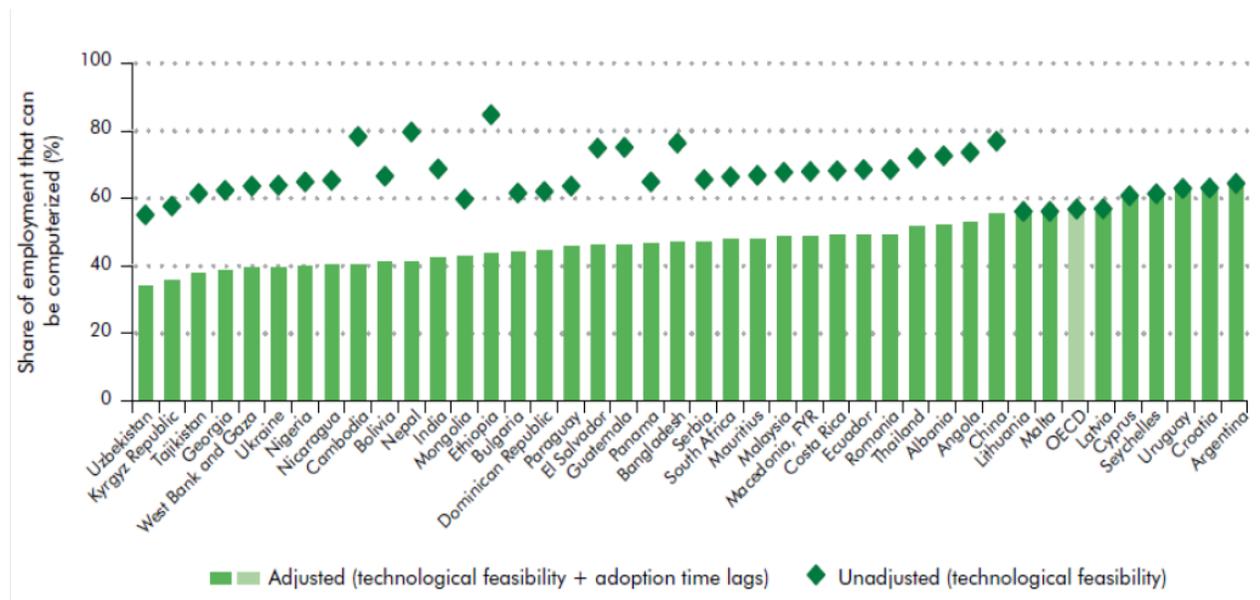


Figure 4 - Estimated computerization-related unemployment in developing countries

Source: World Bank⁸⁶

1.2.8 Reshoring and lowering labour costs

The possibility of automation in emerging and developing economies could be seen as a driving force for Western companies to re-shore their activities.⁸⁷ OECD stated

⁸⁴ World Bank (2016)

⁸⁵ ILO (2016)

⁸⁶ World Bank (2016), p.23

⁸⁷ Sirkin *et al.* (2014)

that “manufacturing companies in OECD economies are increasingly reported to transfer activities back to their home country (back-shoring) or to a neighbouring country (near-shoring).”⁸⁸ This trend could be seen as a consequence of the lowering costs of automation compared to labour costs: the paper further suggests that “the number or reshoring cases is lowest in low manufactory sectors, and more frequent in high technology sectors.”⁸⁹ Technology, indeed, is reported to decrease labour costs:

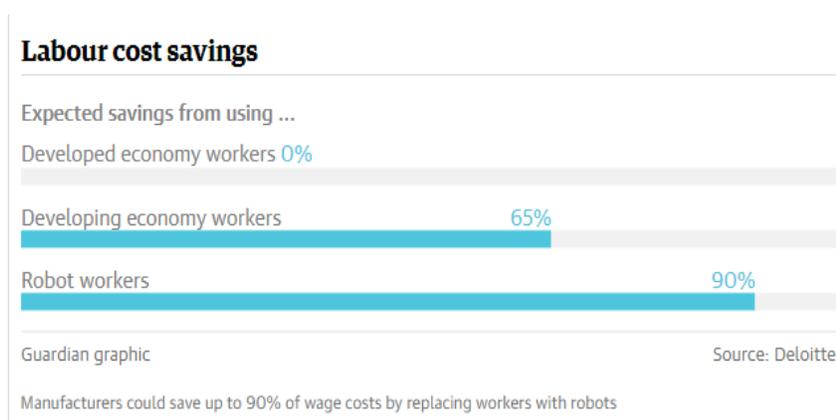


Figure 5 – Labour cost savings

Graphic: The Guardian; Source: Deloitte⁹⁰

However, while off-shoring is proved to be caused mainly by reasons concerning labour costs, there is less evidence that re-shoring is pushed by the cost difference

⁸⁸ De Backer *et al.* (2016), p.4

⁸⁹ De Backer *et al.* (2016), p.12

⁹⁰Steward, *The Guardian* (2015), <https://www.theguardian.com/technology/2015/nov/05/robot-revolution-rise-machines-could-displace-third-of-uk-jobs> accessed: June 2018

between labour and automation.⁹¹ Instead, albeit information about corporate decisions is often fragmented and uncertain, it would seem that back-shoring depends more on market changes, market access, the level of education, flexibility, quality, and proximity to the consumer market (which lowers transportation costs).⁹²

Nonetheless, it is necessary to highlight that, besides technical feasibility, economic feasibility is a fundamental factor that needs to be considered when automation is discussed. As far as labour costs are concerned, two trends should be mentioned. On the one hand, along with lowering costs of technology and robots which allow high levels of productivity, wage levels in developing economies – especially in China - tend to rise⁹³: hence, robotization and re-shoring could represent an economic advantage for companies. On the other hand, stagnating wages in Western countries and lower wages in Eastern European countries could push companies to make re-shoring or near-shoring operations, but refrain them from automatizing production fully. In such cases, firms could favour *cobotization*, in which humans and machines cooperate, taking advantage of the combination of low wages and low robotics costs⁹⁴: it is the case of the historical Fiat Mirafiori plant in Turin, Italy, where advanced robots have been established to cooperate

⁹¹ Cohen *et al.* (2017), p. 14; De Becker *et al.* (2016), p.12

⁹² *Ibid.*

⁹³ ILO (2017), p.5

⁹⁴ Hammex (2016)

with humans along the assembly line.⁹⁵ Foxconn, the Taiwanese multinational corporation well-known for the I-phone production as well as the high suicide rate among its workers⁹⁶, is reported to be planning to substitute its Chinese workers with robots.⁹⁷⁹⁸ At the same time, the firm is off-shoring production to areas where labour cost is lower⁹⁹ – Brazil, Indonesia, even Eastern Europe.¹⁰⁰ Foxconn seems therefore to take both automation and labour costs in consideration in order to make profit, and to move production accordingly: every decision concerning automation and employment seems clearly implemented because of economic reasons. Even when automation is feasible, therefore, it is not certain that firms will take that path: instead, corporations usually choose automation when it is more economically advantageous than human labour.

⁹⁵ In a reportage led inside Mirafiori implant for the Italian tv program *Operai*, Gad Lerner acknowledged that the decision not to automate the factory fully was due to the input-output cost ratio: in other words, it would be less convenient to automate fully when the output is relatively low (as in the case of Mirafiori), while automation is favoured in factories that produce numerically higher output (e.g. >1000 vehicles per day). It seems clear, hence, that the decision to keep workers was not due to the benevolence and good intentions of former FCA's CEO Sergio Marchionne, but rather to economic calculus. <https://www.raiplay.it/video/2017/04/Operai-589629b4-4cd5-4296-81f1-013f0998802c.html> accessed: 02 May 2018

⁹⁶ Merchant, Brian. "Life and death in Apple's forbidden city". *The Guardian*, June 18, 2017, <https://www.theguardian.com/technology/2017/jun/18/foxconn-life-death-forbidden-city-longhua-suicide-apple-iphone-brian-merchant-one-device-extract> accessed: 10 May 2018

⁹⁷ Frey, Osborne (2013), p.22;

Statt, *The Verge* (2016), <https://www.theverge.com/2016/12/30/14128870/foxconn-robots-automation-apple-iphone-china-manufacturing> accessed: 15 June 2018

⁹⁸ *The Economist* (2011) commented this decision as follows: 'Robots are easier to manage'; they 'don't complain. Or demand higher wages, or kill themselves'. (*The Economist*, quoted in Dyer-Witthford, p.170).

Foxconn case has been widely discussed because, due to the high suicide rates among its workers, the firm installed safety nets around their buildings in order to prevent employees from jumping and commit suicide.

⁹⁹ Dyer-Witthford (2015), p. 170

¹⁰⁰ Sacchetto, Andrijasevic (2017)

Decreasing costs due to technology development and the continuous rise of monopolies and scale economies suggest that firms, sooner or later, will take the computerisation path, making increasing number of workers redundant worldwide: between profits and employees, it is likely that CEOs will favour profits, in continuous attempts to expand surplus value through growing productivity levels allowed by technology.¹⁰¹ Increasing unemployment and under-employment caused by automation would become one of the core issues characterizing the future global environment, for “explosive proletarianization and re-proletarianization” would arise “as huge tranches of the global population are rendered surplus to requirements by an increasingly automatic capitalism”.¹⁰²

1.3 Automation: threat or liberation?

1.3.1 Past predictions: Marx and Keynes

Considering that technology is likely to make more and more workers redundant worldwide, different perspectives can be developed about a future environment where work gradually fades. This tendency has already been discussed and in some way predicted in the past: even though the emergence of AI was nearly impossible to expect, automation of production in factories was, instead, viewed as an imminent, near process.

¹⁰¹ For a detailed description of surplus value, see Marazzi (2016) and Reynolds (2018, pp. 90-128)

In a section of the *Grundrisse*¹⁰³, the so-called “Fragment on machines”, Marx describes automation as an “appropriation of living labour by objectified labour”¹⁰⁴, whereby the worker loses control and knowledge of the production process. As technological progress develops, the worker is obliged to follow the rhythm of the machine, so that “through this process, the amount of labour necessary for the production of a given object is indeed reduced to a minimum, but only in order to realize a maximum of labour in the maximum number of such objects”¹⁰⁵: capital aims at producing as much as possible, ignoring the quality and the quantity of working time. Marx highlighted the continuous effort to cast workers out – or at least at the margins – of production through automation, which makes capital a “moving contradiction”, since “it presses to reduce labour time to a minimum, while it posits labour time, on the other side, as sole measure and source of wealth.”¹⁰⁶ Capital, therefore, reduces human labour to increase profits, but maintains waged work at the core of the economic system: albeit it could be interpreted as a pessimistic point of view, what Marx declares in this passage is that capitalism, because of its contradictions, destroys the base of its own apparatus. With this reasoning, Marx suggests that even automation would eventually lead to the self-destruction of capitalism due to an “increasingly automated system collapsing

¹⁰² Dyer-Witheford (2015), p.184

¹⁰³ Original title: “Grundrisse der Kritik der Politischen Ökonomie”, written between 1857 and 1858, first published in 1939.

¹⁰⁴ Marx (1973 [1857]), p.693

¹⁰⁵ *Ibid.*, p.701

¹⁰⁶ *Ibid.*, p.706

under the stresses of mounting unemployment.”¹⁰⁷ The *Grundrisse*, however, have been also subject to divergent interpretations, especially concerning the Marxist concept of “general intellect”: nonetheless, these perspectives will be discussed later in this chapter. For the moment, attention will be focused on automation viewed as a positive means of liberation in the past decades: to do so, it is impossible to ignore Keynes’ contribution to the subject.

Already in 1930, John Maynard Keynes expected capital growth, mechanisation and technical progress to lead to what he called – in his *Economic Possibilities for our Grandchildren* – “technological unemployment”, which he intended as “unemployment due to our discovery of means of economising the use of labour outrunning the pace at which we can find new uses for labour.”¹⁰⁸ He did not have, however, blind faith on the fact that the shift to a world without work would happen without obstacles and doubts, since humans have always been used to employ their time on work. For this reason, Keynes suggested to accustom mankind to work less starting from the introduction of “three-hour shifts or a fifteen-hour week” - a demand that some contemporary leftist authors are starting to recover.

1.3.2 20th Century movements and requests for autonomy

Forty years later, especially in Europe during the ‘60s and ‘70s, similar requests were being made by workers involved in labour movements demanding to free humankind from the strain of work. Viewing work as an imposition from above,

¹⁰⁷ Dyer-Witthford (2015), p.183

¹⁰⁸ Keynes (1930)

and identifying themselves as exploited, the working class – united and supported by trade unions – manifested and went on strike to demand not only higher wages, but also – and most importantly – a shorter working week for the same salary. The Italian slogan “lavorare meno, lavorare tutti” (“work less, work for all”) is emblematic of the struggles led by both workers and students for a fair pay and a fair division between working and free time. During this period, the refusal to work imposed itself as a collective affirmation of the right to employ one’s time as he/she prefers, in an effort of the mass to “go beyond passivity”.¹⁰⁹

Organized protests demanded liberation from fatigue as a social right of the workers (and of students as well, since they represent potential labour force): under these struggles lied not only collective interests, a collective enemy (capital) and, consequently, a strong identification with a collective “we” – which are essential to give birth to a mass movement¹¹⁰; what was central was also a positive belief on the fact that the requests that were being made were viable. The reduction of the working time, the end of work as blackmail, the redistribution of the means of production and the revenues generate by their utilization, hence, were believed to be possible and necessary. Automation, in such a context, could be perceived as a facilitator of the liberation process: if handled by the working class and/or for the interest of the working class, it could have become a powerful tool of autonomy.¹¹¹

¹⁰⁹ Tronti (2006), p.263

¹¹⁰ Della Porta, Diani (2006), p.92

¹¹¹ I used both conjunctions “and”/“or” to imply that the two main options were: 1) automation being totally under the control of workers (of the workers, for the workers) 2) a less revolutionary outcome, with capitalists maintaining their property over the means of production, but the State providing for a redistribution of wealth and a reduction of the working time through automation, limiting capitalist power (not of the workers, for the workers).

Yet, during the following decades, we have not witnessed to such changes, and at present liberation from work is mainly perceived as either utopian or even undesirable, despite the level of technology available.

1.3.3 Beyond semiocapitalism: the general intellect under automation

To explain such developments, some have focused on the shift from manual to intellectual work, from the industrial sector to a growing number of people employed in services and cognitive tasks. The brain at work: under such perspectives, this is the obstacle to automation. From the point of view of *post-operaismo* thinkers, it is the immaterial labour which composes what Marx calls “general intellect” that has been subjected to the capitalist power to re-create the conditions for exploitation; it is the “social knowledge” that, instead of being liberated, is put at work for the capital¹¹²: in the passage from Fordism to post-Fordism, liberation was not possible because, if bodies were freed, brains became the new means of production. While during the ‘60s and ‘70s the cognitive, relational and creative abilities of the masses were employed to develop alternatives to capitalism – both in the economic and artistic form –, the advancement of neoliberal proposals in the ‘80s and the shift to a post-industrial environment subjugated the general intellect to capital, turning it into a sort of *dispositif*, a “vehicle and opportunity to make profit”.¹¹³

¹¹² Dyer-Witheford (2015), p.183

¹¹³ Fumagalli (2007), p. 198

Franco “Bifo” Berardi¹¹⁴ describes the passage from manual to cognitive labour and the post-industrial economic configuration with the term “semicapitalism”. The term refers to the “intellectualization” of work, which envisages the blurring of the line that divides work-time and life-time, helped by the introduction of digital devices through which employment can reach private space and time. Bifo suggests that digitalisation and technology, instead of liberating labour, have exploited its creative and relational abilities, and, therefore:

“the prevision that the development of computerized technologies, favoring automation, would determine a reduction of social labor time proved both true and false, but in the final analysis we have to consider it false. It is true indeed that necessary labor time decreases in the sphere of industrial production, and therefore it is true that a growing number of industrial jobs are eliminated, replaced by machines or transferred to areas of the world where labor costs nothing and is not protected by unions. But it is also true that the time apparently freed by technology is in fact transformed into cyber time, a time of mental processing absorbed into the infinite production processes of cyberspace.”¹¹⁵

Discussing automation, however, Berardi does not take into consideration the possibility of computerization of cognitive tasks, limiting, in this way, his analysis of the overall socio-economic situation. Yet, since - as there is growing evidence - automation can affect both machines and cognitive tasks (fixed capital and living

¹¹⁴ The activities he led during the 1970s in Italy, especially the foundation of *Radio Alice* and of the independent journal *A/traverso*, represent good examples to describe the just-mentioned wave of creative, independent projects born during that decade. In the Italian case, 1977 was the apex of extra-parliamentary students and workers' movements.

labour, which is: the general intellect), and, therefore, technology could potentially be employed to reduce work, to explain the reasons why the obligation to work is still embedded in society, and why workers' movements are not demanding to redistribute/eliminate waged work, it is necessary to go beyond the concept of semiocapitalism (since semiocapitalism is being automated). In Bifo's work are present, of course, useful intuitions, especially concerning people's perception of work and self-identification. However, before addressing these topics, a comparative analysis between the industrial and the post-industrial phases is necessary to reach the key argument of this section, that is: it is not only the level of potential automation/computerization that reduces the need to work; rather, it is the socio-economic context and the relations between the State and the market that, above all, can either facilitate or impede workers' autonomy.

1.3.4 Solid capitalism and social re-composition

A large part of the second half of the 20th century, characterised by Keynesian politics that allowed for a sort of capital-workers compromise, appeared as a period of social re-composition of the working class¹¹⁶ under numerous perspectives.

Firstly, workers were equipped with more bargaining power against the employers than today, due to a sort of interdependence between proletariat and capital. In

¹¹⁵ Berardi (2009), pp.78-79

¹¹⁶ Bifo, *L'anima al lavoro* (2016), p. 81. I am quoting the Italian edition of the book since this passage is not available in the English version

what Bauman calls the “solid” phase of production, workers were still essential to make the plants work: strikes, protests and threats to interrupt production could be utilized as methods to obtain higher salaries, working time reduction, better working conditions, increasing protections, and so forth. As a consequence, the income share of the profits going to waged workers was significantly higher (that is, there was a more equal distribution of income between workers and stakeholders).¹¹⁷ Moreover, not only did workers had more power, but also the unemployed – seen as a “reserve army”¹¹⁸ that, sooner or later, would have been called to contribute to production - could maintain a decent standard of living protected by the welfare state.¹¹⁹ The State was a key participant in such a context, redistributing part of the wealth among the population, acting as a guarantor of citizens’ social rights, and building a compromise between capital and workers.

Secondly, the economic and social background just described allowed for a re-composition of a common identity, which is both a prerogative and an implication of the mass protest. The hierarchy implemented in the solid factory left little space for doubts about who were the exploited and who the exploiters, facilitating individual self-identification with the rest of the working class. Sharing the same labour conditions together with a certain degree of bargaining power opened the path for the production of a common narrative, aimed at changing industrial relations and opening the path for the construction of a future built on a different

¹¹⁷ Foti (2017), p.79, mentioning Thomas Piketty’s work

¹¹⁸ Marx, Capital

¹¹⁹ Bauman (2000), pp.145-146

socio-economic paradigm.¹²⁰ The refusal to work and the demand of work reduction, under these favourable conditions, could be proposed as valid forms of protest but also as feasible proposals to attenuate the consequences provoked by capitalist modes of production.

1.3.5 Towards social de-composition: Neoliberal policies and labour market deregulation

Starting from the end of the 1970s, however, the political and economic environment started to reform; workers' bargaining power began to fade; dominant management approaches were modified; technological progress grew at a rapid pace; the "liquid phase" was inaugurated.

As far as automation is concerned, the development of human-substituting "disruptive" technologies have allowed capital to be more and more independent from workers (both in the production of material goods as well as in the delivery of abstract services) leading to the reduction of their bargaining power. Nevertheless, it would be too simplistic to make a direct association between technology development and the cutback of working class' influence in labour relations. Rather, different factors are preventing automation from being proposed as a facilitator for working class autonomy, turning it into a tool of coercion to limit workers' decisional capacity.

¹²⁰ Berardi (2016: 83) identifies these three factors - common working conditions, common power and common narrative - as crucial elements of social composition.

The implementation of neoliberal policies worldwide, which started to expand in the late 1970s and debuted in the Western world with the governments of Margaret Thatcher (1979, UK) and Ronald Reagan (1981, US), has been crucial in the fragmentation of working class' identity and power. To start from one of the most evident and most known policies through which the "attack on labour"¹²¹ was accomplished, the destruction of trade unions bargaining power is one of the key factors to consider. Starting from Thatcher's offensive towards British miners, trade unions – which were fundamental for workers' organization as well as for their collective identification – have lost ground on collective negotiations dynamics and witnessed a decline on their participation rate. The following graph shows this decline in some OECD countries and the OECD average during the past decades:

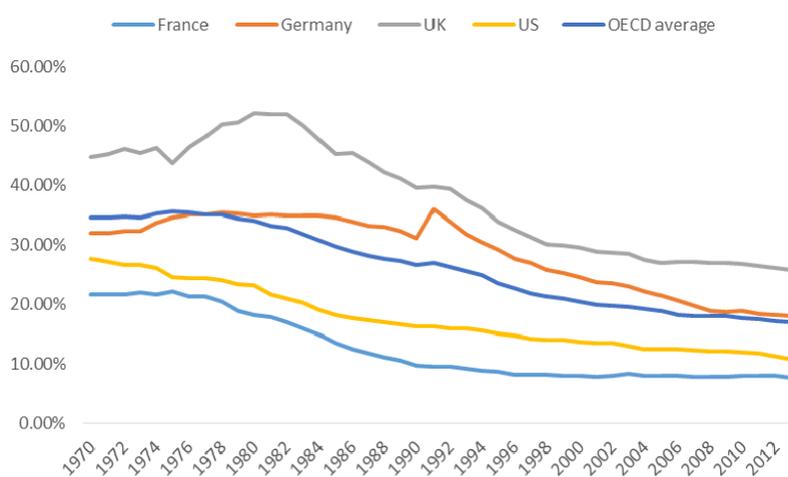


Figure 6 - Trade Union participation in OECD countries

Graphic: Balliester , Elsheikhi (2018), p.34; Source: OECD¹²²

¹²¹ Mason (2015), p.91

¹²² "Trade Unions" in Stats.OECD.org <https://stats.oecd.org/Index.aspx?DataSetCode=TUD> accessed: 27 May 2018

De-unionization can be identified as part of a larger process of social decomposition occurring in the post-industrial era. Employing a broader perspective, the falling participation on trade unions can be interpreted as a symptom of the overturning of the relation between the State and the market, which has implied an unequal power distribution in favour of the latter. Deregulation – the neoliberal imperative – also includes deregulation of the labour market, in which the intervention of welfare measures is not welcomed while the bargaining power of workers faces a gradual yet continuous reduction. In practical terms, the policies that have been implemented by governments worldwide from the 1970s until recently¹²³ have created a legislative environment in which atypical forms of contract proliferate together with a withdrawal of social protections usually linked to employment – minimum wage, paid leave in case of health issues or vacations, tax progression and redistribution – described by Beck as a process of work “de-standardization”.¹²⁴

1.3.6 Neoliberal discourse: flexibility

Not only did material conditions alter, but also the cultural environment, the mainstream *discourse*, adjusted accordingly: the word *flexibility* has placed itself at

¹²³ It would be interesting as well as necessary to discuss more deeply the implementation of neoliberal policies from an historical perspective, from Pinochet’s 1973 *coup d’état* in Chile to the South American debt crisis of the 1980s, from the 1997-98 Asian crisis to the Greek crisis and current European austerity policies, analysing the relationship between international institutions – IMF, World Bank, BCE, etc. – and the governments that legislate in favour of market deregulation to trace the reasons that pushed the spread of deregulation. Unfortunately, this would take too much space and impose over the central topic of this dissertation.

¹²⁴ Beck (1992)

the core of the neoliberal narrative of the “liquid modernity”.¹²⁵ To satisfy just-in-time production/consumption, a just-in-time workforce is required: firms hire and fire employees according to their needs; the new subject is an individual who, rather than being linked to a single employer, builds his/her career jumping from project to project, floating in the sea of networks of the “projective city”.¹²⁶ Management practices and discourse promote, rather than hierarchy, a network structure in which it is more difficult for the worker to recognize who actually takes decisions over his/her working life, which, together with the competitive environment¹²⁷ in which individuals act, render the identification with a collective subject more and more demanding (mentally, but also in material terms, since participation in workers’ associations and trade unions can also have a material impact on the “employability” of a person).

Self-exploitation is a common feature of today’s labour context, as it is a logic consequence of job insecurity and competition, but what is most significant about this condition is the narrative that has been built behind it and the way it has shaped the minds of workers themselves. The common sense no longer interprets work as exploitation and obligation whose value is uniquely represented by the wage (the monetary return needed to survive, the main motivation to work).

Rather, to subdue workers to increasingly precarious labour conditions, non-

¹²⁵ Bauman (2000)

¹²⁶ Boltanski, Chiapello (2007)

¹²⁷ Competition goes beyond market competition and expands over the labour market: the worker, who is no longer protected neither by a stable contract nor by a functional welfare state, has to perform more and demand less (in terms of salary but also of rights) in order to be favoured against the peers.

material returns and values are attached to their jobs, giving birth to a narrative that praises motivation, competitiveness, the willingness to sacrifice one's existence to career. When these values are appropriated by the subject, direct surveillance from higher steps of the hierarchy is no longer needed, since it is the worker who practises self-control and self-exploitation mechanisms independently from external pressures.¹²⁸ Self-identification shifts from the collective working class to the subjectivity of the work activity.

To give an explanation to this alteration, Bifo has addressed the rise of semicapitalism, the intellectualization of work, as the key of this issue: when the intellect is put at work, it is harder to detach from what is produced, since the product is not completely, concretely external to the subject.¹²⁹ Similarly, digitalisation provokes confusion about the division between working time and private, free time: through the continuous interaction with the screen of digital devices, what once were two divided dimensions now blend into each other, creating a space-time singularity which leads the subject to self-identify with work. While in the industrial phase the distinction between man and machine and between capitalist and proletariat was clear, in the digital era of market deregulation the recognition of the self as a subject distinct from the surrounding digital network becomes problematic for self-recognition. Thus, the notion of alienation, which implies a clear distinction between the human and the machine, seems no longer suitable to describe the post-industrial world, so that a different

¹²⁸ Boltanski, Chiapello (2007); Nicoli (2017)

¹²⁹ Berardi (2009)

approach had to be developed to narrate the new context: in post-structuralist analysis, for example, different notions have entered the philosophical discourse such as *biopolitics*, *dispositif*, *discourse* (Foucault), *deconstruction* (Derrida), *desiring-production* (Deleuze, Guattari). As for *operaismo*, Berardi highlighted that while the “first generation” (Negri, Tronti) studied the implications of work refusal and extraneity, the “second generation” (Marazzi, Virno, Lazzarato) developed their analysis around the concepts of language and time.¹³⁰

Lacking self-identification with a broader working class and the capacity to recognize work-time as obligation (because he/she can no longer distinguish between free and obliged activity), the subject is thrown in a perpetual competition with the peers without the possibility to rely on a supportive community or sufficient social protection schemes.¹³¹ In the meantime, insecurity develops into a constantly-present work colleague due to labour market deregulation. Nevertheless, in mainstream discourse backed by 21st century managers, this picture of insecurity and precarity is named by a different, reassuring term – *flexibility*.

1.3.7 Self-justification through critique appropriation

To understand the success of the “flexibility” discourse, it is necessary to recognize the ability and tendency of capital towards self-justification. Mass work refusal and the following development of hegemonic flexibility are, indeed, intrinsically

¹³⁰ Berardi (2016), p.82

¹³¹ Castel (2003)

related.¹³² In the shift to the post-industrial order, capitalism has proven capable of re-shaping itself around the demands advanced during the 1970s by workers and students movements, answering to the request of working time reduction and autonomy with the “re-engineering” of the productive system. However, in doing so the new order developed into a structure that manages to reduce costs for employers – by moving them from the firm to the single worker – while promoting a narrative that attempts to justify the destruction of socio-economic protections and workers’ rights. Boltanski and Chiapello analysed capital restructuring around this concept as a response to the “artistic critique” promoted by mass movements of the 1960s and 1970s – centred on autonomy and freedom – and, at the same time, as a neglect of the “social critique” focused on socio-economic inequalities:

“It thus seems to us fairly obvious that neo-management aims to respond to demands for authenticity and freedom, which have historically been articulated in interrelated fashion by what we have called the 'artistic critique'; and that it sets to one side the issues of egoism and inequalities traditionally combined in the 'social critique'.”¹³³

The flexibility and autonomy promoted by the “new spirit of capitalism” to justify the current socio-economic order, viewed from a critic point of view, can easily be revealed as a narrative which could be substituted with more realistic terms such as *precarity*, *insecurity*, *instability*. Borrowing Boltanski and Chiapello’s

¹³² Berardi (2017), p.328

¹³³ Boltanski, Chiapello (2007), p.97

terminology, my argument is that capital did not respond adequately neither to the social nor the artistic critique. On the one hand, the drop on state subsidies to adequate welfare provisions addressed to the underemployed and the unemployed (whose numbers are increasing significant, as explained previously in this chapter), rather than decrease, augment people's dependence on waged work. Rather than witnessing liberation, contemporary workers have to accept precarious jobs and atypical contracts that are often insufficient even to guarantee a minimum standard of living. As a consequence, on the other hand, the so-called flexibility has shaped into an exclusive benefit of firms, rather than of the workers: it is the contractor, indeed, who has higher decisional power (that is, higher flexibility) over whether, when and at what cost a person will work. The precarious subject, instead, lives with a constant sense of insecurity, since he/she has no decisional power over his/her professional – but also private – life, yet depends on the decisions of numerous and unstable employers. In few words, the reduction of working time has not occurred in a homogeneous way¹³⁴, and, most of all, is not accompanied by wage security: people who work less are paid low wages, which leads to a lowering living standard. Even in the debate on automation, capital discourse has managed to appropriate and reshape visions about a socialist utilization of the technological means of production: nowadays, indeed, the most enthusiast about work-time reduction are in great part corporate CEOs. The precarious workers, instead,

¹³⁴ As noted previously in this chapter, the composition of the workforce is more and more divided between a small share of employees that work longer hours to remain competitive and a larger share of under-employed or unemployed workers that live under constant job insecurity.

deprived of economic security and political power, often view automation with fear, which sometimes feeds neo-luddist sentiments.

It seems clear, therefore, that the use and consequences of technology change according to the socio-economic context in which technological progress occurs: under a neoliberal system, technology likely becomes a threat to waged workers and a revenue source for stakeholders. In a different context such as that of the 1960s or 1970s, instead, trust in technological progress could develop more easily among the population, since people felt more protected by their community, the state, and their collective power. Nonetheless, this is not intended to be a suggestion to return to the post-war system or to bask in “left melancholy”.¹³⁵ Rather, the identification of the relation between different socio-political contexts and their discourses on work reduction/elimination and automation can contribute to the construction of new and different options and projects about the future that need to take into consideration the strategies through which capital has been able to perpetuate itself historically. The transformative capacity of capitalism, which is capable of appropriating and reshaping leftist themes and instruments for its survival, represents a key to understand its dynamics as well as to develop more complex counter-proposals, which should include the utilization and equal redistribution of technological and digital means for the construction of an alternative order.

¹³⁵ a term coined by Wendy Brown

While in the 20th century the future was often imagined as a prosperous and fatigue-less (as, for example, Keynes described), at the beginning of the 21st century hopes about working reduction/destruction accompanied by stable salaries seem more distant than ever. Increasing production, capital profits, and financialization, rather than leading to a wealth redistribution among society, are increasing global inequalities and fostering monopoly power. Even technology, which could be used as a tool of emancipation and redistribution, finds itself under the control of firms that use it for their economic returns, and under the constriction of deregulation policies that prevent the development of alternatives to the neoliberal use of technology. In this context, digital giants play an important role as they gain increasing monetary and political power and – directly or indirectly – augment the ranks of the post-industrial collective subject, the so-called “precariat”.

Chapter 2: Digital Precarity

2.1 The rise of platform capitalism

Although at the beginning of the digital era the internet was mainly perceived from an optimistic perspective as a field characterized by freedom of expression, cooperation and, generally, as an alternative space not restricted by external forces (market *in primis*) – as it was as well conceived -, its development led to a quite different state of affairs. Market forces and actors, indeed, have been able to shape the web occupying digital spaces, creating and feeding an economic field we now call “digital economy”. In particular, Internet commercialization has developed consistently after the “dot com” boom of the 1990s, when an investment frenzy hit the IT sector. As described by Nick Srnicek in his *Platform Capitalism*:

“The boom of the 1990s amounted effectively to the fateful commercialisation of what had been, until that point, a largely non-commercial internet. It was an era driven by financial speculation, which was in turn fostered by large amounts of venture capital (VC) and expressed in high levels of stock valuation. As US manufacturing began to stall after the reversal of the Plaza Accord, the telecommunications sector became the favoured outlet of financial capital in the late 1990s. It was a vast new sector, and the imperative for profit latched onto the possibilities afforded by getting people and businesses online. When this sector was at its height, nearly 1 per cent of US gross domestic product (GDP) consisted of VC invested in tech companies; and the average size of VC deals quadrupled between 1996 and 2000. All told, more than 50,000 companies were formed to commercialise the internet and more than \$256 billion was provided to them. [...] During its peak period between 1997

and 2000, technology stocks rose 300 per cent and took on a market capitalisation of \$5 trillion.”¹³⁶

Such internet financialization has led, on the one hand, to a massive use of ICT by already existing firms, for whom it became easier to connect with their offices and customers worldwide, thus globalising and outsourcing production at a faster pace; on the other hand, new-born corporations started to appear which were entirely centred and reliant on digitalisation. This new economic field has been flooded by further venture capital, especially after the 2008 crisis, due to the high returns on investments to which it could lead in a low interest rates environment.

The young economic model inaugurated by the spreading of and investment on digitalisation has been referred to with different and numerous terms, such as “app economy”, “on-demand economy”, “sharing economy”, “crowd-based capitalism”, “peer marketplace/economy”, “informational economy”, etc. However, through the chapter, along with the general “digital economy”, another term will be used: namely, “platform capitalism”, firstly introduced by Sascha Lobo in Germany and Martin Kenney in the US¹³⁷, taking as a model the use that Srnicek makes of this term in his work.

The platform is the central instrument through which the majority of interactions between economic actors take place: platforms, in fact, can be described – at a general level - as “digital infrastructures that enable two or more groups to

¹³⁶ Srnicek (2017), pp.20-21

¹³⁷ Scholz (2015)

interact” which function, therefore, as “intermediaries that bring together different users: customers, advertisers, service providers, producers, suppliers, and even physical objects.”¹³⁸ To efficiently describe the digital economic environment, however, to the word “platform” it is necessary to add the well-known term “capitalism”. Whereas platforms alone have the chance not to grow into profit-driven entities if they were managed with cooperative aims, the current economic model has appropriated these digital tools, utilizing and spreading them to enjoy higher financial revenues, following management practices that tend to increase labour exploitation. Despite the reassuring terms used to emphasize the “collaborative”, “peer-to-peer” and “sharing” objectives of platforms, the main firms operating on the network economy are more and more revealing, through their operations and *modus operandi*, their capitalist, profit-aimed, nature.

2.1.1 Nick Srnicek’s classification of platforms

Before addressing the common features that lead tech firms towards market monopolization and labour exploitation, a classification can be useful to organize forthcoming analyses of the subject. This section, therefore, proposes the distinction drawn by Srnicek, who classified digital firms in five types of platforms:

1. *Advertising platforms*. Facebook and Google represent the archetype of this type of platform: they are almost entirely reliant on revenues from advertisers, to whom they sell advertising space (in their web-site, apps, or third-party web pages)

¹³⁸ Srnicek (2017), p. 43

selected through the information provided by users' data. Data, in this case, is needed to target the audience and channel ads to the platform users who have a profile that matches with advertisers' target: in this way, users' information is utilized by the firm to increase revenues. Facebook, whose main advertising management tools are "Facebook Ads Manager" and "Facebook Audience Network" (FAN)¹³⁹, seems to represent the largest profit-making advertising platform, with the highest return on investment (ROI) if compared to other similar firms.¹⁴⁰

2. *Cloud platforms.* These platforms rent out hardware and software (whose property rights they own) to other digital businesses. Cloud platforms usually grow after a company decides that the hardware and software it developed for its own business can be rented to other companies that find less expensive – in terms of both time and money - paying the fee rather than developing their own tools. The classical example is given by Amazon Web Services (AWS), first developed as an "internal platform, to handle the increasingly complex logistics of the company", which now rents out numerous "cloud computing services, which include on-demand services for servers, storage and computing power, software development tools and operating systems, and ready-made applications" – through practices also known

¹³⁹ For a more detailed explanation of Facebook tools, see Fumagalli *et al.* (2018), p.5

¹⁴⁰ Emarketer survey, <https://www.emarketer.com/Article/Social-Media-Marketers-Facebook-Produces-Best-ROI/1013918> accessed: 6 July 218

as “Infrastructure as a service” (IaaS), “platform as a service” (PaaS), “software as a service” (SaaS).¹⁴¹

3. *Industrial platforms*. They are the core tools of what is called the “industrial internet (of things)” (IIoT) or – as in Italy and Germany – “Industry 4.0”, which refer to a process through which the platform is introduced in traditional production. Platforms, in these cases, are used to “digitalise” manufactory so that the factory elements are connected to one another, allowing for higher productivity rates but also higher control over the factory as a whole, as well as over workers’ activities and performances.¹⁴² Examples include Siemens and GE.

4. *Product platforms*. They make profit “transform[ing] a traditional good into a service and by collecting rent or subscription fees on them.”¹⁴³ Spotify, Pandora and Netflix, for instance, deliver what are basically zero-marginal-cost products (music, films and tv series) in exchange of a monthly fee: what was once purchased as a singular product (e.g. a digital soundtrack or a material CD) is made part of an overall for-pay service. Another, less known, example is represented by Rolls Royce, which, instead of selling its jet engines, makes its customers pay an hourly fee for the use of those engines, turning a material good into a fee-based service.

¹⁴¹ Srnicek (2017), pp. 61-62

¹⁴² The control exercised through digital devices both in the private environment and at the production level will be addressed later in the chapter.

5. *Lean platforms*. These firms include Airbnb, TaskRabbit, Uber, Amazon Mechanical Turk (AMT). Their main aim is to reduce their assets to a minimum, with the exception of the software and data: that is, the assets that allow control and monopoly over users as well as high revenues from users' activities. In Srnicek's words, they follow a "hyper-outsourced model, whereby workers are outsourced, fixed capital is outsourced, maintenance costs are outsourced, and training is outsourced."¹⁴⁴ In practice, lean corporations propose themselves as facilitators that help the encounter between the demand and supply sides of a service – e.g. a person that is willing to pay for a ride with a driver, someone who orders a meal on wheels with restaurants and "riders", a woman who wants her hair done with a hairdresser that appears at her house at the hour requested, and so on. However, the fact that lean firms gain huge returns on these interactions only because they own the platform software, but do not redistribute profits on other assets (fixed capital, wages, maintenance, etc.), and do not even recognize people who work with the platform as employees, raises important questions about the kind of social and economic paradigm their economic model would develop. The so-called "gig economy" or "on-demand economy" that is born from these platforms represents indeed a central issue of the contemporary labour market as well as a litmus test of the general economic trend of the 21st century: for these reasons, it will be analysed more profoundly later in this chapter.

¹⁴³ Srnicek (2017), p.49

¹⁴⁴ Srnicek (2017), p.76

As far as this classification is concerned, it does not have to be considered as a rigid distinction between fixed profiles. Indeed, platforms can combine various management tools, as it is the case, for example, of Amazon, which – according to Srnicek – “spans over” the categories previously described because of its diversification of services and strategies. Srnicek’s classification, instead, should be interpreted as a helpful scheme that facilitates the understanding of the main focuses of each digital platform and, most of all, the diversified approaches that are implemented to grow into the digital economy.

2.1.2 Being digital

As far as common traits are concerned, the environment in which various platforms grow enhances a sort of isomorphic tendency among them, even though they apparently develop around different areas and types of services: it is not a case, indeed, that in common discourse we refer to these platforms with the general term “digital economy”, without specifying their position among a classification like the one we have just observed. Therefore, distinctions between digital platforms are often blurred and less emphasized than their core property – namely, their belonging to the digital, their *being digital*. However, this could be mainly due to the fact that the common features they develop in their shared digital environment often represent a more relevant aspect for the understanding of the mechanisms of the young digital economic model they reproduce, which seems to feed – as it will be discussed later – monopolistic tendencies and the perpetration of a capitalist mode of dealing with technologies.

As it already seems clear, despite the difference existing among them, platforms perform a core function in digital capitalism, to the extent that they represent the necessary tool upon which the existence of platform capitalism depends as well as the more evident factor that distinguishes current capitalism from previous, older forms. Platforms have become the most relevant assets for firms operating in the digital sector¹⁴⁵, since their profits are mainly – if not exclusively – generated by their ownership of these immaterial assets, precisely by the interactions that occur through them. Consequently, firms' main objective is to develop a functioning platform and to become capable of generating revenues owning this single, immaterial but vital asset: in this sense, platforms can be considered as the new means of production.¹⁴⁶ Once a first investment in the development of a platform is made, this immaterial asset (which is basically a zero-marginal-cost entity, so that further high maintenance costs are not required) becomes the central profit-making factor for digital firms. As for other assets, they tend to be outsourced as they lose economic relevance. To summarize, in digital capitalism revenues are generated by immaterial rather than material assets – namely, platforms functioning through algorithms and data – whose value increases accordingly to the volume of interactions that take place through them.

To understand the reason why a higher number of users equals higher revenues, it is necessary to shift the focus to what could be easily judged as the most relevant

¹⁴⁵ We are referring here to digital firms operating through their platforms, but platforms also play an important role for traditional firms that have extended to the digital sector or supply for digital services (e.g. have developed an app)

¹⁴⁶ Todoli-Signes (2017), p.200

actor in the IT sector: data – particularly big data, which represent the “raw material” that allows platforms to operate. A sort of interdependence exists between platforms, algorithm and data: data are indeed fundamental for the functioning of platform algorithms, and all platforms are wholly dependent from the running of algorithms. To make few examples, algorithms decide what content a user views entering a site or app and in what order; they suggest to the user who he/she could know on Facebook or what product he/she could be willing to buy on Amazon; they match a customer with the nearest and faster Deliveroo rider or Uber driver; they propose a series or film on Netflix that the viewer has not watched yet; and the list could go on. Algorithms are capable of mastering diverse and numerous activities like those just cited through the collection and elaboration of data provided by users’ interactions and activities in the platform. Therefore, users-generated data are generally utilized by every firm to make the platform work and improve its efficiency, even though at a deeper level of analysis other purposes can emerge. For instance, advertising platforms’ profits are entirely reliant on users’ information, since they use it to sell advertising space. At the same time, algorithm-driven practices, officially led to improve the service, are in more practical terms directed towards the generation of profits, since the firms that implement them are mostly profit-driven private entities operating into what we call platform capitalism.

The centrality of data, hence, implies the construction of a digital economic environment where firms compete against each other to attract and retain more

users as possible through a “network effect”, since it is the data generated by users what represents the real value-creating factor for platforms. To increase their networks – and, consequently, their economic returns – platforms adopt a set of practices aimed at developing a sort of dependency in their users¹⁴⁷ - which include e.g. continuous feedbacks and interactions, or the use particular colours and graphics – or make users feel fun and enjoyment in utilizing the platforms¹⁴⁸ and, more generally, compete to gain sufficient monopolistic power among other similar firms so that users, lacking alternatives, will likely rely on mono/oligopolistic firms. As highlighted by Paul Mason, “with info-capitalism a monopoly is not just some clever tactic to maximize profit. It is the only way an industry can run”.¹⁴⁹

It is not a case, indeed, that during the “fourth industrial revolution”¹⁵⁰ we are still experiencing the core corporate protagonists that have appeared in the global economic system are the big-five tech giants of the Silicon Valley, namely Google, Facebook, Amazon, Apple and Microsoft, which represent the oligopolistic or even monopolistic nature that characterizes the economy model of our century. The “big tech” have in fact led competitive monopolistic practices since their appearance. For instance, Facebook acquired Instagram in 2012 for \$1bl¹⁵¹ and WhatsApp in

¹⁴⁷ Jack Linchuan Qiu (2016) described this kind of dependency as a process that turns digital users into “iSlaves”

¹⁴⁸ Fuchs and Sevignani (2013); Scholz (2013)

¹⁴⁹ Mason (2015), p.119

¹⁵⁰ As it has been called by the executive chairman of the World Economic Forum (Srnicek, 2017, p. 37)

¹⁵¹ Geron, *Forbes* (2012), <https://www.forbes.com/sites/tomiogeron/2012/09/06/facebook-officially-closes-instagram-deal/#63960b081d45> accessed: 15 July 2018

2014 for \$19bl¹⁵², expanding in this way its presence in the field of social media and instant messenger and beating (/buying) competitors through specific investments.¹⁵³ Google's search engine, in practice, was created to become the common global tool for web research, since its functionality strictly depends on huge number of users distributed worldwide. Alternatives exist, of course, but are less performing than Google because they do not rely on the same amount of data Google extrapolates from its users, which are utilized to improve the service as well as to gain high revenues from the selling of advertising space. As a consequence, it becomes almost impossible not to use Google when doing a research online, independently from the willingness of the user, because the platform has gained a *de facto* monopolistic position on the web. However, Google does not only represent the most important search engine worldwide, but it also performs numerous and different services through which it expands its power in the digital economy. To compete with Apple, for example, Google – to be more specific, its company Alphabet Inc. – has made a deal with Android to insert its services (which include Gmail, YouTube, Play Store, Google Maps, Google Drive) in smartphones than function through Android system (in practice, almost every smartphone which is not an iPhone). Again, smartphone users have few alternatives, mostly represented by private profit-driven companies¹⁵⁴ that will use their data to

¹⁵² Olson, *Forbes* (2014), <https://www.forbes.com/sites/parmyolson/2014/10/06/facebook-closes-19-billion-whatsapp-deal/#57479605c66c> accessed: 15 July 2018

¹⁵³ For a complete list of mergers and acquisitions led by facebook, see https://en.wikipedia.org/wiki/List_of_mergers_and_acquisitions_by_Facebook accessed: 15 July 2018

¹⁵⁴ I used the term “mostly” since some open-source alternatives such as Ubuntu Touch have been developed, even though they have not reached large market portions.

increase revenues and to maintain their market power. To make some final examples, Amazon clearly spreads through different fields (in fact, Srnicek did not classify it into a single type of platform): although it is mainly known as a logistic giant, it also provides cloud computing services through AWS; its AMT is a sort of reservoir of on-demand online workforce; it also competes with Netflix for series and film streaming with Amazon Prime Video. Similarly, Microsoft has developed a version of its operative system compatible with some smartphones (produced by Microsoft itself and Nokia), trying to expand to the field of smartphone production (even though without great achievements). Similar choices made by digital corporations suggest that their major objective is not only represented by monopoly power in a specific field (social media, logistics, advertising, and so on), but they also compete against each other for broader sections of the digital sector, creating wider and wider networks. As far as the so-called “sharing” economy is concerned, it seems that more than a half of each specific sector is controlled by monopolistic players: “Kickstarter is responsible for 57% of crowd-funding transactions; Craigslist for 65% of professional services; Uber for 86% of ride-sharing; and Etsy for 91% of the custom product marketplace”.¹⁵⁵ To describe this phenomenon, Srnicek uses what is called the “convergence thesis”:

“the need for more data [...] leads to what we might call the convergence thesis: the tendency for different platform companies to become increasingly similar as they encroach upon the same market and data areas.”¹⁵⁶

¹⁵⁵ Murillo, Buckland, Val (2017), p.69, referring to Owyang (2015)

¹⁵⁶ Srnicek (2017), p.107

The network effect through which platforms operate implies, firstly, that increasing amount of data – which can turn into monetary, political and social power – are in the hand of few private entities that do not redistribute that power among their users and society at large; secondly, alternative solutions are prevented to grow in the digital field because the functioning of a platform and the participation to its network increase in line with the number of users: this unfair competition tends to lead to a situation where the lack of alternatives could be interpreted as pure coercion.

Despite their attempts to emphasize collaborative values through a discourse centred on terms such as “sharing”, “collaborative”, “peer-to-peer”, “networking”, the profit-driven objectives of digital platforms are easily revealed by their revenues, assets, the lack of redistribution of their profits and the way they employ users’ information. The so-called sharing economy has supported and fed the development of precarious labour, while the control over data – the “new oil” – has raised concerns over the definition of “data labour”, people’s right to privacy and, more generally, the unethical strategies through which corporations acquire and utilize personal information.

2.2 (Under)Paid labour in platform capitalism

Focusing on labour in the digital economy, the more evident aspect is that platform capitalism feeds a wide range of atypical forms of employment, what is also known as “gig” work. Deliveroo riders, Uber drivers, AMT “turkers”, Task Rabbit’s “taskers”, etc. are part of the wide workforce engaged in the gig economy. Lacking official national and international statistics, data concerning the number of people involved in the gig economy are only available through private entities (mostly think-thanks, but also digital firms themselves) that provide contrasting and possibly unreliable information.¹⁵⁷ For instance, since the US Bureau of Labor Statistics does not provide specific data (gig economy is not included in their classifications), analysing digital paid labour in the United States requires a comparative analysis between various think thanks and researches that leads to a quite confusing general framework: gig workers are estimated to represent 2% of US workforce by Intuit¹⁵⁸ and 1% by McKinsey Global Institute, while other research suggests higher pictures, like those provided by the public relation agency Burson-Marsteller (22%)¹⁵⁹ and the Pew Research Centre (24% of US adult population, adding further data about Americans who have used platforms to “take on a job or task” - 8% - from those who have sold goods or rented a property

¹⁵⁷ Staglianò (2018)

¹⁵⁸ Intuit (2015), <https://investors.intuit.com/press-releases/press-release-details/2015/Intuit-Forecast-76-Million-People-in-On-Demand-Economy-by-2020/default.aspx> accessed: 20 July 2018

¹⁵⁹ Burson-Marsteller, Aspen Institute, Time (2016), <https://www.burson-marsteller.com/what-we-do/our-thinking/the-on-demand-economy/the-on-demand-economy-survey/> accessed: 20 July 2018

through platforms - 19%).¹⁶⁰ As highlighted by Staglianò (2018), the variation has an excessively wide range (from 1.5 million to 33 million people), making any serious discussion based on the real number of gig workers impossible. Even though there seems to be higher agreement in research concerning other countries¹⁶¹, the lack of official statistics denotes the unpreparedness of official agencies on a subject that should be of general interest, since this kind of data would be central on any discussion regarding the future of work.

Furthermore, a classification of the gig workforce should be made. McKinsey Global Institute, for example, has distinguished independent workers between four categories: “free agents”, “casual earners”, “reluctants”, and “financially strapped”, basing their classification on whether independent work constituted workers’ primary income or not and whether their engagement in independent work was voluntary or moved by necessity.¹⁶² Their study was centred on independent workforce as a whole, of which gig workers constitute only an apparently low

¹⁶⁰ Pew Research Center (2016), “Gig work, online selling and home sharing”, <http://www.pewinternet.org/2016/11/17/gig-work-online-selling-and-home-sharing/> accessed: 28 August 2018

¹⁶¹ Such as for the UK, where gig labour is usually estimated to include around 1 million people – circa 3% of the workforce (Staglianò, 2018). However, even reports provided by the government are based on statistics delivered by external agencies – e.g. NatCen, which estimates gig workers to represent 4.4% of UK population. Referring to this statement, the report added: “It can be stated with 95 per cent confidence that the corresponding value in the wider population lies between 3.2 per cent and 6.0 per cent”, emphasising the uncertainty surrounding the actual number of people engaged in the gig economy.

To read full report:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/687553/The_characteristics_of_those_in_the_gig_economy.pdf

¹⁶² MGI (2016)

percentage¹⁶³, but similar classifications could be applied specifically to gig workers. Despite the common narrative that draws gig economy as an environment in which people engage occasionally to earn a small additional amount of money, there is increasing evidence that, instead, for many people gig work represents a full-time occupation on which they entirely rely to sustain themselves. Nonetheless, again, specific and official data are not available, so that we can only rely on private sources or academic surveys, which are often overly limited to specific groups, firms, or geographical areas. Hence, waiting for more reliable and specific statistics to be provided, what we can state with a sufficient degree of certainty – since there seems to be high consensus among scholars¹⁶⁴ - is that the number of people working on the gig economy is expected to continue to rise in the following years (again, estimates vary among academic research, but agreement exists on a certain degree of expected future growth).

2.2.1 Defining gig economy

Although the term “gig economy” has entered common language in recent years, academics often lack consensus over a single definition.¹⁶⁵ In fact, studying this subject it is possible to focus on various aspects and choose different perspectives:

¹⁶³ Taking into consideration the US and EU-15, MGI (2016) estimated that the share of independent contractors that have “earned income from a digital platform” constitute 15% of independent workers. Making further distinctions, they concluded that workers that provide labour through platforms (such as TaskRabbit, Uber, Deliveroo, Upwork) constitute the 6%; people who have sold goods through platforms (eBay, Etsy) the 63%; workers who lease assets through platforms (Airbnb, BlaBlaCar) the 36%.

¹⁶⁴ Dunn (2018), p.21

¹⁶⁵ Dunn (2018)

emphasis can be put on the digital nature of this new economic model, on the “on-demand” character of employment, or even on the kind of exchanges and interactions that take place through platforms. In the latter case, however, the term “sharing economy” is often favoured in place of “gig”, “on demand” or other adjectives that emphasise the intermittent character of work. The word “sharing” in fact suggests an optimistic approach toward this economic model which assumes that the relations occurring among platform users are equal exchanges between peers (indeed, “peer-to-peer” is often utilized in place of “sharing”), excluding or simply ignoring the existence of power relations – and, therefore, coercion – in this economic environment. Nevertheless, as many have argued, this position can be easily disproven through an analysis of the corporate practices utilized to manage the workforce and the accounts of personal experiences provided by on-demand workers. The sole existence of a monetary exchange can be interpreted as lack of equal exchange: as a consequence, the term “sharing economy” could be better used to refer to non-monetary exchanges such those occurring in platforms like Couchsurfing, where people offer accommodations to travellers for free (without seeking a monetary return), or to open-access entities like Wikipedia, in which users voluntarily write and edit the pages of the online encyclopedia¹⁶⁶, but are less

¹⁶⁶ As a matter of fact, it seems that it would be less likely for “Wikipedians” to be involved in the platforms if the editing was not voluntary and the platform was for-profit. As highlighted by Scholtz:

“What are other motivations for data labor? In Germany, the government considered paying Wikipedia editors, but it is not clear if someone who works for several days on an article and considers her contribution intellectually valuable would not in fact understand such compensation as a put-down. In some scenarios, compensation does not lead to better performance. In fact, Wikipedians frequently describe their work as enjoyable. After all, they are working on something that is of direct use to them and the public. [...] For some Wikipedians at least, acknowledgement from peers may seem to matter more

suitable for platforms like Uber, TaskRabbit, Amazon or similar digital firms that are explicitly profit-driven corporations, which take a payment in percentage on the work done by their users, have complete or almost complete power to adopt decisions concerning payments and contracts, and manage a workforce that deals with the platforms mainly to supply to personal economic needs.

In the case of the latter profit-driven firms, they all are platforms that foster productivity¹⁶⁷ and function through paid contingent labour. The tasks that their workforce leads are numerous and diversified; nonetheless, it is possible to draw common features among them. To describe the productive paid labour done through digital platforms, Standford (2017) has listed in five points the “organisational features” digital lean platforms adopt:

- “1. Work is performed on an on-demand or as-needed basis. Producers only work when their services are immediately required, and there is no guarantee of ongoing engagement.
2. Work is compensated on a piece-work basis. Producers are paid for each discrete task or unit of output, not for their time.
3. Producers are required to supply their own capital equipment. This typically includes providing the place where work occurs (home, car, etc.), as well as any tools and equipment utilised directly in production. Because individual workers’ financial capacity is limited, the capital requirements of platform

than pay. Wikipedia editors described that they write articles because they may feel bored or undervalued in their day jobs. Volunteering for Wikipedia allows editors to create value outside of the control of the dominant corporate players. Peer production for this encyclopedia is production for need and use; it is not directly marketed for financial gain later.” (2017:88-89)

¹⁶⁷ Farrel, Grieg (2016)

work (at least capital used directly by workers) are typically relatively small (although these assets can be significant in the lives of the workers who must purchase and maintain them).

4. The entity organising the work is distinct from the end-user or final consumer of the output, implying a triangular relationship between the producer, the end-user and the intermediary.

5. Some form of digital intermediation is utilised to commission the work, supervise it, deliver it to the final customer, and facilitate payment.”¹⁶⁸

Using an historical perspective, Stanford continues describing the rise of gig work as part of the disruption of the “Standard Employment Relation” (SER) which, starting from the end of the 20th century, has built the current neoliberal labour market. Precarity, indeed, is not only a feature of the gig economy, but rather a systemic issue concerning the workforce as a whole: digital corporations, hence, have been capable of inserting themselves into a deregulated labour market, fostering and profiting from an already existing tendency towards precarity from which the global workforce suffers. What digital profit-driven firms share is, hence, their ability to profit from and – at the same time - stimulate labour deregulation: indeed, despite the diversity of services they provide, digital platforms fostering atypical employment often utilize common material as well as discursive approaches when dealing with their pool of workers and labour-related issues.

The discursive level seems to have particular relevance, since gig economy takes part to the already-discussed capitalist tendency to appropriate the demands of the

critique¹⁶⁹ in an attempt to justify or hide their profit-aimed methods. The use of terms such as “sharing” and “peer-to-peer” rather than “gig”, as the continuous stress on the “flexibility” of gig workers rather than on their economic and social instability represent clear examples of the discursive strategies implemented by digital firms. In particular, the refusal of digital firms to recognize the people engaged in their platforms as workers raises important concerns over the lawfulness of their methods as well as the economic and psychological implications of working through digital employers. The use of the term “worker” that is made in this paper is not, in fact, casual: rather, it implies a position in contrast with that of platform capitalists, who base their narrative on different terms such as “taskers”, “turkers”, “drivers”, “contributors”, and, generally, especially when more formal definitions are required, “independent contractors”¹⁷⁰ – which are often unclear from a legal perspective and suggest an implicit attempt to avoid national jurisdictions. Through the description of the common practices through which work is managed by some major platforms in the global gig economy (which will be provided by the following pages) it is possible to conclude that, despite the legal and discursive strategies utilized by digital firms, people engaged in these platforms should be legally recognized as workers – as some national judges have already ruled.¹⁷¹ The lack of the worker status, indeed, does not only represent an informal and discursive issue, but it implies a series of legal rights that people

¹⁶⁸ Stanford (2017), p.384

¹⁶⁹ That Boltanski and Chiapello (2007) divide into “social” and “artistic” critique

¹⁷⁰ Murillo *et al.* (2017), p.70

currently working in the gig economy do not benefit from: the dearth of legal recognition, therefore, helps the reinforcement and perpetuation of precarity among gig workers.

Furthermore, as competitive behaviours are emboldened through a series of practices and workers face few opportunities to personally interact with their peers and supervisors, platforms seem to have a consistent impact on subjectivity. Algorithms play a core role in work management in platform capitalism, since they organize worker-customer relations (they match demand and supply) and supervise customers' evaluations (which represent part of the data on which they base their decisions). Computer algorithms, on the one hand, de-humanize work relations ignoring subjective circumstances external to the information they process, and perform high degrees of control over users; on the other hand, they provide easy justification for digital firms in case of legal actions led against them (or even a quick answer for common questions concerning the management of the workforce) – that is, informally speaking: the algorithm made certain decisions, not corporate managers.

Focusing on the use digital firms make of computer algorithms, it is possible to trace their employment of technological advancements (that could potentially be utilized for common, collective aims – such as the previously discussed liberation from work) for private interests that rely on workers' contingent labour. In the gig economy, digital firms' revenues come directly from the ownership of privatized lean platforms, while other assets are outsourced. In this way, firms can avoid

¹⁷¹ Relevant case studies will be provided in the following pages

labour costs because of the lack of recognition of the workers operating through the platform¹⁷² and, at the same time, they shift productivity costs from the firm to single workers outsourcing as many assets as possible – excluding the platform, which represents the profit-making property of lean firms. Consequently, workers precarity seems to represent a structural feature of platform capitalism, contemporarily a condition and a consequence of its hyper-outsourced model. The following paragraphs will provide an overlook of labour management in some of the main lean platforms, addressing cognitive labour first and, secondly, manual tasks in the gig economy.

2.2.2 Crowdsourcing cognitive digital labor: AMT

Among crowdsourcing firms like CrowdFlower, ShortTask, and Universal Human Relevance System (UHRS), Amazon Mechanical Turk (AMT)¹⁷³ is the most cited as well as the one on which most research on the subject has focused. AMT is a crowdsourcing platform founded by Amazon in November 2005 through which users can request and provide online micro-tasking: in contrast with other

¹⁷² As highlighted in Murillo *et al.* (2017), “From the business perspective, classifying workers as independent contractors saves money and removes much of the legal liability from issues arising out of work” (70)

¹⁷³ Scholz (2017) described the origins of the name of the platform as follows:

“Amazon’s Mechanical Turk is named after a chess-playing automaton designed in 1769 by the Hungarian nobleman Wolfgang von Kempelen. A small-bodied chess player hidden in a wooden case, operated this “automaton,” controlling the Turk’s mechanical hands of the Turk. The spectacle of a seemingly complex, mechanized chess-playing machine, complete with a turban-wearing Turk put small technical details on display as distraction while keeping the actual human labor out of sight. The operator-worker remains quite literally hidden in the black box. The Mechanical Turk was a hit in Europe at the time with Catherine the Great, Charles Babbage, and Edgar Allen Poe coming to experience it. Amazon’s Mechanical Turk pays homage to this eighteenth-century Mechanical Turk.

platforms in the gig economy, crowdsourcing firms limit the range of tasks that can be requested/provided to what are called “Human Intelligence Tasks” (HITs)¹⁷⁴ that can be completed online (being cognitive tasks, they do not require physical movement or the use of material objects different from a personal computer). Some crowdsourcing firms deal with fields that require highly specialized skills, such as graphic and design (e.g. 99designs), while the majority function as a pool for the request and provision of micro-tasks that do not need specific training or skills to be completed. AMT takes part to the latter group, focusing on cognitive microtasks. To make some examples, these human intelligence microtasks include activities such as “transcribing a snippet of handwritten text, classifying an image, categorizing the sentiment expressed in a comment, rating the relevance of a search engine result, and selecting the most representative frame in a video clip”¹⁷⁵ or “the description or categorization of products, the filling in surveys, the filtering out of social media content that violates terms of service (pornography and so on), the tagging and labelling of images, and the transcription of audio and video recordings or receipts.”¹⁷⁶ AMT is one of the major platforms through which online workers complete similar tasks, which are submitted by external subcontractors (be them private corporations, foundations, individuals, academics, or students) for various aims: corporate objectives, academic research, private or public surveys,

Similar to von Kempelen's historical Turk, the customers using the AMT's services today are frequently unaware of the workers delivering the services from behind the screens.” (26)

¹⁷⁴ Scholz (2017), p.29; Bucher and Fieseler (2017), p.1871

¹⁷⁵ Bucher and Fieseler (2017), p.1870, quoting Kittur et al. (2013) and Lehdonvirta and Ernkvist (2011)

¹⁷⁶ Scholz (2017), p.30

but also to implement Internet security, detect fake news, or contribute to big data building.¹⁷⁷¹⁷⁸

As for the number of AMT workers, information has been not updated from the time Amazon stated they are “over 50,000”.¹⁷⁹ Their composition is unclear as well, but it seems they mainly come from the US and India. US turkers surely represent the majority, since Amazon has not accepted non-US workers since 2012, probably due to difficulty in processing payments to foreign users or “foreign workers trying to scheme the system”.¹⁸⁰

Focusing on the terminology used to describe its users, AMT shows to be in line with the narrative generally utilized in the gig economy. Subcontractors that require and submit tasks in the platform are officially called “requesters”, while the workforce operating through AMT is referred to with various appellatives like “Turkers’, ‘mTurks’, or – tongue in cheek – “Turkeys””.¹⁸¹ These terms suggest themselves the lack of recognition of the worker status from part of Amazon: indeed, AMT workers are considered independent contractors. Consequently, “turkers” are not recognized the rights emanated by the Fair Labor Standard Act,

¹⁷⁷ Amazon, indeed, refers to AMT as an “artificial artificial intelligence” service (Scholz, 2017), referring to the fact that AMT “turkers” often contribute, through their tasks, to big data building: tasks such as image recognition, text transcription or translation are often aimed at creating big data useful to make algorithms more performing. In this sense, they contribute to “automating automation”, to make automation possible.

¹⁷⁸ Katz, *Wired* (2018), <https://www.wired.com/story/amazons-turker-crowd-has-had-enough/> accessed: 27 July 2018

¹⁷⁹ AMT website, <https://requester.mturk.com/tour> accessed: 08/17/2018

¹⁸⁰ Scholz (2017), p.31

¹⁸¹ Scholz (2017), p.29. Scholz also highlights that other terms are used to describe AMT workers: for example, “*The New York Times* referred to Amazon's piecemeal workers as ‘data janitors.’”

including the right to a minimum wage.¹⁸² As a matter of fact, diverse research has found that only a small part of the AMT workforce reaches federal minimum wage (\$7.25 per hour): for instance, according to Hara *et al.*¹⁸³, they only represent 4% of turkers, while Pew Research Center estimated that 91% of AMT workers earn less than \$8 per hour.¹⁸⁴ These findings suggest that there is a small core of expert turkers that manage to maintain a minimum standard of living with their work on Amazon, while the great majority of workers – both long-time frequent users or casual workers - do not reach the minimum standard with their work on Amazon.¹⁸⁵ What is necessary to highlight is that, independently from the earnings they manage to reach, none of Amazon turkers is recognized workers' rights by federal law. Rather, they have to follow the rules emanated by the platform, which foster workers' precarity. AMT workers are not paid an hourly wage: rather, by task. There is no minimum compensation, so that tasks can be paid from 1 cent to several dollars (it is the subcontractor who decides how much to offer for a micro-task), on which Amazon takes a 20% fee.¹⁸⁶ Consequently, workers spend much time at the computer trying to find sufficiently remunerated tasks and to accept them before other workers, yet this employment of time is not recognize as

¹⁸² Semuels, *The Atlantic* (2018), <https://www.theatlantic.com/business/archive/2018/01/amazon-mechanical-turk/551192/> accessed 17 August 2018

¹⁸³ Hara *et al.* (2017), <https://arxiv.org/abs/1712.05796> accessed 17 August 2018

¹⁸⁴ Pew Research Center (2016), <http://www.pewinternet.org/2016/07/11/turkers-in-this-canvassing-young-well-educated-and-frequent-users/> accessed 17 August 2018

¹⁸⁵ Scholz (2017) indicates that new AMT workers usually earn between \$2/\$3 per hour (30)

¹⁸⁶ Semuels, *The Atlantic* (2018), <https://www.theatlantic.com/business/archive/2018/01/amazon-mechanical-turk/551192/> accessed 17 August 2018

working time – hence, not remunerated. Furthermore, once a task is completed, “requesters” can decide not to deliver the payment in case they are not satisfied with the work done by the worker: this allows subcontractors to easily avoid payment and, at the same time, increase workers’ tension, to the extent that many employ more time to deliver a task to stressfully check if the work they did is correct.¹⁸⁷ Workers are neither paid if they reject a task: this usually occurs when, after accepting a task, they realize the instructions provided by the requester are unclear or insufficient to conclude the assignment. Therefore, AMT workers spend much unpaid and unrecognized working time in the platform, as they are subject to continuous external supervision: control is exercised, on the one hand, by the contractors that can decide whether to pay workers or not; on the other hand, by the platform algorithm that detects their actions and their evaluations.

To explain the motivations that lead AMT workers to engage in the platform despite low wages and lack of worker status recognition, Bucher and Fieseler (2017) suggested that working on Amazon Mechanical Turk generates “flow-like state of immersion”, characterized by “enjoyment (‘games’) and absorption (‘time flies’)” that constitute an intrinsic motivation to involve in the activity.¹⁸⁸ This position seems to be in line with interpretations from Fuchs and Seignani (2013) and Scholz (2013), who recognize that digital labour¹⁸⁹ can be perceived as a source of enjoyment and fun for platform users. This aspect is extremely important

¹⁸⁷ Trebor Scholz (2017), quoting Scholz, “Digital Labor Notebook” (The New School, August 2014)

¹⁸⁸ Bucher and Fieseler (2017), p.1870

in analysing underpaid or unpaid digital labour, since it reveals the methods used by digital firms to retain users. As previously explained, platforms' revenues increase in accordance to the number of their users; in the case of AMT, more users equal higher revenues coming directly from the monetary transactions occurring between requesters and turkers (from which Amazon extracts 20%).

Nonetheless, it is equally relevant to analyse economic motivations to understand involvement in paid labour through the platform. Rising precarity among US population seems in fact to represent an incentive factor that brings workers to accept engagement in poorly paid tasks available through Amazon Mechanical Turk and other similar platforms. In its research concerning the gig economy, the Pew Research Center indicates that 25% of gig workers has chosen to work through platforms because of lack of employment in the city or area where they live, and that for 56% of the gig workers surveyed the income generated by their work through platforms was "essential or important".¹⁹⁰ Even if not unemployed, many digital workers utilize platforms to find an additional source of income, being their primary source insufficient. The increase of *working poor* in advanced economies¹⁹¹, from this perspective, can be easily understood as one of the factors contributing to the growth of the gig economy. Rises in platforms workers, hence, take part to the historical changes experienced by the labour market which have

¹⁸⁹ These authors actually focus on enjoyment in unpaid digital labour; nonetheless, the same reasonings can be applied for (under)paid digital labour

¹⁹⁰ Pew Research Center (2016), <http://www.pewinternet.org/2016/11/17/gig-work-online-selling-and-home-sharing/> accessed: 22 July 2018

¹⁹¹ Whose numbers have increased in all affluent economies, especially the US (Brady *et al.*, 2010)

led to deregulation policies, widespread economic instability, as well as to a normalization of precarity:

“Intermittent employment, once considered the temporary condition of the young and marginal sections of the labor force, has now become standard for all employees. The temps (temporary employees) now outnumber the perms (permanent employees).”¹⁹²

As the single wage per household has disappeared and been substituted by a normalisation of lowering salaries and part-time employment or various atypical contracts, people have become more prone to accept lower wages and additional work to maintain a minimum standard of living.¹⁹³ We can conclude that the development of Amazon Mechanical Turk, as that of many other platforms, has been aided by an environment characterized by growing economic precarity and, at the same time, it constitutes an accelerator of precarity, since it allows (and profits from) workers’ rights disruption.

2.2.3 Material labour in the digital economy: TaskRabbit, Deliveroo, Uber, etc.

The gig economy fostered by economic recession, however, is not limited to the relatively narrow field of cognitive micro-tasking; rather, it has grown consistently through the development of digital apps whose objective is to match demand and

¹⁹² Foti (2017), p.79

¹⁹³ Staglianò (2018) remarks that many digital firms in the gig economy have been created – not casually – during and after the financial crisis: “Airbnb (2008), TaskRabbit (2008), Uber (2009/2010), Homejoy (2010), Urbansitter (2010)”

supply of manual tasks. Despite increasing concerns in the academic debate over the rise of “immaterial labor”¹⁹⁴ (to which this thesis takes part), the growth of gig economy demonstrates that “digital labor isn’t just digital”¹⁹⁵, and that the spread of digital capitalism has managed to reach non-cognitive areas as well as the social sphere. This paragraph will provide a concise description of the platforms dealing with manual tasks and their position as social actors, to leave space to the following analysis of legal cases concerning workers’ recognition by the law.

As for firms providing cognitive crowdwork, among digital platforms dealing with non-cognitive labour there are different levels of specialization in a field. For instance, it is well-known that Uber is specialized in car rides; other platforms are, instead, specialized in food delivery (Deliveroo, Foodora); and examples could go on listing babysitting, dry cleaning, house cleaning, car cleaning, and so forth. In the case of other apps like TaskRabbit, instead, the services provided are multiple and diversified: from dog-walking to hairdressing, from house-keeping to the provision of minor reparations. According to Scholz, these are occupations that cannot be outsourced, so that they have been subjected to the rule of platform capitalism.¹⁹⁶ Examining briefly the range of tasks that are led through digital apps, it is worth noticing that: a) part of these activities constituted a formal occupation for professionals who were granted the rights deriving from their employment status;

¹⁹⁴ Maurizio Lazzarato (2012), <http://www.generation-online.org/c/fcimmateriallabour3.htm> accessed: 21 August 2018

¹⁹⁵ Ayhan Antes, quoted in Scholz (2017), p.104

b) another share of these tasks were not usually remunerated in previous times, or were informally remunerated at least.

As far as the former category is concerned, these occupations witnessed a gradual disruption of employment rights and recognition. The plumber, the hairdresser, the taxi-driver, rather than being employees, or even freelancers, are now part of the in-between pool of “independent contractors”, professionals who are formally recognized as independent, but who *de facto* depend from the algorithm through which they work. As already stated, the lack of recognition of worker status and the decreasing wages accompanied by high surveillance should be interpreted from an historical point of view, taking in consideration raising precarity in the gig economy as part of long-term socio-economic tendencies.

Shifting to the second category, that of informal favours turned into remunerated tasks, it is interesting to focus on the social causes and implications of this transformation. These activities, indeed, used to be perceived as personal favours between friends, acquaintances or neighbours rather than constitute potential sources of income or even full-time occupations: in Trebor Scholz’s words, gig economy is stimulating the “financialization of activities that used to be an expression of social capital”¹⁹⁷, entering the social and private sphere of individuals, “extending the scope of commodified labour”.¹⁹⁸ Again, the historical perspective is useful to better interpret these changes: as the privation gig workers’

¹⁹⁶ Scholz (2015)

¹⁹⁷ Scholz (2017), p.48

¹⁹⁸ Standing (2016), p.211

rights is linked to labour market deregulation, the monetization of private and social life has to be understood in light of the social de-composition¹⁹⁹ fostered by neoliberal policies during the last decades. Despite the optimistic discourse around the gig economy that idolises the “sharing” aspect of these platforms, which, according to their supporters, is based on the willingness of their users to socialize, communicate and, exactly, *share* their goods and competences, the implications of these applications seem to bring social relations to the opposite side. The fact that today people favour to pay strangers to walk their dog, watch their children or give themselves a lift to the airport rather than ask a favour to a friend or neighbour is emblematic of the decomposition of communities occurring in contemporary economic circumstances. Favoured by the socio-economic processes that have fostered individualization, the gig economy has found a way to monetize it, promoting its spreading. An emblematic example that shows how the “promotion of individualization” just mentioned is not only a symbolic, abstract furtherance, but it can also develop into actual publicity, is the marketing implemented by Seamless, a food delivery platform. Their advertising posters, rather than promoting sharing, are in fact publicizing sociopathic sentiments through slogans such as “Satisfy your craving for zero human contact”, or “Over 8 million people in New York City and we help you avoid them all”, which do not even take into consideration the contact with their delivery men as “human”.²⁰⁰ As social relations

¹⁹⁹ See section 1.3 of this paper

²⁰⁰ Staglianò (2018); Jensen, *The Outline* (2018), <https://theoutline.com/post/3555/seamlessly-sliding-into-hell?zd=1&zi=gqey66bw> accessed 27 August 2018

are increasingly avoided and substituted by monetary exchanges, the “drivers”, “riders”, “taskers”, “contributors” of the gig economy lose recognition not only as workers but also as human beings, finding themselves in an employment relationship with minimum or no human contact and an algorithm as their “boss”.²⁰¹

Functioning through the data provided (voluntarily or involuntarily, consciously or unconsciously) by users, platform algorithms are able to constantly monitor the workforce and, consequently, to exercise control over them: they detect the position of workers, their timings, the number of tasks accepted, etc., but also their rates. In the case *Aslam, Farrar & Others v Uber*, the claimants who held that “the rating systems [function] as a further means by which Uber seeks to exert control over drivers” were supported by the Tribunal ruling.²⁰² The rate of appreciation of platform users, indeed, is particularly relevant in workers’ management, since the algorithm can give them higher or lower visibility on the platform on the basis of their rates; what is more, commonly, algorithms can also decide to deactivate a worker’s account if they do not comply with certain standards (e.g. if they do not accept certain tasks or if they are given a certain number of bad rates from users) – *de facto* firing the worker that operates through the platform. Algorithm control, hence, increases the pressure exercised and

²⁰¹ O’Connor, *Financial Times* (2016), <https://www.ft.com/content/88fdc58e-754f-11e6-b60a-de4532d5ea35> accessed: 25 August 2018

²⁰² *Aslam, Farrar & Others v Uber*, Employment Tribunals, Case Nos: 2202550/2015, October 28, 2016

perceived by workers, who are pushed to constantly improve their performances and to extend their permanence in the platform to raise their rates, promoting self-exploitation and a pressing competition between peers. In Guy Standing's words, in platform capitalism "surveillance is being automated".²⁰³ These mechanisms, which put workers in competition with each other and lower their human contacts to a minimum, contribute to the reduction of the probability of unionization and collaboration among them. Warin (2017), in a report about Deliveroo in the city of Brighton, highlights this aspect reaching the following conclusion:

"The specific structure [of the platform] found to foster divisions within the workforce. Principally this relates to the placing of workers in direct competition for work, whilst at the same time obscuring the procedure by which work is distributed and preventing riders from shaping the labour process in a meaningful way. As a result, riders are both disempowered and alienated from their colleagues. This poses significant difficulties for the organisation of workers and the formation of effective collective bargaining."²⁰⁴

Furthermore, this "hyper-accountable world in which everyone rates everyone (drivers to passengers, hosts to homeowners, and customers to messengers)" raises concerns over the legitimacy of workers management practices based on external, unreliable, information (often not objective, yet personal and shaped by subjective feelings and events) as well as over the ethics of the "increasing

²⁰³ Standing (2016), p.222

²⁰⁴ Warin (2017), p.7

penetration of user feedback mechanisms” which is leading to “a world with little or no privacy in which our data is ready to be sold to a third party.”²⁰⁵

Despite the efforts of digital firms to “minimize the outside regulation of the relationship between employer and employee”²⁰⁶, the emotional and economic control they can exercise over the workforce – to the extent that they can *de facto* dismiss them – suggests that platform users are, instead, unrecognized dependent workers. Before addressing case law, it could be useful to provide a description of the functioning of one these platforms to detect how control is exercised in more practical terms. Since one of the first important cases concerning workers’ recognition has been led against it, and since its functioning represents a pattern which we can find in the majority of other platforms in the gig economy, I have chosen Uber to provide an emblematic example for the “many companies that share the same business model”.²⁰⁷ To do so, we can rely on the precise and concise account made by Todoli-Signes (2017), who described Uber as follows:

“Uber owns a virtual platform where a user can obtain city transport. Operation is simple. After downloading the Uber app for free, any user can use it to find, by GPS, the closest driver and ask for a ride. Uber does not employ drivers or own any cars; on the contrary, Uber expects its participating drivers to do the job. Potential drivers have to send an application to Uber and pass a test in order to be authorised to participate in the platform. The authorisation

²⁰⁵ Murillo *et al.* (2017), p.71

²⁰⁶ Graham *et al.* (2017), p.40

²⁰⁷ Todoli-Signes (2017), p.195

process includes a request to send their driver's licence, car registration number and car insurance policy. Depending on the city, drivers may also be examined on their geographical knowledge of the city and may be interviewed by an Uber employee. A driver's vehicle has to be less than 10 years old. The price of the service is not negotiable, but set by Uber. Tips are forbidden and Uber takes between 10 per cent and 20 per cent of the price. Users can evaluate drivers and evaluations are made public for other clients. If these are negative, Uber can deactivate a driver's access to the platform. Uber can revoke a driver's access to the platform for other reasons too, e.g. for criticising the company on social networks. Drivers are free to choose when to work and for how long. Drivers can also refuse rides, but if a task is accepted it has to be completed. Moreover, the 'drivers' manual' provided by Uber says that a driver is expected to accept all jobs. Uber will investigate – with the possibility of deactivating the driver – if too many rides are rejected. The manual invites drivers to wear professional clothes, suggests that the radio should be switched off or, if left on, should play jazz music. It also recommends opening the car door for users' convenience and keeping an umbrella in the car, so that, in the event of rain, the user does not get wet when entering or exiting the vehicle. The driver has to pay for all running expenses (petrol, insurance, taxes) and the car, and assumes all responsibility should an accident occur. Uber offers cut-price insurance to all its drivers."²⁰⁸

As it is possible to extrapolate from this description, Uber gives precise indications about the ways in which drivers should act, it has control over their wages and their information, and can punish them for their conduct or the rates received by the customers. At the same time, drivers bare the costs related to their work (maintenance, insurance, customer care) and are not recognized workers' rights, such as minimum wage, sick pay or holiday pay. As this business model is adopted

²⁰⁸ *Ibid.*

by many other firms in the gig economy, gig workers have started to appeal to the law for the recognition of workers' rights.

2.2.4 Gig workers' recognition: case law from national jurisdictions

Since national jurisdictions are heterogeneous and the issue of gig workers' status is relatively recent, different conclusions have been reached in the first cases brought before national judges by workers willing to be recognized as such by digital firms. Being the UK the country where the first important achievements have been reached in this area, and since its jurisdiction can now rely on previous judgements, this section will leave more space to legal cases brought before UK judges. In particular, the cases *Aslam, Farrar & others v. Uber* and *Addison Lee Ltd v. Gascoigne* will be firstly addressed, since they represent two of the most important rulings in which the claimants were recognized worker status. Attention will be paid also to other national jurisdictions, particularly to US federal law and the lawsuit *Dynamex Operations West, Inc. v. Superior Court*.

- Mr Y Aslam, Mr J Farrar & Others v. Uber

On October 28, 2016, UK Employment Tribunal emanated a judgement declaring that Uber drivers are to be classified as workers under the Employment Rights Act 1996 (ERA) and Uber is, *de facto*, a transportation company. The claimants were Yaseen Aslam and James Farrar, two drivers who also spoke on behalf of other 19 Uber workers; the respondents were (1) Uber B.V., the Dutch company that holds

the legal rights to the App, (2) Uber London Ltd, which holds “a Private Hire Vehicle (‘PHV’) Operator’s License for London, and (3) Uber Britannia Ltd, which “hold[s] and/or manage[s] PHV Operator’s licenses issued by various districts outside London”. Nonetheless, the third respondent was not involved in the reasons, since the ruling concerned London-based drivers exclusively.

The Tribunal unanimously declared that Uber drivers were workers under the definition provided by the Employment Rights Act 1996 in s230(3)(b), what is also called “limb (b) worker”. This section, indeed, extends the notion of workers to people who are not formally employed (under a Standard Employment Relation) but fulfil certain conditions. The section goes:

“(3) In this Act “worker” (except in the phrases “shop worker” and “betting worker”) means an individual who has entered into or works under (or, where the employment has ceased, worked under) –

- (a) a contract of employment, or
- (b) any other contract, whether express or implied and (if it is express) oral or in writing, whereby the individual undertakes to do or perform personally any work or services for another party to the contract whose status is not by virtue of the contract that of a client or customer of any profession or business undertaking carried on by the individual;

and any reference to a worker’s contract shall be construed accordingly.”

Albeit the rights attached to the status of “limb (b) worker” are different from that of a SER, this definition implies a series of rights not recognized by digital firms, such as minimum wage and sick pay: hence, this ruling represents an important step towards gig worker’s rights’ implementation. The judgement rejected the

notion according to which Uber drivers are to be identified as singular entrepreneurial entities who are not subordinated to the platform, evidencing in this way the need for workers' recognition. Quoting official papers:

“The notion that Uber London is a mosaic of 30,000 small business linked by a common ‘platform’ is to our minds faintly ridiculous. In each case, the ‘business’ consists of a man with a car seeking to make a living by driving it.”
(28)

Moreover, the ruling also stated that, in contrast with Uber's claims and terms, the firm is a transportation company, quoting a previous judgement of the North Carolina District Court, which, in the *O'Connor et al v. Uber Technologies, Inc.* lawsuit, rejected the claim that Uber was a “technology company”, stating that the platform functions for Uber as the radio functions for taxi companies:

“Uber does not simply sell software, it sells rides. Uber is no more a ‘technology company’ than Yellow Cab is a ‘technology company’ because it uses CB radios to dispatch taxi cabs.”²⁰⁹

Hence, Employment Tribunal concluded that “Uber runs a transportation business. The drivers provide the skilled labor through which the organisation delivers its services and earns its profits”, providing the following reasons:

²⁰⁹ *O'Connor et al v. Uber Technologies, Inc.*, C.A. No. 13-03826-EMC

“(1) The contradiction in the Riders Term in the fact that ULL [Uber London Ltd] purports to be the drivers’ agent and its assertion of ‘sole and absolute discretion’ to accept or decline bookings.

(2) The fact that Uber interviews and recruits drivers.

(3) The fact that Uber controls key information (in particular the passenger’s surname, contact details and intended destination) and excludes the driver from it.

(4) The fact that Uber requires drivers to accept trips and/or not to cancel trips, and enforces the requirement by logging off drivers who breach those requirements.

(5) The fact that Uber sets the (default) route and the driver departs from it at his peril.

(6) The fact that UBV fixes the fare and the driver cannot agree a higher sum with the passenger. (The supposed freedom to agree a lower fare is obviously nugatory.)

(7) The fact that Uber imposes numerous conditions on drivers (such as the limited choice of acceptable vehicles), instructs drivers as to how to do their work and, in numerous ways, controls them in the performance of their duties.

(8) The fact that Uber subjects drivers to the rating system to what amount to a performance management/disciplinary procedure.

(9) The fact that Uber determines issues about rebates, sometimes without even involving the driver whose remuneration is liable to be affected.

(10) The guaranteed earnings schemes (albeit now discontinued).

(11) The fact that Uber accepts the risk of loss which, if the drivers were genuinely in business on their own account, would fall upon them.

(12) The fact that Uber handles complaints by passengers, including complaints about the driver.

(13) the fact that Uber reserves the power to amend the drivers’ terms unilaterally.”

On November 10, 2017, Uber presented appeal to this judgement to the Employment Appeal Tribunal in London. The judge rejected it, restating the just-

mentioned conclusions provided by the Employment Tribunal, thus restating the status of limb (b) workers for Uber drivers and their rights to the protections attached to that employment status.²¹⁰

- Addison Lee Ltd. v. Mr. C. Gascoigne

On May 11, 2018 the Employment Appeal Tribunal rejected an appeal made by the company Addison Lee Ltd. against the decision taken by the Central London Employment Tribunal that recognized the worker status to Mr. Gascoigne, one of their couriers. Furthermore, the EAT rejected the notion that such employment relationship did not imply mutual obligation for the parties to the contract.

Mr. Gascoigne was, between 2008 and 2017, a gig worker, specifically a courier, for Addison Lee Ltd., a company described as follows in the Tribunal Judgement²¹¹:

“AL's business includes the provision of private-hire taxis to businesses and individuals, working with around 4000 drivers, and a small courier business with around 500 couriers using motorcycles, cars, vans and bicycles. The number of such 'cycle'/'pushbike' couriers is 30-40. They operate within a relatively small geographical area within Central London where pedal power is more likely to get a letter or parcel delivered quickly. The service provides speedy delivery, usually within an hour, to the customers.” (6)

²¹⁰ Davies, *The Guardian* (2017), <https://www.theguardian.com/technology/2017/nov/10/uber-loses-appeal-employment-rights-workers>

²¹¹ *Addison Lee Ltd. V. Gascoigne*, UK Employment Appeal judgement, Case No. [2018] UKEAT 0289/17/1105, https://assets.publishing.service.gov.uk/media/5af56eb540f0b622d4e9808e/Addison_Lee_Ltd_v_Mr_C_Gascoigne_UKEAT_0289_17_LA.pdf

On July 2017, Gascoigne brought a lawsuit against Addison Lee before the Employment Tribunal, requiring to be recognized as worker of the company. As for the lawsuit previously analysed, also in this case the Employment Tribunal found evidence that the claimant was to be classified as a limb (b) worker and, therefore, had the right to holiday pay. The Tribunal stated that, despite the written contract between the parties defined the worker as an “independent contractor”²¹², it “did not reflect the reality of their legal relationship”, thus claiming its invalidity. The appeal made by the company was then rejected by the EAT.

Moreover, the Employment Appeal Tribunal restated the “mutuality of obligation” between the parties during the period in which Gascoigne was “logged-on” in the App, in practice claiming that, once logged, the worker has an obligation to accept jobs and, as a consequence, the company should have an obligation to provide jobs. Such mutual obligation is not recognized by the contract signed by Mr. G, which stated, in Clause 5, “Provision of Services”:

“5.2. For the avoidance of doubt, there is no obligation on you to provide the Services to Addison Lee or to any Customer at any time or for a minimum number of hours per day/week/month. Similarly, there is no obligation on Addison Lee to provide you with a minimum amount of, or any, work at all.”

²¹² The contract, quoted on EAT judgement, goes: “You agree that you are an independent contractor and that nothing in this agreement shall render you an employee, worker, agent or partner of Addison Lee and you shall not hold yourself out as such” (7)

Nonetheless, the Tribunal provided evidence that, *de facto*, there was an obligation for the courier to accept the jobs. The Employment Appeal tribunal decision reports these significant lines from the ET judgement:

“53.1. One of the few parts of the contract of October 2015 which does ring true is the final phrase of clause 5.1 which says ‘*unless we are informed otherwise, you agree that if you are in possession of and logged into an Addison Lee XDA you shall be deemed to be available and willing to provide Services*’. That was indeed how the claimant and his controllers operated. His willingness had to be more than theoretical because, if he had logged in when not actually available, his whereabouts would have shown up on the GPS tracker and, if he was not in central London, he would have taken longer to do the job and therefore earned less per hour. [...]

53.6. The claimant was put under pressure, albeit gentle pressure, from his controller if he did not pick up a job when logged on and he was not expected to decline it; his XDA had no ‘decline’ button. [...]

53.7. Once the claimant had accepted the job there was no way that he would not complete it unless, again, circumstances such as a puncture got in the way. He was subject to a classic wage/work bargain.”

The judgement, hence, evidences the power relation existing between the company and the worker, subject to “wage/work bargain” by an employer that has not recognized his rights and did not respect the mutual obligations derived from their employment relationship. The Tribunal also found that the company put additional obligations on the worker, such as that of contracting a specific insurance chosen by the firm. (19)

The Employment Appeal Tribunal concluded:

“There is rightly no challenge to the Tribunal's conclusion that the written terms of contract did not reflect the reality of the situation. In our judgment there is no basis to challenge the Tribunal's assessment of that reality nor its consequential conclusion that G was a 'limb (b)' worker.”

This judgment represents a relevant case in UK law not only because it recognized the limb (b) worker status, but also because it centred on the reality of the situation, on how the gig economy *de facto* functions despite their discursive and legal manoeuvres aimed at avoiding juridical consequences like those just presented.

- *IWGB v. Deliveroo; Pimlico Plumbers v. Smith*

Despite legal victories in the field of workers' rights, not always are gig workers able to be recognized as limb (b) workers by UK national judges. Companies, indeed, sometimes manage to find legal loopholes to avoid their recognition.

In the case *IWGB v. Deliveroo*²¹³, the Independent Workers' union of Great Britain (IWGB) lose the claim brought before the Central Arbitration Committee, which did not recognize the limb (b) worker status of Deliveroo riders. To win the legal dispute, Deliveroo included in its contracts a clause that allowed its riders to be substituted to work by a second person. Since the limb (b) contract provides that

²¹³ Full name: *Independent Workers' Union of Great Britain (IWGB) v. RooFoods Limited T/A*, case No. TUR1/985(2016)

the worker has to “do or perform *personally* any work or services for another party” [my emphasis], the judges have concluded that a limb (b) worker could not be substituted by other individuals to lead his work: hence, Deliveroo riders could not be included in that category. Quoting CAC judgement:

“101. In light of our central finding on substitution, it cannot be said that the Riders undertake to do personally any work or services for another party. It is fatal to the Union’s claim. If a Rider accepts a particular delivery, their undertaking is to either do it themselves in accordance with the contractual standard, or get someone else to do it. They can even abandon the job part way having only to telephone Rider Support to let them know. A Rider will not be penalised by Deliveroo for not personally doing the delivery her or himself, provided the substitute complies with the contractual terms that apply to the Rider.

102. [...] The delivery has to be undertaken by a person, however it does not have to be the Rider that personally performs it: Riders are free to substitute at will.”

Jason Moyer-Lee, the leader of IWGB, explained that the fact ERA does not provide a definition of worker in which substitution is considered is, however, a discrepancy that national tribunals and courts should (and usually do) avoid taking into serious consideration in lawsuits concerning workers’ rights. In an article published by *The Guardian*, he wrote:

“This issue has become the favourite focus of the courier companies’ overzealous corporate lawyers: you simply introduce a clause in the person’s contract saying they can have someone else do the work for them and you’ve

miraculously transformed a low-paid bike courier into an independent business person! Luckily, tribunals and courts usually see through this nonsense, but every once in a while the company is able to get away with exploiting the loophole and the worker.”²¹⁴

In the same article, he claims that, finally, a Supreme Court judgement has “closed the loophole”. The case to which he was referring to is *Pimlico Plumbers v. Smith*, in which the Court rejected the positions of the appellants (Pimlico Plumbers Ltd.) and unanimously held that the platform plumber Gary Smith (the respondent) was to be classified as a limb (b) worker.²¹⁵ In the judgement, a section was dedicated to the issue of “personal performance”.²¹⁶ Here, the Court declares that the contract stipulated by the parties, which takes into consideration the possibility of worker’s substitution, is “irrelevant, cast in highly confusing terms” (12). The section concludes as follows:

“33. The terms of the contract made in 2009 are clearly directed to performance by Mr Smith personally. The right to substitute appears to have been regarded as so insignificant as not to be worthy of recognition in the terms deployed. Pimlico accepts that it would not be usual for an operative to estimate for a job and thereby to take responsibility for performing it but then to substitute another of its operatives to effect the performance. Indeed the terms of the contract quoted in para 18 above focus on personal performance: they refer to “your skills”, to a warranty that “you will be competent to perform

²¹⁴ Moyer-Lee, *The Guardian* (2018), <https://www.theguardian.com/commentisfree/2018/jun/14/gig-economy-workers-pimlico-plumbers-employment-rights> accessed 18 August 2018

²¹⁵ *Pimlico Plumbers Ltd. v. Smith*, UK Supreme Court judgement, Case No. [2018] UKSC 29; UKSC 2017/0053, <https://www.supremecourt.uk/cases/uksc-2017-0053.html>

²¹⁶ pp. 10-15

the work which you agree to carry out” and to a requirement of “a high standard of conduct and appearance”; and the terms of the manual quoted in para 19 above include requirements that “your appearance must be clean and smart”, that the Pimlico uniform should be “clean and worn at all times” and that “[y]our [Pimlico] ID card must be carried when working for the Company”. The vocative words clearly show that these requirements are addressed to Mr Smith personally; and Pimlico’s contention that the requirements are capable also of applying to anyone who substitutes for him stretches their natural meaning beyond breaking-point.

34. The tribunal was clearly entitled to hold, albeit in different words, that the dominant feature of Mr Smith’s contracts with Pimlico was an obligation of personal performance. To the extent that his facility to appoint a substitute was the product of a contractual right, the limitation of it was significant: the substitute had to come from the ranks of Pimlico operatives, in other words from those bound to Pimlico by an identical suite of heavy obligations. It was the converse of a situation in which the other party is uninterested in the identity of the substitute, provided only that the work gets done. The tribunal was entitled to conclude that Mr Smith had established that he was a limb (b) worker - unless the status of Pimlico by virtue of the contract was that of a client or customer of his.” (14-15)

This Supreme Court judgement, besides representing further evidence for the classification of gig workers as limb (b) workers under ERA 1996, provides consistent case law for future attempts by companies to escape workers’ recognition through *ad hoc* contracts. Moreover, as in the case of *Addison Lee Ltd. v. Mr. C. Gascoigne*, this judgement suggests that a complete analysis of the gig economy should require a study of the *de facto* situation of its workers.

- *Dynamex Operations West, Inc. v. Superior Court; Brunetto & Duetta v. Foodora; and the ABC standard*

*Dynamex Operations West, Inc. v. Superior Court*²¹⁷ is a lawsuit concerning a group of delivering drivers who led a class action to require employment status by Dynamex, the package and document delivering firm through which they operate. The trial court and the California Court of Appeal, which followed the case, already held that those workers were employees of the company. Nonetheless, the Supreme Court, while restating the employment status of those workers, has delivered in this judgement a central opinion regarding law interpretation. This case is particularly important because in its judgement, delivered on April 30, 2018, the California Supreme Court has clarified the standard that should be applied in Californian and federal law to determine whether a worker is an independent contractor or an employee. This legal standard, already used in other jurisdictions, is known as “ABC test”, and was employed in this judgement in place of the usual “Borello standard”.²¹⁸ In the Court judgement, the ABC standard is described as follows:

“Under the ABC standard, the worker is an employee unless the hiring entity establishes each of three designated factors: (a) that the worker is free from control and direction over performance of the work, both under the contract

²¹⁷ *Dynamex Operations West, Inc. v. Superior Court of Los Angeles County*, Supreme Court of California, Case No. BC332016, <http://www.courts.ca.gov/opinions/documents/S222732.PDF>

²¹⁸ A common law test whose name comes from the 1989 lawsuit *S.G. Borello & Sons, Inc. v. Department of Industrial Relations* (McGuire Woods, 2018, <https://www.mcguirewoods.com/Client-Resources/Alerts/2018/5/California-Supreme-Court-ABC-Test-Independent-Contractor-Status.aspx>) which implies 11 points of verification

and in fact; (b) that the work provided is outside the usual course of the business for which the work is performed; and (c) that the worker is customarily engaged in an independently established trade, occupation or business (hence the ABC standard). If the hirer fails to show that the worker satisfies each of the three criteria, the worker is principal federal wage and hour legislation.” (57-58)

In this specific case, the court adopted the decision of previous judgements and concluded that Dynamex workers were employees according to the ABC standard, and, consequently, the “hiring business” would “bear the responsibility of paying federal Social Security and payroll taxes, unemployment insurance taxes and state employment taxes, providing worker’s compensation insurance, and, most relevant for the present case, complying with numerous state and federal status and regulations governing the wages, hours, and working conditions of employees.”

Speaking in more general terms, this opinion is central in the debate around the gig economy because, in practice, the Court ruled that gig workers are employees *unless* the three points of contrary evidence are proved. This rule hence implies a sort of *default* employment status recognition to gig workers, who can be reevaluated as independent workers only if the ABC requirements are fulfilled. Moreover, the court defined subordination differently from the formal and hierarchic kind derived from an employment contract and the organizational structure of the firm, thus basing its judgement on *substantial* subordination of workers rather than formal subordination. This standard could be applied not only to US federal law but also to other national jurisdictions that lack the necessary legal means to deliver adequate judgements. It would be the case, for example, of

Italian law, which has not recognized gig workers' rights yet. In the highly debated case *Brunetto & Duetta v. Foodora*²¹⁹, the Tribunal of Turin ruled that Foodora riders were independent contractors, emphasising (excessively) the alleged flexibility of their working hours and rejecting the notion that their relationship with the company was one of subordination.²²⁰ Under the ABC test, however, the firm would have found it more difficult to provide evidence for riders' independence. Moreover, in contrast with UK and US judges, the Tribunal restricted its examinations to already-existing national law and the contract stipulated between the parties, without taking into consistent account the *de facto* substantial subordination under which the riders work.

To conclude, analysing the "reality of facts", as for example UK courts and tribunals are already used to do, and the substantial rather than formal aspects of subordination, could represent two relevant legal tools to implement gig workers' rights in national legislations that are less advanced in this juridical field.

²¹⁹ Full name: *Bonetto S., Druetta G. v. Digital Services XXXVI Italy S.r.l (Foodora)*, Case No. 4764/2017, <http://www.bollettinoadapt.it/wp-content/uploads/2018/05/7782018.pdf>

²²⁰ *Bonetto S., Druetta G. v. Digital Services XXXVI Italy S.r.l (Foodora)*, Tribunale di Torino judgement, Case No. 4764/2017, 11 April 2018, Italy, <http://www.bollettinoadapt.it/wp-content/uploads/2018/05/7782018.pdf>

2.3 Unpaid labor in platform capitalism

2.3.1 *The theory of value applied to data labor*

As already described, data constitute the “raw material” which allows digital platforms to function and profit. Data – or information – are produced by users through the activities and interactions they lead inside the platform: users, in other words, do what is called *data labor*.

To understand data labour, it is necessary to detach the concept of labour to the traditional idea of employment (what could be referred to as waged work) and start to view labour as an activity that takes part to the capital process of value creation, independently from the ways it is organized and the (concrete or abstract) space where it takes place.²²¹ Waged labour is not the only productive form of labour²²²: this rule applies to platform capitalism, but has always been true in human history, from the times of slavery to patriarchal society. In fact, what digital capitalism has in common with previous forms of exploitation is its ability to expropriate the value created by unpaid labour. In a capitalist economy, this leads to a maximization of surplus. Labour exploitation in the digital environment seems, however, less evident than other forms of unpaid work: this could be related to the fact that in digital platforms, and especially in social media, the distinction between consumer and producer is often blurred²²³, and users, suggested by common sense,

²²¹ Armano E., Murgia E., Introduction to Armano *et al.* (2017), p.12

²²² Fuchs (2016), p. 361

²²³ To the extent that hybrid terms like “prosumer” are commonly used even in the academic field (Szymusiak, 2015)

often perceive themselves more or exclusively as customers rather than value-creating actors (albeit phrases like “if something is free, you are the product” have spread through the Internet). The digital economy, as long as it is able to hide the labour exploitation it perpetuates, is hence a functional “consensus-creating machine”²²⁴ which embeds masses into its circuit of value appropriation: data labour, hence, is “free” under two perspectives – (1) it is unpaid; (2) it is not perceived as labour, rather as a voluntary activity.²²⁵

Nonetheless, in the process of value creation implemented by platform capitalism, despite common perception, users are to be understood as the *producers* of the principal material that allows firms to make profit – that is: data. More than being themselves the product, users are those who create the product, who create value, through their activities in the digital space. User-generated data, then, are utilized by firms to create profit in various ways, to improve the platform performance, to implement surveillance, to sell advertising space based on users’ information. Among the numerous types of digital firms, advertising platforms (especially social media platforms) are those which probably depend more on data, since they exclusively rely on unpaid labour (differently from e.g. gig economy companies that also depend on underpaid gig work). Consequently, social media represent an emblematic case of data labour implementation, in which digital firms manage to maximize their surplus value by lowering wages to zero.

²²⁴ Terranova (2000), p.39

²²⁵ Briziarelli (2017) refers to this perception of data labour as voluntary and positive as “volunteerism 2.0”

As evidenced by Fuchs in describing value creation in advertising platforms, it is hence possible to apply Marx's theory of value to platform capitalism:

“The rise of capitalist social media such as Facebook, Twitter, YouTube and Weibo has not rendered the concepts of labour time and the law of value superfluous, but is an expression of a new qualities of the labour theory of value. The more time a user spends on Facebook, the more profile, browsing, communication, behavioural, content data s/he generates that is offered as a commodity to advertising clients. The more time a user spends online, the more targeted ads can be presented to her/him.

The average value of a single ad space is the average number of minutes that a specific user group spends on Facebook per unit of time (e.g. 1 month or 1 year) divided by the average number of targeted ads that is presented to them during this time period.

Targeted online advertising is many social media corporations' core capital accumulation strategy. It is a method of relative surplus-value production: Not just one ad is presented to all users at the same time, but many different ads are presented to different users at the same time. Individual targeting and the splitting up of the screen for presenting multiple ads allows to present and sell many ads at one point of time. In the pay-per-click mode, clicking on an ad is the value realization process.”²²⁶

Rather than an equal exchange between user/consumer and provider/producer, digital capitalism implements labourer-exploiter relations. The inequality and unfairness of these practices are revealed by the disproportionate profits digital corporations manage to make with the data provided for free by their users without any kind of monetary incentive or redistribution.

²²⁶ Fuchs (2015), p.27

From the perspective of the theory of value, the core of this exploitative relationship is the profit-aimed nature of digital firms' practices. The principal issue seems not so much that digital unpaid labour exists (there are, in fact, forms of voluntary digital unpaid labour, such as those provided by Wikipedians), rather that this kind of labour is not subject to redistribution, and it is voluntarily hidden by its platform owners who capitalize the activities and information users provide for free. Consequently, "it is the imperative of productivity in the context of extractive platform capitalism that should be questioned and restricted."²²⁷ Fuchs (2012) identified coercion, alienation, and appropriation as the three constitutive elements of data labour exploitation. While the first element, coercion, is linked to the social environment existing inside and outside the platform, the latter two involve the profit-driven organisation of digital firms, namely the fact that platforms are not owned by their users/labourers (alienation) and the value of labourers' interactions is appropriated by digital capitalists (appropriation). Nonetheless, I agree with Tiziana Terranova in the fact that the term "appropriation" is not well suited for digital labour, since digital firms do not appropriate a value that was created independently from them. Rather, digital structures have been purposely built to employ – without paying for it – the information generated *inside* capitalist platforms:

"The fruits of collective cultural labor has been not simply appropriated, but voluntarily channelled and controversially structured within capitalist

²²⁷ Scholz (2017), p.89

business practices. The relation between culture, the cultural industry, and labor in these movements is much more complex than the notion of incorporation suggests.”²²⁸

The field occupied by digital capital on the Internet is therefore an abstract diffuse structure that widens its frontiers with the aim of incorporating increasing numbers of free (unconscious) labourers who allow to accumulate surplus value.

2.3.2 The general intellect at work

The data labour digital users provide for capitalist platforms is not only constituted by cognitive labour (which is represented, to make few examples, by chatting and posting on social media, or watching a film), but also includes less cognitive practices: geospatial data, for example, can be extracted by movements detected by Gps sensors, Wi-Fi systems or by the components of what is called the “Internet of Things” (IoT).

The IoT, which refers to a network of digital devices connected to each other and to a common platform that regulates them using the information they collect, shows how the structure of platform capitalism is not just an abstract entity, yet it also functions through material objects (and the material, often underpaid, living labour necessary to concretely produce those objects). If we identify the general intellect as an entity including both the material (objects/machines) and human (cognitive and physical capacities) components of labour, then digital capitalism configures as a system in which the general intellect is put at work:

²²⁸ Terranova (2000), p.39

“The general intellect is an articulation of fixed capital (machines) *and* living labor (the workers). If we see the Internet, and computer networks in general, as the latest machines—the latest manifestation of fixed capital— then it won’t be difficult to imagine the general intellect as being well and alive today.”²²⁹

In this sense, Berardi’s notion of *semiocapitalism* could be re-employed to indicate, rather than the realm of waged work, that of unconscious unpaid labour. Paolo Virno even extended the idea of the “general intellect at work” and stated that whole life is put at work²³⁰, emphasizing the process through which digital devices have increasingly occupied people’s daily life to the point that any activity can be transformed into valuable data. Albeit Scholz (2017) is right in his counter claim, which highlights that not everyone lives surrounded by digital apparatuses nor is any occurring activity registered by digital devices, we cannot state with certainty which is the extent that the digital environment is able to reach and which are its actual limits. Moreover, if it is true that not everyone has been incorporated in the digital network yet, evidence suggests that the objective of digital corporations is to widen their pool of data sources as much as possible, since expanding their networks represents a vital necessity for these profit-driven entities.

Bringing the analysis to extreme positions, it could be asserted that digital data labour could eventually substitute life, and digital interactions overcome personal relations. Recalling the historical perspective utilized to describe gig work, some connections could be made between the social decomposition begun in late 20th

²²⁹ *Ibid.*, p.45

²³⁰ Virno (2004)

century and the hyper-excited search for interactions and attention inside digital networks typical of the contemporary connected subject.²³¹ While human contacts and communities shatter under the consequences of neoliberal policies and economic recession, the subject moves to a virtual environment where the law of neoliberal performance is in force implementing mechanisms that expose the person to continuous evaluation by his/her peers, in search for approval and interactions from other individuals who rarely or never gather in a physical dimension. Taking into account the considerations proposed in this section, digital platforms – social media in particular – seem to configure as instruments purposely constructed to (a) generate and extrapolate value from free data labour²³²; (b) contribute to the further transformation of their users into neoliberal subjects.²³³

2.4 Inequality, class struggle, and the need for redistribution

2.4.1 Lack of redistribution

As labour deregulation is being implemented and normalized at the global level, platform capitalism takes advantage of precarious subjects to subsume them to underpaid or unpaid labour, fostering in this way the process of deregulation and contributing to its normalisation.

²³¹ Coin, *CheFare* (2018), <https://www.che-fare.com/social-liberta-jaron-lanier/> accessed: 29 August 2018

²³² Terranova (2000)

²³³ Briziarelli (2017)

While making consistent profits exploiting precarious labour, digital firms do not redistribute their wealth among society. On the one hand, in relation to their size and revenues, they do not substantially contribute to employment.²³⁴ Their surplus value is commonly generated by unrecognized, unstable, and underpaid labour (i.e. gig work) or by unconscious, unpaid data labour provided freely by their users. On the other hand, the revenues they collect through labour exploitation and venture capital funding are commonly not declared to fiscal authorities. Digital firms are, indeed, highly used to fiscal elusion and scheme various mechanisms to avoid taxation, such as the so-called “Double Dutch” utilized by Uber.²³⁵ Therefore, besides refusing the recognition of a fair pay and employment rights to their workers, as well as exploiting free labour, digital companies do not contribute to fiscal redistribution avoiding taxation. Consequently, digital corporations increasingly reveal their role as contributors to economic and social instability as they implement and profit from labour deregulation for profit-driven motives.

2.4.2 Digital class struggle

As a response to the corporate practices described in this chapter, some critics suggest that digital labourers should react through contemporary forms of class struggle. Being the structure of traditional worker-employer relations collapsed under platform capitalism, and being the terrain where labour exploitation occurs

²³⁴ To make an example, when WhatsApp was bought by Facebook for \$19ml, the company had only 55 employees (Dyer-Witthford, 2015, p.177)

different from the physical factory, rather constituted by digital networks and devices, traditional practices of protest should be reviewed and reinvented.

Christian Fuchs (2015), focusing on social media, evidenced that since users represent the value-generating actors, they have the consequent power to stop the process of value and profit creation. This notion can also be utilized to explain why social media interactions are, in fact, unpaid labour: as suggested by the author, if Facebook formal employees went on strike, the platform would continue to function and generate profits; if Facebook users stopped entering the App, instead, the company would face huge losses. Logging off social media, hence, can be recognized as a contemporary form of class struggle. Another practice could be that of using ad-block software, since it “disables Facebook and others’ monetization of personal data by blocking targeted ads.”²³⁶ Fuchs concludes stating that since “exploitation is not tied to earning a wage, but extends into broad realms of society”, then:

“class struggles need to extend from factories and offices to Google, Facebook, and Twitter. The theory of digital labour is an ally of users, whereas the digital rent concept and related approaches are a slur that does not side with the interest of users and denigrates them as unproductive and unimportant in class struggles.”²³⁷

²³⁵ Albeit highly relevant for an analysis of digital capitalism, the avoidance of fiscal duties by digital companies will be only hinted in this paper, since the topic would require a specific dissertation about tax-related jurisdiction and the specific mechanisms utilized to avoid fiscal authorities.

²³⁶ Fuchs (2015), p.39

²³⁷ *Ibid.*, p.40

The re-emergence of hacker culture and its re-appropriation of digital practices and technological instruments could be central for political struggles in the digital field.²³⁸ In particular, creating alternatives to capitalist services and leading resistance with similar but socialized tools could represent a turning point for digital class struggle.

2.4.3 Platform cooperativism

Remaining in the field of digital platforms, important contributions were provided by Trebor Scholz in the field of *platform cooperativism*, which refers to projects aimed at building socialized platforms as an alternative to capitalist ones. It is based on the notion that data labour and digital labour “is not necessarily exploited labor”²³⁹: rather, it can be retributed through an economic redistribution or even voluntarily delivered to be used for social objectives. Being the topic articulated and subject to continuous debate, and an exhaustive analysis would require an *ad hoc* section, the following lines will be limited to a brief description of the principal points through which platform cooperativism could be developed. Scholz (2017:181) synthesized the project in three core aspects:

- 1) “It is about cloning or creatively altering the technological heart of the sharing economy. It embraces the technology but wants to put it to work with a different ownership model, adhering to democratic values”: it is about the development of

²³⁸ Delfanti A. and Söderberg J., in Armano *et al.* (2017), pp. 57-70

²³⁹ Terranova (2000), p.48

platforms which, rather than being profit-driven, act accordingly to cooperative and democratic principles;

- 2) “Platform cooperativism is about solidarity [...]. Platforms can be owned and operated by inventive unions, cities, and various other forms of cooperatives, everything from multi-stakeholder and worker-owned co-ops to produser-owned platform cooperatives”: property of the platform and the relative assets, hence, would be cooperative and redistributed among workers or even cities and communities;
- 3) “Platform cooperativism is built on the reframing of concepts like innovation and efficiency with an eye on benefiting all, not just sucking up profits for the few”: again, here the author restates the objective of using technology for common well-being, hence avoiding exploitation and economic inequality.

The development of projects of platform cooperativism clearly requires multi-level analyses, from IT research to the juridical field, as well as numerous different trial projects necessary to develop a functional template for the spreading of this *modus operandi*. Nonetheless, cooperative digital realities have already started to spread, from workers-owned gig platforms (like Resonate, a cooperative version of Spotify owned by musicians, or Bolognese drivers-owned company Cotabo) to open-access no-profit search engines and operative systems (Linux being the most known among the latter).

2.4.4 *The rise of Precariat*

Other scholars have adopted a wider perspective moving the focus from specific digital environments (e.g. social media) to society as a whole, identifying digital labourers and their struggle as part of a larger tendency to which a wide range of precarious subjects contribute. Tiziana Terranova, assuming the traditional strike being obsolete, has theorized the necessity of a “social strike”, “a permanent experiment of invention which diffuses forms of striking practicable even by those who would, according to the traditional model, be incapable: the unemployed, the precarious, the domestic worker, the crowd worker, the migrant without official documents.”²⁴⁰ From such broader perspective, digital workers can be identified as part of the rising class of the “precariat”.

Albeit the term “precariat” is often linked to Guy Standing’s work²⁴¹, Italian activist and scholar Alex Foti explained, in his *General Theory of the Precariat* (2017), that before Standing used this terminology in his books, “the precariat had already named itself”:

“In London, during the fall of 2004, anti-globalization activists drafted *The Middlesex Declaration of Europe’s Precariat*, a manifesto that sent forth a call for a pan-European May Day, and also comprised of a list of demands. It called for an international May Day across Europe, focusing on precarity and reclaiming those labors, welfare, and social rights denied to precarious youth by neoliberal governments and corporations.”

²⁴⁰ Scholz (2017), p.175

²⁴¹ See Standing (2014)

Precariat mobilizations have then spread throughout Europe, at first mainly in southern countries (Italy, Spain, Greece), followed by other European activists.

Precariat includes different and numerous subjects, who share a condition of “precarity”, that is of economic as well as social instability. In the current neoliberal system, they are the growing group of those who do not receive a rent from capital and are subjected to exploitative measures, from instable employment or unemployment to unpaid labour. In Foti’s words:

“The precariat counts among its members those who: work in temporary and/or part-time private or public employment; are self-employed as freelancers (often for a single employer); work in poorly paid apprenticeships; work in unpaid internships; do not work because they are unemployed; officially do nothing (NEETs) and/or perform under-the-counter, black-market labor.”²⁴²

Giving their proven condition of exploitation and underpaid or unpaid labour, digital workers and users can be seen as includable in the precariat²⁴³, together with the increasing number of unemployed who have been or will be displaced by automation and computerization.

Viewing this apparently heterogeneous group as a contemporary class, it is possible to advance proposals of class struggle as those previously described.

Furthermore, differently from the 20th century working class, the precariat seems

²⁴² Foti (2017), p.31

²⁴³ Even though Foti forgot to include them, other authors e.g. Terranova refer to them as part of what we are calling “the precariat”

to have a larger revolutionary potential exactly because of their precarious conditions: not having a regular well-paid occupation to protect, they are more likely to lead active actions to fight inequality and precarity and build functional alternatives to the neoliberal regime that fosters the socio-economy insecurity to which they are subjected.

Nonetheless, when proposing solutions to socio-economic instability, attention should be paid to neoliberal practices and discourse. As described in this thesis, capitalist rhetoric is used to the practice of appropriation of the arguments of the critical subordinated groups. The manipulation of technological progress, turning it from a potential tool of liberation from work to an accelerator of unemployment and decreasing wages; the creation of digital profit-driven platforms built to perpetuate value extraction from a conscious or unconscious labour force; the persistent recurrence to a narrative that idolises flexibility in a (rather unsuccessful) attempt to hide the socioeconomic disparities generated by labour deregulation: these practices represent a proof of the neoliberal ability to constantly re-shape itself according to the moves of the critique and to appropriate critical arguments to turn them into neoliberal reinforcing tools. A further example of this appropriation ability is represented by the arguments led by neoliberal representatives, particularly by Silicon Valley CEOs, in favour of the basic income. The idea of basic income they support is fundamentally distant from the leftist project of Universal Basic Income (UBI); nonetheless, the utilization – or rather, appropriation - of identical or similar terminology is sufficient to create space for

counter-resistance. If an alternative is to be build, it should respond properly to neoliberal strategies as well as develop a likewise hegemonic project capable of replacing efficiently the neoliberal paradigm.

Chapter 3: UBI and Future Perspectives

3.1 Basic income under the neoliberal paradigm

3.1.1 Basic income history: both a left- and right- wing argument

Despite current general common sense that has developed around the basic income which links it to left politics, this proposal has historically been advanced by both left- and right-wing politicians, scholars and entrepreneurs. Basic income is not, moreover, a recent and novel topic. Yet, it has a long history: the original idea can be dated back to the 14th century, when Thomas More wrote *Utopia*, thus introducing the concept in literature, and Johannes Ludovicus Vives – who can be recognized as the founding father of the idea of basic income, followed by Thomas Paine - made the first theological as well as practical considerations around the topic. In politics, it has received particular attention in Europe and the US during the second half of the 20th century, to the extent that even US president Richard Nixon was about to implement a “republican” version of basic income under the “Family Assistance Plan” (FAP), (yet, it was officially rejected by US Senate in 1972). Even Milton Friedman, one of the major neoliberal economists, theorised what he called “negative income tax”, which implied a proposal of income intended to substitute US welfare system under a regressive fiscal order. As far as practical projects are concerned, it is worth reminding that since 1982 in right-wing Alaska residents receive annually the interest-rate-based dividends of the Alaska

Permanent Fund, created with the revenues coming from oil mining. Furthermore, diverse experiments have been led worldwide, from Kenya to India; the most known and discussed today is the one being led in social-democratic Finland, whose results will be public between 2019 and 2020.²⁴⁴

These historic notions, albeit incomplete, can be useful to clarify that basic income proposals can origin from different parties and geographic areas and, consequently, they can be developed into different structures and according different principles. The following section will address one of the diverse declinations of basic income, namely the neoliberal type usually backed by Silicon Valley representatives. Later in the chapter, a profile of UBI as a counter proposal to the neoliberal declination will be briefly drawn together with the central reflection of this final part, which will be focused on the need to avoid neoliberal appropriation of the argument.

Hence, rather than focusing on the economic feasibility of this redistributive measure and its ethical aspects (whose analysis would require a different, specific thesis), this chapter will give higher attention to its potential development under a neoliberal regime, to discursive appropriation and to the need to circumvent it in the building of counter proposals for the future that have to take into consideration the limits of UBI projects.

²⁴⁴ For a detailed and full account of the history of basic income, see BIEN, “History of Basic income”, available at: <https://basicincome.org/basic-income/history/> accessed: 29 August 2018

3.1.2 Silicon Valley and basic income

As they foster technological development and digitalisation, contemporary digital corporations seem to have – at least partially - recognized their role in the growth of unemployment related to automation and computerisation. In particular, Silicon Valley representatives have adopted their usual (self-justifying and self-idolising) humanitarian and altruistic rhetoric to advance basic income proposals to limit poverty and unemployment. In general terms, there seems to be a relevant degree of consensus among venture capitalists on the possibility to tax robots²⁴⁵ and digital automation to redistribute those fiscal revenues among displaced workers and communities. Some are even willing to finance private studies themselves, while a company has already implemented a privately financed experiment: in January 2016, start-up incubator Y Combinator has financed a pilot project in Oakland, California aimed at giving to one hundred families “between \$1000 and \$2000 a month, for between six months to a year, to be spent on anything anywhere”.²⁴⁶ Today, YC plans to extend the project to two US states involving 3000 participants in 2019: some participants would receive the income for three years while others for five years, and they will be divided between a group of one thousand people receiving \$1000 monthly and another composed by the remaining

²⁴⁵ Bill Gates famously backed the idea of robot taxation, becoming one of the first Silicon Valley representative to raise the issue (see Javelosa, Gohd, *Futurism*, 2017, <https://futurism.com/bill-gates-says-job-stealing-robots-need-to-pay-taxes/>) Accessed: 2 September 2018

²⁴⁶ Sadowski, *The Guardian* (2016), <https://www.theguardian.com/technology/2016/jun/22/silicon-valley-universal-basic-income-y-combinator> accessed: 29 August 2018

two thousand receiving \$50 a month.²⁴⁷ Since debate around the topic is continuously spreading both inside and outside Silicon Valley, the chances that other tech companies, together with private foundations and think tanks, could support or finance similar projects are growing. Considering these premises, it would be necessary to raise some questions about the motives that are driving such enlarging support among digital capitalists.

Given the explicit profit-driven nature of digital corporations and the already-discussed pragmatic and discursive strategies utilized to enlarge surplus value, it seems legit to advance questions and doubts about the alleged altruism of practices like the basic income declined in Silicon-style.

In line with their neoliberal values, it is probable that the basic income backed by digital corporations would resemble more the neoliberal idea than the leftist proposals. In this sense, it would shape into a form of non-progressive taxation aimed at substituting rather than complementing the welfare state, similar to Friedman's "negative income tax". If we consider in the analysis the corporate habit to avoid taxation, and the privatization of welfare services implemented by neoliberal policies backed by multinational companies, the possibility of a basic income delivered as a substitute to welfare does not seem distant.

²⁴⁷ Tiku, *Wired* (2018), <https://www.wired.com/story/y-combinator-learns-basic-income-is-not-so-basic-after-all/> accessed: 29 August 2018

3.1.3 Neoliberal basic income

Under this scenario, the payment in cash would substitute social programs: basic income would shape into “free money” delivered to pay for privatized services (e.g. healthcare, education, pensions, etc.) as well as to maintain or raise consumption levels.²⁴⁸

The idea of free cash as an alternate to welfare policies is indeed widespread: not casually, estimates are often based on the amount of money states utilize to finance social programs, and are thus aimed at calculating the amount of cash that could be given to each household or citizen if that money would shift from welfare expenditures to basic income programs.²⁴⁹ If such change was to happen, however, public social programs would turn from representing a right of the citizens into for-payment consumer services: people would be bound to pay for public basic services as if they were non-essential consumer goods. Inequality rate among population would grow, since groups that are more in need of social protection would not be allowed a higher amount than other citizens. A healthy wealthy person would obviously find it easier to manage expenditures than a poor who is granted the same amount of money but cannot count on other reserves or sources of income, or a sick or disabled person who needs to finance specific medical treatments.²⁵⁰ In addition, even in the case different amounts of income were

²⁴⁸ Fana M. and Fana S. (2018, p. 52) have highlighted how a basic income could be used to foster consumption and, therefore, reinforce consumer society and its consumption imperative as well as firms’ returns on increasing selling of consumer goods. The topic of consumption as a value will be addressed later in the following section.

²⁴⁹ Flowers, *FiveThirtyEight* (2016), <https://fivethirtyeight.com/features/universal-basic-income/> accessed: 30 August 2018

²⁵⁰ *Ibid.*

delivered (in a progressive manner), subjects would still experience lack of security due to (a) the dearth of recognition of the rights usually attached to citizen status (to health, education, etc.) and (b) the risk that the income delivered would not be sufficient to finance the services needed.

Not only would inequality not be resolved, but it would also be fostered by unfair the elimination of welfare policies, which can be worsened by a potential elimination of progressive taxation.²⁵¹ In the case basic income was implemented as a measure of welfare substitution, it would shape into a neoliberal policy, in line with the austerity measures and welfare privatization.

With welfare privatization public services would enter private consumption, so that venture capital would find new profit-making fields: moved by the increasing financialization that has spread throughout global economy, multinational corporations – including digital companies – would join in an investment and speculation frenzy generated by the “new markets”. As synthesized by Srnicek and Williams (2015):

“The conservative argument for a basic income [...] is that it should simply replace the welfare state by providing a lump sum of money to every individual. In this scenario, the UBI would just become a vector of increased marketisation, transforming social services into private markets. Rather than

²⁵¹ Assuming the widely stated notion that regressive taxation is proven to destabilize the socio-economic conditions of the majority of the population while favouring the wealthy, in case UBI programs were implemented along with such regressive taxation schemes, the burden imposed on poor subjects would worsen. Indeed, they would struggle to pay taxes and they would not benefit from fiscal redistribution, since UBI would be a universal measure that delivers the same amount of money to anyone, poor and wealthy alike.

being some aberration of neoliberalism, it would simply extend its essential gesture by creating new markets.”²⁵²

In simple terms, the privatization of public programs would turn into a novel opportunity to generate profit for capital, which is permanently in search for new markets.

Moreover, welfare disruption could also imply a further reduction or elimination of workers’ rights, including minimum wage measures. To make an example, firms in the gig economy could continue underpaying their workforce and avoiding workers’ rights recognition as well: the issues concerning gig workers’ rights would not be resolved, and basic income could represent a new accessible justification to further legitimize a decrease in workers’ stability and wages, as well as the tacit employment of data labour. Profiting from surplus value extraction and the surplus appropriation attached to such practices, rather than being hindered, would be facilitated.²⁵³

As far as the discursive level is concerned, UBI in the form of “free cash” substituting welfare could potentially play a central role in the neoliberal narrative surrounding the concept of “self-made man”. This measure, indeed, could be interpreted as an incentive to turn citizens into a mass of *self-entrepreneurs* in permanent competition²⁵⁴ who are bound to individually decide which are the best

²⁵² Srnicek, Williams (2015), p.119

²⁵³ Fana M., Fana S. (2018), p.54

²⁵⁴ Dardot, Laval (2009)

investment outlets for their revenues (represented by the universal basic income): people would in this way be forced to act according to the logic of the market, while the public measures attached to the welfare state – perceived as excessively “paternalistic” by supporters of neoliberalism – would be disrupted. This business logic is so rooted in areas such as the Silicon Valley that some have even suggested to provide every new-born with a stake of shares from tech corporations, so that infants could rely on allegedly safe stocks to invest once they are grown. Under this perspective, UBI would represent a sort of “venture capital for people” and be appropriated, together with other public measures, by business mechanisms:

“UBI is not (only) a moral response to economic harms or a political response to social injustice, but a sound financial investment in the startup-of-you. A way of producing more makers, risk-takers, and move-fast-breakers – the type of people that tech culture values above all others.

Thinking of UBI as a financial innovation represents the “businessification” of government; now we talk about the “return on investment” of social policy, rather than outcomes in terms of public good. When social policy is evaluated using economic standards you get starkly different policies, different expectations, and different beneficiaries.”²⁵⁵

Once again, despite the positivity that irrigates neoliberal narrative, which interprets the market as a universal solution to human problems, the shiny rhetoric

²⁵⁵ Sadowski, *The Guardian* (2016), <https://www.theguardian.com/technology/2016/jun/22/silicon-valley-universal-basic-income-y-combinator> accessed: 29 August 2018

of corporate managers conceals a project that in fact involves less optimistic perspectives.

If people were forced to turn into neoliberal subjects, the costs – both material and emotional – related to their decisions would fall into the individual realm. Delivering money rather than public services, governments would get out of their commitments concerning their citizens' well-being and socio-economic stability. In line with the well-known Margaret Thatcher's statement "there's no such thing as society, there are individual men and women"²⁵⁶, neoliberal UBI would thus dispense to individuals the monetary and moral responsibilities linked to every aspect of their life – work, education, health, etc. – consequently refusing the notion that the overall social and economic well-being of citizens takes part to states' duties.

The practice of individual *responsibilization* has potential impact both at the social and the individual level: firstly, it would foster neoliberal deregulation and the socio-economic instability attached to it (already discussed elsewhere in this thesis); secondly, at the subjective level, the burden perceived by the individual is likely to lead to worsening psychological conditions. Here, it is worth quoting Mark Fisher, whom has masterfully described throughout his work the condition of the subject under the neoliberal regime:

²⁵⁶ Proclaimed in 1987, during an interview as UK PM. Full quote, together with other famous quotes by Thatcher, can be found at the following link (*The Guardian*): <https://www.theguardian.com/politics/2013/apr/08/margaret-thatcher-quotes> accessed: 1 September 2018

“For some time now, one of the most successful tactics of the ruling class has been responsabilisation. Each individual member of the subordinate class is encouraged into feeling that their poverty, lack of opportunities, or unemployment, is their fault and their fault alone. Individuals will blame themselves rather than social structures, which in any case they have been induced into believing do not really exist (they are just excuses, called upon by the weak). What [David] Smail calls ‘magical voluntarism’ – the belief that it is within every individual’s power to make themselves whatever they want to be – is the dominant ideology and unofficial religion of contemporary capitalist society, pushed by reality TV ‘experts’ and business gurus as much as by politicians. Magical voluntarism is both an effect and a cause of the currently historically low level of class consciousness. It is the flipside of depression – whose underlying conviction is that we are all uniquely responsible for our own misery and therefore deserve it.”²⁵⁷

If a neoliberal basic income was implemented, it would contribute to the spreading of the myth of the “self-made man”, which would thus be promoted by state policies officialising the entrance of market logic in both the public and personal realm.

At the same time, the individual “responsibilization” mentioned by Fisher would allow state responsibilities to vanish at both the discursive and pragmatic level. Indeed, under the neoliberal UBI scenario described in these pages, once the income is delivered, state intervention should not occur: if social circumstances worsen, as in the case of spreading poverty or poor education, the fault would fall on individuals (guilty of having made bad investment decisions, as if they were entrepreneurs) rather than on the overall socio-economic system or the government. A first step towards a desirable solution to welfare disruption and

²⁵⁷ Fisher (2014), <https://theoccupiedtimes.org/?p=12841>

individualization, therefore, seems to be represented by the need to reveal the systemic cause underlying social as well as individual instability and to shift the focus from the individual to the socio-economic realm:

“The 'methodological individualism' of the capitalist realist worldview presupposes the philosophy of Max Stirner as much as that of Adam Smith or Hayek in that it regards notions such as the public as 'spooks', phantom abstractions devoid of content. All that is real is the individual (and their families). The symptoms of the failures of this worldview are everywhere - in a disintegrated social sphere in which teenagers shooting each other has become commonplace, in which hospitals incubate aggressive superbugs - what is required is that effect be connected to structural cause. Against the postmodernist suspicion of grand narratives, we need to reassert that, far from being isolated, contingent problems, these are all the effects of a single systemic cause: Capital. We need to begin, as if for the first time, to develop strategies against a Capital which presents itself as ontologically, as well as geographically, ubiquitous.”²⁵⁸

Under the “ubiquitous” system of capitalism, capable of shaping itself according to external conditions and different contexts, the redistributive and democratic potential of policies such as the basic income would vanish to favour neoliberal outcomes, particularly privatization and individualization, and to reinforce the self-perpetuating principle of capital, namely the continuous creation of profit. In this context, UBI could potentially turn into a tool that reinforces power relations under capitalism rather than an instrument that smooths their inequities.

²⁵⁸ Fisher (2009), p.77

Multinational corporations could maintain their power position preserving their control over (a) the means of production and (b) monetary distribution of UBI. As far as entities like corporate firms are able to receive revenues from their ownership of the means of production, without redistributing *all* the profits, they obviously maintain their economic power over other parties – especially individuals under unstable socio-economic conditions. Taking this consideration into account, it is possible to deduce that, albeit the delivery of a basic income financed through corporate taxation would obviously represent a beneficial factor for many recipients, it would also be an insufficient, partial measure for the elimination of the economic inequalities, both local and global, that tend to grow in the neoliberal environment.²⁵⁹

Furthermore, the taxation of a portion of corporate profits would be possibly seen as a necessary cost to prevent revolts originated by the growing displaced, underpaid, and unpaid workforce. Privately-financed or regulated by the state, in both cases the delivery of a basic income would consequently turn into a means to exercise control and surveillance over populations, a tool of coercion not dissimilar from the traditional salary: in the former case (private BIN), there would be a direct exercise of power; in the latter (fiscally-regulated BIN) it would be indirect, but still existing, since multinational corporations – particularly tech companies – have, in many cases, such financial power that they can exercise it over entire nations as well as the knowledge to masterly elude national fiscal authorities. To sum up, if tech companies maintained the means of production and their economic power

²⁵⁹ For a full account of the growth of global inequalities under neoliberalism, see Harvey (2005)

and, at the same time, the basic income was financed through the taxation of such companies and their robots, corporate power would not be reduced, but rather augmented since the universal income would depend on their willingness to pay.

To reduce or eliminate the economic power than multinational companies can exercise under neoliberal hegemony, it would be therefore necessary not only to build a leftist alternative to the neoliberal proposal of UBI, but also to interpret basic income as a fundamental - yet alone insufficient - step of a larger project that aims at overcoming neoliberalism and the power relations it perpetuates. UBI policies, together with the whole range of political measures necessary to move to a post-neoliberal order, should be implemented while revealing the role played by capital as a destabilising force that stimulates socio-economic inequalities, in the attempt to elude its narrative and appropriating capacity and manage to build a counter paradigm.

3.2 Conflictual UBI

As highlighted by Chicci and Leonardi (2018), a desirable basic income project should be different from both (a) the Silicon Valley version, which – as previously claimed – would represent only a minimum measure that allows tech corporations to maintain their economic, but also political, power, and (b) the social-democratic version, whose objective is to partially regulate power relations without intervening on the widespread financialization of the economy and the capitalist order. They call this desirable version, in antithesis with the two former,

“conflictual”: this section will use the same term to indicate a basic income proposal that could contribute to overcome the neoliberal regime.

3.2.1 Three requisites for basic income: sufficient, universal, supplemental

In order to develop a basic income project contrasting with neoliberal forms, Srnicek and Williams (2015) suggested that it firstly needs to fulfil three core features:

“[1] It must provide a *sufficient* amount of income to live on; [2] it must be *universal*, provided to everyone unconditionally; [3] and it must be a *supplement* to the welfare state rather than a replacement of it.”²⁶⁰

Firstly, the income needs to be sufficient to maintain a decent standard of living and economic autonomy. This feature is essential to achieve one of the main objectives of a conflictual basic income, which aims at liberating people from working blackmail. When provided sufficient income, people would not feel the obligation to accept any work contract and would hence be free to refuse exploitative labour relations, including underpaid jobs and unstable contracts. The contractual power of employers, especially that of platforms operating in the gig economy, would thus be reduced or even eliminated in favour of a substantial freedom of workers to choose the working conditions they favour, promoting class power. Under this perspective, flexibility would become a truly personal choice

²⁶⁰ Srnicek, Williams (2015), p.119, the numeration has been added to the original text

made by people who may prefer to enjoy more free time, rather than a discursive strategy utilized to hide unstable working conditions. The demand for flexibility would be re-appropriated by the working class, who, as described in the first chapter, abandoned such request after the neoliberal turn:

“It is often forgotten that the initial push for flexible labour came from workers, as a way of demolishing the constraining permanency of traditional Fordist labour. [...] In the face of these desires for flexibility, capital adapted and co-opted them into a new form of exploitation. Today, flexible labour simply presents itself as precarity and insecurity, rather than freedom. The UBI responds to this generalisation of precarity and transforms it from a state to be feared back into a state of liberation.”²⁶¹

Recipients would thus be allowed to lead a dignified standard of living and to decide autonomously how to distribute and spend their time without being subjected to external coercion.

Secondly, the basic income should be universal, in two senses. In the first sense, it should be provided unconditionally to every person within the state, community or area where the program is implemented. This condition is fundamental for a variety of reasons: when universal and unconditional, UBI would shape into a right allowed to every individual. It would detach from the neoliberal concept of *workfare*, according to which welfare measure are provided under certain conditions, usually the obligation to work (at any condition and under any

²⁶¹ Srnicek, Williams (2015), p.121

contract). A universal basic income would also avoid welfare stigmatization²⁶², especially acute in countries such as US and the UK where neoliberal policies have deeply influenced the perception of welfare measures. Moreover, the principle of universality of income should be interpreted as not restricted to the citizens of a country, but rather to every person living in the area, immigrants included, in order to make the right to UBI as universal as possible. Indeed, basic income should be universal in a second sense: it should be distributed at the global level as much as possible. This possibility would be desirable, since the global universality of income is a condition for the reduction of inequalities between countries²⁶³: in the case it was only implemented in what is misleadingly called “developed” world, basic income would shape into a further instrument of inequality, in line with the colonial and neo-colonial measures historically imposed by central powers to the “periphery”. Moreover, the principle of universality would contribute to avoid mass migration from countries where UBI is not implemented to areas where it has been established, thus avoiding geopolitical shocks as well as the economic, psychological, and cultural trauma experienced by people who migrate. Such universality would require a rethinking of the concept of nation states as well as that of borders, and the values currently and commonly attached to these notions.

Thirdly, in contrast with its neoliberal conception, UBI should not substitute the welfare state; rather, it should be supplemental to it. In this way, it would be a

²⁶² *Ibid.*, p.119

²⁶³ Fana M., Fana S. (2018), p.57

real additional income to freely utilize according to one's needs and desires, rather than "free money" that - despite the "freedom"-stuffed narrative developed around neoliberal UBI - would eventually be necessarily utilized to finance services that were formerly public. Furthermore, we should intend welfare as comprehensive of minimum wage policies, in an attempt to further delegitimize underpaid labour.²⁶⁴

Projected through the three points just described, the Universal Basic Income would represent a genuinely redistributing and democratic measure that has the potential to fracture the power relations existing in the current socio-economic context. In particular, it would represent an essential tool to deprive corporate actors of part of their profits to move them to public redistribution. It would become a secure source of income for workers whose jobs have been automated, it would transform labour-capital relations in the gig economy, and it would (at least partially) re-pay for the free data labour people deliver to digital platforms. For its supporters, it would be central in the progressive deterioration of labour blackmail and the obligation to work and an essential step towards the construction of an alternative order, especially towards a post-work society.

3.2.2 Overcoming work

As described in the first chapter of this dissertation, automation and computerization are likely to move growing numbers of people out of employment in the following years, and unemployment rates are expected to grow

²⁶⁴ Chicchi, Leonardi (2018), p.26

consequently, particularly in the Americas and Europe, where it could almost duplicate in the following 25 years (figure).

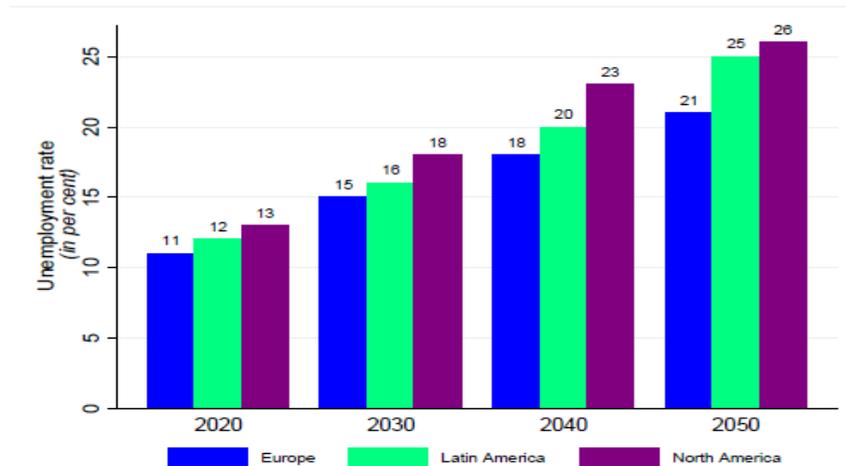


Figure 7 - Expected unemployment in Europe, Latin America and North America

Source: Daheim, Wintermann (2017)

In addition to increasing unemployment and automation, as previously noted, job insecurity is also expanding among different segments of society: as productivity grows, feeding the revenues of the small portion represented by global elitists, average wage levels continue on their stagnation, particularly in Western countries.²⁶⁵ Under such context, a Universal Basic Income would be desirable not only to smooth global inequalities, but also to progressively free people from work obligation: under this scenario, the delivery of basic income should be accompanied by a gradual decrease of working hours. Srnicek and Williams (2015) have advances a proposal for the construction of a post-work order that could be useful

²⁶⁵ Harvey (2005), p.25

as a starting point for the re-appropriation of capitalist practices, which is built in four main points:

- “1. Full automation
2. The reduction of the working week
3. The provision of a basic income
4. The diminishment of the work ethic”²⁶⁶

This process would imply the re-appropriation of the productive system as well as that of discursive production: while redistributing resources and monetary power, it would change the objective of automation turning it from a tool for capital accumulation and work blackmail to a process that allows for increasing freedom from work, and it would as well provide a starting point for the building of an alternative discourse, beginning from the reduction of work ethic. In line with *accelerationism* and Marx’s notion that automation would eventually lead to capital destruction²⁶⁷, it embraces technology as a means to build an alternative order. In this way, the precariat could re-establish the collective demand for diminishing working time accompanied by the distribution of a sufficient level of income, as their working class predecessors demanded in the post-war period.

²⁶⁶ Srnicek, Williams (2015), p.127

²⁶⁷ Fisher (2013) has indeed written that “Marxism is nothing if it is not accelerationist”, reflecting on the fact that, while capitalism is incapable of providing future perspectives, neo-Marxism has instead the capacity to implement future projects without falling in *pastiche* and nostalgia for the past: <http://markfisherreblog.tumblr.com/post/32522465887/terminator-vs-avatar-notes-on-accelerationism> accessed: 5 September 2018

To conclude similar objectives, however, the provision of a basic income – supposing, for this moment, its feasibility – would not be sufficient. The re-articulation of a coherent counter-discourse to the capitalist one would also be necessary: not casually, the authors of *Inventing the Future* suggest that, among the fourth points, the one concerning work ethic would be more difficult to accomplish, suggesting that the Left should become more used to creating alternative narratives without falling in left melancholy and “folk politics”. Beyond their post-capitalist project, this final argument seems central to this dissertation, because it focuses on discursive hegemonic practices: a leftist counter-discourse as hegemonic as the capitalist one would indeed have the potential not only to restructure work relations and the ethic attached to it, but the whole socio-economic system.²⁶⁸

Despite the important insight they give about the necessity of a new leftist hegemony, it is necessary to point that Srnicek and Williams’ proposal also fails to include reflections about data labour and, generally, the commodification and financialization of the personal and social fields, referring almost exclusively to traditional waged labour, neither it addresses the overall production process where work relations take place or the lack of distribution of the means of production. Furthermore, the UBI proposed in their work (described earlier in the previous section of this chapter), albeit desirable, inevitably faces various problematics. In order for similar projects to turn into practice, it would be

²⁶⁸ The use of the term “hegemony” here and in the rest of this dissertation is to be intended in Gramscian sense (Gramsci: 1971)

necessary to discuss about their substantial applicability and their flaws as well as the structural conditions they would have to transform.

3.3 Beyond UBI

Despite the good will and desirability of the construction of a conflictual UBI like the one previously described, this and similar projects undoubtedly face numerous limits, risking almost inevitably either to fall into the utopian realm or to be absorbed by neoliberal practices.

Firstly, if a desirable UBI has to supplement welfare, it is necessary to point what is the level of protection needed.²⁶⁹ Indeed, the extent of welfare measures varies among countries, but if the income has to be universal, welfare should be universal as well. Otherwise, inequalities among states would not smooth. The proposal of a Universal Basic Income would hence require the implementation of regional and international agreements concerning welfare homogeneity among different nations, which is not utopian but would still require difficult long-term negotiations that, moreover, would risk leading to insufficient and/or inadequate outcomes.

Similar doubts could be raised around the level of income that should be delivered: supposing there was agreement (at least among supporters of a conflictual UBI) on the fact that the income should be *sufficient*, debate would almost inevitably address the question of whether such sufficient income should be equal to minimum wage or exceed it and, in the latter case, how much should it overcome

²⁶⁹ Fana M., Fana S. (2018), p.49

the sum required for a minimum standard of living. Such decisions would also imply further international debates over monetary policies, concerning e.g. the possibility of inflationary outcomes and exchange rates restructuring. Moreover, since UBI would require fiscal redistribution, functional regulations – also at the international level – would be necessarily projected to avoid capital flight and tax avoidance²⁷⁰ (two practices multinational corporations are particularly familiar with²⁷¹).

Furthermore, the development of UBI should occur together and in accordance with a range of material and discursive measures aimed at transforming capital-labour relations. The central argument of this chapter is, indeed, that UBI policies are doomed to be appropriated by - or even support - neoliberal policies unless they participate to a wider project of reconstruction of the whole socio-economic system.

As far as salaries and work obligation are concerned, it seems unlikely that basic income would be sufficient to erase wage blackmail and inequalities among the workforce, as well as those between workforce and employers. Being the income universal, disparities of the overall income among the population would not be weakened. The basic income would be advantageous for everyone, but only high- and medium- income households would be more likely to actually utilize it as a tool of liberation from work, which could permit them to lower their working time or

²⁷⁰ *Ibid.*; Bruenig, BIN Italia (2016), <http://www.bin-italia.org/silicon-valley-and-basic-income/> accessed: 10 September 2018

²⁷¹ Olhoft Rego (2010); Desai, Dharmapala (2006); Gravelle (2009), Staglianò (2018)

even to leave waged work. For low-income subjects, instead, this measure would certainly be helpful to support expenditures, but insufficient to increase their bargaining power in their work relations. UBI could thus alleviate poverty but could not defeat it alone: to face increasing inequalities, it would be necessary to point at the mechanisms that allow a diminishing portion of firms and individuals to generate and hold great part of world's wealth. If interventions at the roots of monopoly power were not conducted, UBI – as already stated – would not represent a critical changing factor for power relations.

Taking the digital economy as an example, as already observed, tech firms can even be willing to support basic income programs, yet only at the condition that these would not imply the elimination of their market power (oligopoly/monopoly). Under this scenario, underpaid gig work and digital data labour, as other forms of underpaid and unpaid labour - from internships to forced volunteerism – would face further legitimation rather than disappear, since the delivery of a basic income would be interpreted as a substitute of the traditional salary: again, UBI could represent an important measure that furthers economic security, yet it would not prevent neither the extrapolation of increasing surplus value from unpaid work, nor the consequent economic and political power enjoyed by multinational private entities.

As long as firms – tech corporations in particular - are allowed to avoid workers' rights recognition, to pay them unfair wages, and generate revenues from their reliance on unpaid labour, they can even utilize participation to the subsidization of a basic income as an action that further legitimizes unfair practices and enormous

profits as well as the power they exercise over society. Under this perspective, traditional priorities (minimum wage, maximum working hours, welfare expansion) are liable to move into the background. The problem of inequality, however, would not be relieved if UBI was delivered without the implementation of such priorities: at the present moment, taking into account the widespread and continuous decrease in workers' rights and securities, addressing UBI policies could even seem premature, since a functioning basic income would necessitate a prior increase and establishment of welfare policies and workers' rights regulations that still need to be accomplished.

Furthermore, it would be necessary to restate the objective of basic income as a redistributive means aimed at homogeneous socio-economic well-being, independence, and decisional power, rather than insisting on its utility as a consumption-boosting policy. If consumption power was imposed as the only instrument of liberation²⁷², the basic income would automatically prevent the transformation of both the economic and ethic status quo. A rise in consumption levels would favour profit-oriented practices, facilitate the maintenance of market monopoly, and, moreover - being it ecologically unsustainable - worsen climate change.²⁷³

Therefore, before discussing a functional Universal Basic Income, a whole different socio-economic context should be projected and developed to avoid the neoliberal

²⁷² Fana M., Fana S. (2018), p.50

²⁷³ For an account of the ecological unsustainability of the capitalist profit-aimed system, see Reynolds (2018), pp.207-234 and Klein (2014)

appropriation that would occur if previous restructuring of the current economic and ethic order was not implemented. The problem, indeed, does not seem to concern robot and capital taxation as much as who owns the robots, *who owns the means of production*. Under this perspective, monetary redistribution reveals insufficient if not anticipated or accompanied by a redistribution of production. As immaterial as some assets may seem in the current market (e.g. digital platforms), it is worth noticing that under the impression of immateriality lies a concrete reality characterised by energy-consuming data centres, submarine cables, factories and minerals necessary to build our smartphones and computers, which require living labour whose (often underpaid) work contributes to the creation of value appropriated by capital afterwards.²⁷⁴ For this reason, future economic research should focus on collective ownership and cooperative management of resources, on plans that would aim at “transferring the ownership of the means of production from shareholders to workers”²⁷⁵, such that of platform cooperativism proposed by Trebor Scholz. International debate should focus on the possibility of a socio-economic re-organization which could pursue the redistribution of both the means and returns of production and the consequent redistribution of decisional power among society, while taking into account topics avoided by capitalist discourse such as workers’ rights and climate change. Certainly, such a project would require enormous efforts from numerous scholars of diverse fields of study, since the restructuring of labour-capital relations would imply further discussions

²⁷⁴ Scholz (2017)

²⁷⁵ Reynolds (2018), p.245

and projections concerning topics such as the feasibility of a socialization of the financial and bank systems, as well as a rethinking of the values currently attached to concepts such as that of debt, work, nation state.²⁷⁶

Nonetheless, similar economic projects necessarily have to facilitate the creation of a different system of values, detached from the imperatives of productivity and consumption, if they want to avoid what Mark Fisher calls “capitalist realism”.²⁷⁷ Indeed, their scope would be to go *beyond* neoliberalism, to build a future post-capitalist order, rather than stagnating in the current one. Rather than following the Keynesian path, discussing a way to mediate labour-capital relations and mitigate the consequences of capitalist re-production – inequity, climate change, individualism, and so forth – the global Left should hence assert the feasibility of neoliberal disruption as well as that of a desirable alternative system. If not ideated to be utilized for the construction of a wider alternative order, as massive as the neoliberal one, the three factors addressed in this thesis (automation, digitalisation, and basic income) would remain clogged within the boundaries of neoliberalism, risking becoming its self-reinforcing instruments. The re-appropriation of those instruments would thus be central in the building of a counter-hegemonic project capable of offering a desirable future-oriented alternative.

²⁷⁶ Differently from Srnicek and Williams (2015), Reynolds (2018) has managed to propose a future plan that goes beyond UBI policies and, besides the reduction/elimination of work, includes topics such as the collectivization of the means of production and of the financial system, climate change and the disruption of nation states, also taking into consideration, besides ethics, the substantial feasibility of such proposals.

²⁷⁷ Defined by Fisher (2009: 2) as “the widespread sense that not only is capitalism the only viable political and economic system, but also that it is now impossible even to *imagine* a coherent alternative to it.”

Conclusion

While in the past, especially during the 20th century, our time was often thought and predicted as an improved, desirable historical phase characterized by general well-being and work reduction due to scientific progress²⁷⁸, the present has not lived up to the expectations. Moreover, we seem to have lost this same capacity of imagination of a future more satisfactory than our present²⁷⁹, as well as that of a future that does not involve capitalism reproduction.²⁸⁰

Albeit significant technological development has occurred, and it still is under continuous progress, it has been absorbed by the current socio-economic order and utilized for its perpetuation. Technology, hence, has been directed towards the main objective of the economic system of capitalism, namely capital growth, favouring in this way private revenues and private property over collective redistribution. Making technology and digital spaces private, for-profit entities have been able to appropriate these potentially revolutionary means to fulfil the objectives of a small, progressively decreasing élite of stakeholders. Neoliberal practices have massively contributed to this outcome, shaping not only global economy but also the general common sense and widespread values.

²⁷⁸ As it is observable, for example, from the works of Marx and Keynes (addressed in section 1.3.1).

²⁷⁹ Not casually, most of the current cultural production (literature, films, art, etc.) concerning the future takes the form of dystopia.

²⁸⁰ Fisher (2009)

As suggested by this thesis, after the social de-composition brought by the neoliberal turn of the 1970s and 1980s, collective demands for work reduction and economic redistribution have vanished under deregulation policies and the construction of consensus over individual *responsibilization*²⁸¹ and work ethics. Neoliberal discourse has consequently managed to appropriate the demands for autonomy of the critique²⁸², responding to them with labour market deregulation and justifying it with ambiguous terms such as “flexibility”. Facing the loss of a collective “we”²⁸³ as well as a decrease in social rights, workers have abandoned the request of autonomy: under the current socio-economic orders, the potential instruments of liberation (technology) have turned into threats of potential unemployment and underemployment on the hands of private owners.

Not only has automation become a menace of economic instability for many workers, but also digital spaces – originally perceived as fields of freedom and collective distribution - have been colonized by profit-driven entities, moved by their appropriation of both concrete technology and the abstract digital field. In what we call “platform capitalism”²⁸⁴, digital firms generate value subordinating both contingent and unpaid labour (conscious or unconscious) through the

²⁸¹ Fisher (2014), <https://theoccupiedtimes.org/?p=12841> accessed: 10 September 2018

²⁸² Boltanski, Chiapello (2007)

²⁸³ Essential for the construction of social movements and collective struggle (Della Porta, Diani: 2006)

²⁸⁴ Srnicek (2017)

establishment of a digital environment aimed at surplus value extraction²⁸⁵ as well as at the construction and spreading of neoliberal subjectivity.²⁸⁶

As provided by this thesis, to respond to growing precarity, precariousness²⁸⁷, and global inequalities, a re-appropriation of the digital and IT fields as well as of the mainstream discourse should be interpreted as desirable. Furthermore, functional macro-economic and social projects should be proposed to reach a post-neoliberal future. Nonetheless, it would be extremely relevant to take into account the capacity of neoliberal discourse to appropriate or redirect such proposals: using basic income projects as an example, it is possible to trace the way in which a project involving – at least theoretically - redistributive measures can become an instrument to reinforce the current economic *status quo*. Indeed, policies such as the Universal Basic Income (UBI) risk to be singularly implemented and declined in neoliberal style, without representing crucial changing factors for the macro-economic and social environment or even becoming reinforcing instruments of our capitalist economy.

Consequently, as suggested by Srnicek and Williams (2015), the response to the current hegemonic order seems to need to be global and hegemonic as well, in order to avoid appropriation and incorporation under neoliberalism. Future projects should hence aim at transforming power relations rather than smooth the

²⁸⁵ Fuchs (2015)

²⁸⁶ Briziarelli (2017)

²⁸⁷ Neilson, Rossiter (2005)

inequalities existing among them, focusing on the need of a power redistribution, which would imply the redistribution of profit as well as that of the means of production, already advanced and practiced by diverse cooperative proposals and trials.²⁸⁸ A counter hegemonic project would require the re-appropriation of both material resources and knowledge – technology, digital spaces, etc. – in an effort to free the general intellect²⁸⁹ from value extraction and turn scientific progress into a tool of autonomy from capital, as well as that of discursive practices aimed at revealing the substantial instability and inequality hidden under the optimistic and self-justifying neoliberal discourse. Under such global perspective, the passage to a post-capitalist order seems to be more feasible, as it would allow a shift from “capitalist realism”²⁹⁰ to a re-appropriation of the future in both material and discursive terms.

²⁸⁸ In the field of the digital economy, the most important seems to be that of *platform cooperativism* theorized by Trebor Scholz

²⁸⁹ Marx (1973)

²⁹⁰ Fisher (2009)

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