

**TOWARDS AN IMMANENT CRITIQUE OF THE ATTENTION ECONOMY**

**Labour, Time, and Power in Post-Fordist Capitalism**

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## SUMMARY

This thesis develops an immanent critique of the concept of attention economy from the perspectives of labour, time, and power. The attention economy is a notion forged by authors belonging to the field of political economy in order to explain the growing value of human attention in societies characterised by post-industrial modes of production. In a world in which information and knowledge become central to the valorisation process of capital, human attention becomes a scarce and hence increasingly valuable commodity. At the same time, the attention economy turns human attention into a form of labour and hence into a new mechanism of capitalist exploitation.

Using a series of contemporary readings of Marx (Postone; Lazzarato; Negri and Hardt; Deleuze and Guattari), this thesis develops a critique which does not simply apply Marxist categories to the object of the attention economy, but which uses the attention economy as a concrete object of analysis for reflecting upon both the validity and the importance of Marx's critique of political economy for a critique of contemporary capitalism. In other words, this research suggests that, although the attention economy has indeed turned human attention into a new form of labour, it is only through a systematic reinterpretation of Marx's categories that this claim can be fully grasped. This reinterpretation comprises two general aspects. Firstly, this thesis argues that the way in which the attention economy produces and exploits value puts into crisis the traditional category of labour based on an industrial mode of production and which relies solely on abstract labour time as its general equivalent. This calls for an analysis of the labour-value relation from the standpoint of the endogenous transformation of capitalism. Secondly, this thesis suggests that the attention economy operates as a concrete power mechanism which reterritorializes the unleashed productive powers in order to reproduce capital's command over human activity. This requires addressing the specific transformations of the diagram of power from disciplinary societies to what Deleuze has defined as societies of control.

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## ABBREVIATIONS

<b>AO</b>	<i>Anti-Oedipus</i> (Deleuze and Guattari 2004a)
<b>ATP</b>	<i>A Thousand Plateaus</i> (Deleuze and Guattari 2004b)
<b>C</b>	<i>Capital, volume 1</i> (Marx 1976)
<b>CPR</b>	<i>Critique of Pure Reason</i> (Kant 1998)
<b>DP</b>	<i>Discipline and Punish</i> (Foucault 1995)
<b>G</b>	<i>Grundrisse</i> (Marx 1973)
<b>KPM</b>	<i>Kant and the problem of Metaphysics</i> (Heidegger 1965)
<b>N</b>	<i>Negotiations</i> (Deleuze 1995)
<b>SS</b>	<i>Soft-Subversions</i> (Guattari 2009)
<b>STP</b>	<i>Security, Territory, Population</i> (Foucault 2009)
<b>TLD</b>	<i>Time, Labour, and Social Domination</i> (Postone 1993)
<b>TT3</b>	<i>Technics and Time, volume 3</i> (Stiegler 2011b)

Forget capitalism and socialism: Instead we have in place one vast machine, extending over the planet an enslavement of all mankind. Every aspect of human life – work, childhood, love, life, thought, fantasy, art – is deprived of dignity in this workhouse. Everyone feels only the threat of social demise: unemployment, poverty, welfare. Work itself defaults its promise of developing the relations between humanity and the material environment; now everyone works furiously, to evade eviction, yet only hastening their own expulsion from the mechanical process that work has become.

*Communists Like Us*, Antonio Negri and Félix Guattari

I think Félix Guattari and I have remained Marxists, in our two different ways, perhaps, but both of us. You see, we think any political philosophy must turn on the analysis of capitalism and the ways it has developed. What we find most interesting in Marx is his analysis of capitalism as an immanent system that is constantly overcoming its own limitations, and then coming up against them once more in a broader form, because its fundamental limit is Capital itself.

*Control and Becoming*, Gilles Deleuze

## INTRODUCTION

This thesis develops an immanent critique of the concept of attention economy from the perspectives of labour, time, and power. The attention economy is a notion forged by authors belonging to the field of political economy in order to explain the growing value of human attention in societies characterised by post-industrial modes of production. In a world in which information and knowledge become central to the valorisation process of capital, human attention becomes a scarce and hence increasingly valuable commodity (Simon 1969; Davenport and Beck 2001). At the same time, critical studies on the attention economy have highlighted the fact that in post-industrial societies paying attention becomes a new form of labour (Jhally and Livant 1986), i.e. a new form of capitalist exploitation which alienates the spectator from his or her own vision (Beller 1994; 2006) and broadens capital's command over life to include not only labour time but also leisure-time (Marazzi 2008). Using a Marxist theoretical framework, these authors suggest that attention must be understood not only as a valuable commodity but mainly as a labouring activity which, although not necessarily grounded on abstract labour time, nevertheless involves exploitation and power relations.

Despite their contribution, these critical works remain unsatisfactory mainly because of the lack of historical specificity in their use of the Marxist framework for a critique of the attention economy. Most significantly, these writers fail to engage seriously with the question regarding the validity of Marxist categories for understanding a post-industrial phenomenon such as the attention economy. Using a series of contemporary readings of Marx (Postone 1993; Lazzarato 1996; Negri and Hardt 2000; Deleuze and Guattari 2004), this thesis seeks to develop a critique which does not simply apply Marxist categories to the object of the attention economy, but which uses the attention economy as a concrete object of analysis for reflecting upon both the validity and the importance of Marx's critique of political economy for a critique of contemporary capitalism.



## 1. THE CONCEPT OF ATTENTION ECONOMY

The concept of attention economy was first introduced by Herbert A. Simon in his 1969 lecture *Designing Organizations for an Information-rich World*.<sup>1</sup> During the decade of the 1960s, economists were deploying notions such as ‘knowledge’ and ‘information’ in an attempt to explain the crisis of industrial capitalism and the radical changes triggered by it. In these emergent post-industrial societies, purely industrial processes were no longer seen as the single source of value. Instead, knowledge and information were becoming central aspects of the economic cycle, reshaping the way in which surplus value is produced and exploited. This new, post-industrial mode of production is usually referred to in political economy as ‘knowledge capitalism’ or ‘knowledge-based economy’.<sup>2</sup> Simon’s definition of the attention economy has to be understood as a response to this new economic context. According to Simon, in the emerging post-industrial economies, it is not only knowledge and information that become central to the productive process, but also the attention necessary to process this knowledge and this information (Simon 1969, p. 6). Using straightforward supply and demand logic, Simon argues that the abundance of knowledge and information that characterises knowledge-based economies “creates a poverty of attention, and a need to allocate the attention efficiently among the overabundance of information sources that might consume it” (pp. 6-7).<sup>3</sup> According to him, in this new productive scenario, the most pressing economic question becomes: “How can we design organizations, business firms and government agencies, to operate effectively in such a world; how can we arrange to conserve and allocate effectively their scarce attention?” (p. 8). With this question, Herbert A. Simon inaugurates a new field of economic analysis, the attention economy.<sup>4</sup>

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<sup>1</sup> This lecture was delivered at the John Hopkins University, October 9, 1969. It was later published as a chapter in the book *Computers, Communication, and the Public Interest*, edited by Martin Greenberg in 1971. The lecture is available online at <http://zeus.zeit.de/2007/39/simon.pdf> (accessed 12/12/14).

<sup>2</sup> According to Peter Drucker (1969, p. 247), the term ‘knowledge economy’ was coined by Fritz Machlup in his 1962 book *Production and Distribution of Knowledge in the U.S.* For Drucker, “the systematic and purposeful acquisition of information and its systematic application [...] are emerging as the new foundation for work, productivity and effort throughout the world” (1969, p. 247).

<sup>3</sup> In their textbook *The Attention Economy* (2001), Davenport and Beck suggest that in post-industrial societies, attention becomes the key resource moving the economy. They write: “Every business is an engine fuelled by attention. In the farms and fields of primitive societies, and in the factories of the Industrial Revolution, physical manpower drove the economy. In the information era, knowledge was power – the more a company had, the more successful it could be. But now, as flows of unnecessary information clog workers’ brains and corporate communication links, attention is the rare resource that truly powers a company” (2001, p. 17).

<sup>4</sup> Likewise, Davenport and Beck (2001) argue that the most urgent organizational problem is that there is “not enough attention to meet the information demands of business and society” (p. 2). Following Herbert A. Simon, they claim that we do not inhabit a knowledge economy, but an attention economy: “In this new economy, capital, labour, information, and knowledge are all in plentiful supply [...] What is in short supply is human attention. Telecommunications bandwidth is not a problem, but human bandwidth is” (p. 2). In post-industrial

Despite being introduced in 1969, it was not until the 1990s that the attention economy became widely accepted and discussed. In particular, it was with the invention of the internet and the massification of digital technologies that human attention became a pressing topic in economic analyses. In 1997, Michael H. Goldhaber applied Simon's definition of the attention economy to explain the emerging economic possibilities of the internet.<sup>5</sup> Like Simon (1969), Goldhaber argues that in a society in which information and knowledge become central to the productive process, the attention necessary to grasp and set to work all that information and knowledge efficiently becomes equally crucial. Accordingly, the more knowledge and information we have access to, the scarcer a resource attention becomes. Goldhaber's novel approach, however, seeks to displace Simon's conceptualisation of attention economy to a specific object of focus: the internet. He argues that the internet is not only abundant, but overflowing with information. At the same time, he states, "there is something else that moves through the Net, flowing in the opposite direction from information, namely attention" (Goldhaber 1997). The vast volume of information made available by the internet turns attention into an "intrinsically scarce" – and therefore valuable – resource. In addition to this, Goldhaber suggests that the internet is a privileged territory for the exchange of this valuable commodity. This is due to at least two reasons. First, its capacity to generate and distribute information in audiovisual form (a combination of texts, images, sounds, videos, etc.) turns the internet into an appealing platform to capture attention.<sup>6</sup> Second, the internet provides extremely powerful mechanisms for measuring the attention it captures and hence creating and cultivating segmented and specialized audiences. Unlike more traditional media, such as television, radio, and printed media, the internet

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societies, they state, technology has made the production of commodities cheaper and more accessible, hence increasing the totality of "human wealth" (p. 3). The problem, then, lies not on the production of commodities, but on capturing the attention of both consumers and workers. Davenport and Beck write: "The problems for business people lie on both sides of the attention equation: how to get and hold the attention of consumers, stockholders, potential employees, and the like, and how to parcel out their own attention in the face of overwhelming options. People and companies that do this, succeed. The rest fail. Understanding and managing attention is now the single most important determinant of business success. Welcome to the attention economy" (p. 3).

<sup>5</sup> Goldhaber's paper 'The Attention Economy and the Net' can be found online at <http://firstmonday.org/article/view/519/440> (Accessed 12/12/14).

<sup>6</sup> According to Richard Lanham, "the internet constitutes the pure case of an attention economy [in which] 'eyeballs' constitute the coin of the realm" (2006, p. 17). In post-industrial capitalism, he argues, the source of economic value is no longer the production of commodities but the attention that these commodities are able to capture. In the attention economy, then, disciplines such as design, advertisement and marketing become central for the corporative production of value (Lanham 2006, p. 17). Lanham calls these 'disciplines of rhetoric and style', and places them at the heart of the attention economy (2006, p. 21). The internet then is a fruitful territory for the exchange and monetisation of 'eyeballs' and, at the same time, a privileged medium for the development of these 'disciplines of style' that aim at capturing attention.

provides instant analysis tools that offer rich feedback for measuring attention and manufacturing personalized audiences.<sup>7</sup>

Since Goldhaber's first attempt to think the internet through Simon's definition of attention as a scarce commodity, the attention economy has become an important theoretical framework for explaining the rapid monetisation of internet-based corporations.<sup>8</sup> Today, more than fifteen years after Goldhaber's article was published, it seems very difficult to address the issue of the attention economy, be it from a strictly economic point of view or from a critical perspective, without referring to the internet as one of its main objects of analysis. In particular, with the emergence of what has been called the Web 2.0 and more recently with the notion of Big Data, the attention of users becomes both a desired commodity and a generous source of value. The main characteristic of the Web 2.0 is that the internet does not operate as a unidirectional medium of communication but as a platform, i.e. an apparatus in which most of the content is simultaneously generated, shared and consumed by the users themselves.<sup>9</sup> In this sense, users do not play a merely passive role as consumers of information, but are active participants in the constitution of the web's content. Furthermore, with the improvement of data-processing algorithms (what is known today as Big Data), users' attention itself becomes the valuable content generated by the internet.<sup>10</sup> As

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<sup>7</sup> Micky Lee (2011) uses the case of Google in order to argue that what distinguishes the internet from traditional media is that in the internet the same corporation can vertically integrate the service offered (e.g. Google's search engine), the advertising agency (e.g. Google AdWords and Google AdSense) and the rating system (e.g. Google Analytics).

<sup>8</sup> It is important to note that the discourse on the attention economy is far from constituting a mainstream trend within the field of economics. Nevertheless, the current economic boom of internet corporations such as Google, Facebook, Youtube, etc., together with the massification of personal computers and smartphones, the growth in internet access and the rise in the average time spent online is gradually turning the concept of attention economy into a symptomatic phenomenon of contemporary capitalism. As Tiziana Terranova (2012, p. 3) puts it, "it is true that such theories [economic theories on the attention economy] constitute a kind of 'fringe' discourse within the field of economics at large, and one that lacks the legitimacy that is usually granted to more academic work. Published mostly on the internet, and then also occasionally translated into paperback publications for the market of incumbent and aspiring internet entrepreneurs, they constitute a specific genre which, while also being somehow ephemeral, in some ways translates what are the more general preoccupations of economic actors operating within the context of what used to be called the 'new economy'".

<sup>9</sup> The concept of Web 2.0 was first introduced by Darcy DiNucci in 1999. According to DiNucci, "the web we know now [in 1999], which loads into a browser window in essentially static screenfuls, is only an embryo of the Web to come" (1999, p. 32). In the Web 2.0, the internet "will not be understood as screenfuls of texts and graphics but as a transport mechanism, the ether through which interactivity happens. It will still appear on your computer screen, transformed by video and other dynamic media made possible by the speedy connection technologies now coming down the pike. The web will also appear, in different guises, on your TV set (interactive content woven seamlessly into programming and commercials), your cell phones (news, stock quotes, flight updates), hand-held game machines (linking players with competitors over the net), and maybe even your microwave (automatically finding cooking times for products)" (DiNucci 1999, p. 32). Sites like Facebook, Youtube, Twitter, etc. are examples of webpages that operate as platforms for the users to generate the content themselves.

<sup>10</sup> For a critical introduction to the notion of Big Data, see Boyd and Crawford's (2012) *Critical Questions for Big Data*. See also Pasquinelli's (2014) paper on 'societies of metadata'.

Pasquinelli (2014, p. 14) notes, Big Data is not simply defined by a change of degree ('big data' meaning more data), but by a qualitative leap from information to meta-information (or information about information). In this context, the internet becomes a thriving platform where human attention is not only the target of information (e.g. how many eyeballs consume a given advertising message) but an active source of information about consumers' habits and preferences.<sup>11</sup>

The specific development of the Web 2.0 and the more recent appearance of Big Data technologies represent two important examples of how attention has become a relevant object of economic concern for political economy. At the same time, however, the apologetic literature on the attention economy fails to grasp the exploitative nature of these phenomena, concealing the asymmetric power relations that ground the production, distribution and consumption of knowledge and information.

## 2. THE COGNITIVE CAPITALISM HYPOTHESIS

As a response to the theoretical shortcomings of political economy, some authors have suggested that it is necessary to understand knowledge-based economies as a strictly capitalist phenomenon based on the asymmetric struggle between capital and living labour. For Carlo Vercellone (2007, pp. 13-4), for example, although it remains true that "the contemporary historical conjuncture is marked by the diffusion and the evermore central role of knowledge in the organisation of production and the dynamic of technical progress", it is also true that theories of knowledge capitalism have developed an approach which often "abstracts from the capital/labour antagonism and from the conflicts of knowledge and power which structure transformations in the division of labour". For this reason, Vercellone argues, it is necessary to develop a critical response to knowledge capitalism which highlights both the persistence of the capital-labour struggle in contemporary society and the growing importance of cognitive activities for the valorising process of capital (2005, p. 2). Vercellone calls this critical response "the cognitive capitalism hypothesis" (2005, p. 2). From his perspective, knowledge and technical progress alone do not appear as the moving cause

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<sup>11</sup> Pasquinelli (2014) describes this shift as follows: "The accumulation of information and extraction of metadata performed every day by the global digital infrastructure is massive: take, for instance, search engines like Google, social networks like Facebook and Twitter, online stores like Amazon and any global logistic service. The new global scale of metadata extraction has started only recently to disclose a new perspective on the governance of the means of production: this shift has been famously acknowledged by recent business literature as 'big data' or the 'industrial revolution of data' (p. 15).

behind the mutations of capitalism. On the contrary, the cognitive capitalism hypothesis understands knowledge-based economies as the result of the subsumption of knowledge and information “to the laws of capital accumulation”, that is, it understands the rise of post-industrial capitalism as a consequence of the internal contradictions of capitalism and not as the natural evolution of technical progress (Vercellone 2005, p.2).

Echoing Vercellone, Moulier Boutang (2011) points out that the analysis of cognitive capitalism must not forget that, despite its radical transformations of the productive processes, cognitive capitalism remains a capitalist mode of organizing production (p. 59). This means that cognitive capitalism is not a mode of production oriented towards the production, valorisation and accumulation of knowledge for knowledge’s sake, but rather a mode of production in which knowledge becomes an active element for the production, valorisation and accumulation of capital.

Vercellone’s and Moulier Boutang’s arguments are useful when addressing the specific object of the attention economy. As mentioned above, the concept of attention economy develops initially as part of the theories of knowledge capitalism. As such, this concept focuses on the importance of human attention within a context in which knowledge and information become key aspects of the productive process. At the same time, however, the concept of attention economy fails to grasp the asymmetric power relations which ground the production of value in contemporary capitalism, precisely because it treats human attention as a commodity rather than as an active element of the capital/labour antagonism. Hence, political economy is unable to see that the attention economy constitutes a concrete mechanism for exploiting unpaid labour, generating surplus value from the harvesting of consumer preferences, interests and habits.

The conceptual shift from attention as a scarce commodity to attention as a new form of labour has allowed authors such as Sut Jhally and Bill Livant (1986), and Jonathan Beller (1994; 2006) to argue that in contemporary capitalism human attention becomes an active mechanism of capitalist exploitation. Beller (2006), for example, suggests that the attention economy gathers human attention through complex algorithms which create patterns about consumption habits, preferences, lifestyles, etc., turning this information into an active element of the valorisation cycle of capital. In this sense, the attention economy becomes a new form of labour that expands the capitalist exploitation of surplus value beyond factory walls and thereby blurs the distinction between labour time and leisure time (and between labour space and leisure space). In other words, the attention economy appears as a concrete

apparatus aimed at the reproduction of capital's capacity to impose its command over human activity.

Motivated by the belief that even today Marx's work remains the most ambitious and systematic theoretical attempt to analyse capitalist society, these authors deploy Marxist terminology (using concepts such as alienation, exploitation, necessary and surplus labour time, etc.) as a way to examine the concrete mechanisms through which the attention economy exploits human attention.<sup>12</sup> Most notably, Beller (2006) tries to define an 'attention theory of value' that would modernise Marx's labour theory of value in order to explain how human attention becomes an active source of surplus value. For Beller, the attention economy represents a generalised alienation of the spectator from his or her own vision in the same way in which capitalism denotes an alienation of the worker from his or her labour (2006, p. 8).

As it will be shown throughout this thesis, the main theoretical shortcoming of these critical responses is their lack of historical specificity when applying Marxist terminology to the particular object of the attention economy. Contrary to this, the present research raises the question of the validity of Marx's critique of political economy for an adequate analysis of the attention economy. From this perspective, this research belongs to the broader literature which reflects upon the validity of Marx's critique of capitalism for understanding the contemporary world.<sup>13</sup> In the specific case of the attention economy, the reflection regarding the validity of Marx's theory involves posing at least three questions: 1) to what degree is the attention economy a specific form of capitalist production?; 2) in what sense does the attention economy differ from the industrial mode of production in which Marx developed

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<sup>12</sup> Kenneth Rogers (2014, pp. 6-7) points out that the critiques of the attention economy from a Marxist perspective move away from the Marxist reading of images as spectacle, "as a form of ideological deception", and understand images as "a site of value production for the wave of global capitalism based on the aggregation of attention as a new pool of global labour power". From a more general perspective, these Marxist critiques of the attention economy belong to a broader group of authors that pose the question of how a Marxist framework can be used to develop a critique of the internet and digital technologies as new territories of capitalist exploitation. Some of these authors are Nick Dyer-Witheford (2009; 2012), Trebor Scholz (2012), Christian Fuchs (2013; 2014), and Tim Jordan (2013).

<sup>13</sup> According to Dyer-Witheford and Fuchs (2012) there is a "renewed interest in the Marxian Critique of Political Economy [which] marks both the perceived historical distance of the Cold War in the era of a triumphalist global capitalism and the enduring relevance of Marx's analysis and critique of capitalism" (p. 3). Most importantly, these authors suggest that the renewed interest in Marx's theory discloses "that economic issues such as class, exploitation and economic crisis form the heart of contemporary society" (2012, p. 3). In similar fashion, Heinrich (2012, p. 8) argues that today no serious understanding of capitalism can avoid Marx's critique of political economy. At the same time, however, Heinrich states that many of the publications that comprise the contemporary revival of Marx's critique of capitalism repeat a "somewhat superficial treatment of Marx's categories: they often appear as empty phrases" (2012, p. 9). For Heinrich, a serious engagement with Marx is necessary since his work "gives a more comprehensive analysis of capitalism and is in many ways more contemporary than many of the pompously packaged works written in the present" (2012, p. 9).

his critique of capitalism?; and 3) how can Marx's theory be used today despite the historical differences that separate industrial from post-industrial capitalism?

In relation to the first question, this dissertation argues that the attention economy remains a capitalist mode of production because: a) its overarching aim is the accumulation of capital; and b) because this accumulation is based on the asymmetric power relation between capital and living labour. Just as the cognitive capitalism hypothesis unveils the capitalist nature of knowledge-based economies, the attention economy has to be understood above all as a capitalist phenomenon. At the same time, however, the way in which the accumulation of capital and the asymmetric power relation between capital and living labour are played out in the specific post-industrial context of the attention economy differ greatly from the mechanisms of production, accumulation and exploitation of value described by Marx in his critique of 19<sup>th</sup>-century capitalism. The aim of this work, then, is to explore these differences in light of the general transformations of labour, value, temporality and power entailed in the passage from industrial to post-industrial capitalism. In other words, it attempts a reinterpretation of some aspects of Marx's critique of political economy that can contribute to advancing the critique of the present stage of capitalist production. To achieve this, the attention economy functions as an exemplary object of investigation.

This thesis suggests that although the attention economy has indeed turned human attention into a new form of labour, it is only through a systematic reinterpretation of Marx's categories that this claim can be fully grasped. This reinterpretation comprises two general aspects. On the one hand, the way in which the attention economy produces and exploits value demands questioning the traditional category of labour based on an industrial mode of production and which relies solely on abstract labour time as its general equivalent. On the other hand, the attention economy demands an examination of the way in which capital reproduces its command over human activity, i.e. the way in which capital reproduces a specific set of power relations.

Following these two considerations, the present research argues that the attention economy belongs to a general shift of capitalism in which subjectivity itself gradually becomes the territory of production and exploitation of value as well as the territory of reproduction of capitalist power relations. In this context, subjectivity is understood not simply as "the seat of intellectual operations", but also as "the affective and libidinal forces that weave together a world: attentiveness, the ability to address, care for and appeal to others" (Smith 2009, p. 10). Post-Fordism is characterised by replacing large portions of manual labour with automated

machines. Nevertheless, capitalism continues to exploit the “more generic attitudes of the mind”, that is, “the faculty of language, the disposition to learn, memory, the capacity to abstract and relate, and the inclination towards self-reflexivity” (Virno, p. 6). In other words, post-Fordism “takes the mind, language and creativity as its primary tools for the production of value” (Berardi 2009, p. 21). Hardt and Negri (1999) call this shift towards subjectivity “affective labour”, while Berardi (2009) refers to it as “the soul at work”. The important aspect of this phenomenon, as Virno (2007) suggests, is that by putting subjectivity itself to work, capitalism “renders the impersonal technical division of labour spurious, but also induces a vicious personalisation of subjection” (p. 8). In this new context, it is subjectivity itself, that “disposition to thought and action”, which is now under the command of capital (Virno 2007, p. 8). This study makes an effort to provide the necessary conceptual tools for understanding this gradual shift towards subjectivity that characterises both contemporary capitalism as a whole and the attention economy in particular. Furthermore, it argues that an immanent approach represents the most adequate methodology for such an enterprise.

### 3. TOWARDS AN IMMANENT CRITIQUE

The notion of immanent critique has to be understood as a specific form of critique that does not rely on any external standpoint when examining its object. Rather, an immanent critique focuses on the contradictions that are internal to its object of analysis. It has been argued (Postone 1993) that Marx’s critique of political economy is undertaken from an immanent standpoint which attempts to unveil the core contradictions of capitalism. According to this interpretation, Marx’s critique is not a critique of capitalism from the transhistorical standpoint of labour, but a critique of labour as a historically specific capitalist category (Postone 1993, p. 4). This means that Marx’s critique is not a “universally applicable theory”, but a critical theory limited strictly to the capitalist mode of production (Postone 1993, p. 5).

In the case of the attention economy, an immanent critique can neither be a normative assessment of the benefits or disadvantages of digital technologies for contemporary society, nor a historicist account of the transformations of our modes of perception.<sup>14</sup> An immanent

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<sup>14</sup> It is important to note that immanent critique should not be confused with historicism. From the perspective of immanent critique, historicism appears as a transhistorical methodology since it presupposes the external standpoint of History. In other words, historicism constitutes a historically limited understanding of historical movement. Instead, an immanent critique should aim at unveiling the internal contradictions of its object. For an analysis of the differences between historicism and a Marxist immanent methodology, see Althusser’s (2009) *Reading Capital*, in particular the chapter entitled “Marxism is not a Historicism”.



critique of the attention economy must unravel the internal contradictions that the concept itself presupposes. It is important to note that the insistence on such a methodology is given by the object itself. In a context in which every human activity becomes a potential source of surplus value, the capital/labour struggle begins to take place in what Hardt and Negri (1999, p.82) have called a “non-place of exploitation”. In this non-place, the “measure of labour-value, grounded on the independence of use-value” becomes ineffectual and the relation between living labour and capital becomes one of immediate, naked command (Hardt and Negri 1999, p. 83). To develop a critique adequate to this context, Hardt and Negri argue, one must

refuse the temptation to go a simple path that is presented to us: the path of reintroducing the Marxian figures of use-value and pretending to renovate them in the context of the new situation. How do the philosophers and politicians who situate themselves in this perspective proceed? They reconstruct a fictional use-value that they nostalgically oppose to the growing processes of globalization; in other words, they oppose to globalization a humanistic resistance. In reality, in their discourse, they bring to light again all the values of modernity, and use-value is configured in terms of identity. (Even when use-value is not invoked explicitly, it ends up being inserted surreptitiously). (Hardt and Negri 1999, pp. 83-4).

What Hardt and Negri denounce as the main flaw of contemporary Marxist critiques of capitalism is the lack of an immanent methodology, i.e. a methodology that avoids the temptation to smuggle in an external, ahistorical perspective which in turn would reintroduce a humanistic framework. In the critical literature on the attention economy and the new forms of digital labour, this flaw has become a recurring trait. Authors such as Jhally and Livant (1986) and Beller (2006) presuppose in one way or another that human attention possesses a use-value that is alienated by capital. The problem with this way of proceeding is not only its lack of historical specificity, but the fact that it necessarily leads to a normative reading of Marx’s critique of capitalism. Nick Dyer-Witheford and Christian Fuchs (2012, p. 2), for example, claim that Marx’s own works are grounded on normative judgements that both “condemn capitalism as oppressive, exploitative, alienating, estranging and heteronomous” and “present an alternative vision of a better world”. Therefore, these authors state, a Marxist critique of the internet necessarily entails a normative judgement that examines its role in the struggles for emancipation (2012, p. 2). As it will be argued, the main limitation of a normative project is that it requires an external standpoint (labour, freedom, individuality, use-value, etc.) from where to undertake such a critique. On the contrary, this research follows Postone’s (1993) interpretation of Marx in order to suggest that Marx’s mature works are not merely a normative critique of capitalist society but a systematic analysis of its internal contradictions.

According to Marx, “capital itself is the moving contradiction in that 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” (G, 706). This constitutes the internal limit of capitalism: it puts forth an enormous technological and scientific revolution that aims at reducing the amount of labour time necessary for the production of each commodity to a minimum while, at the same time, it uses labour time as the universal measure to preserve a given social order based on value and on the capacity of capital to command human activity. The attention economy must be understood as a consequence of this contradiction under post-industrial conditions of production: on the one hand, the attention economy is the result of an enormous technical revolution that employs information technologies in an effort to orchestrate the production, distribution, and consumption of commodities; on the other hand, the attention economy subsumes this unleashed social productivity under the logic of surplus value, expanding the exploitation of human activity beyond the factory and hence reproducing the dominant power relations at a larger scale.

The present research attempts to unveil how this contradiction manifests through the specific concepts of labour, time and power. In the case of labour, an immanent critique of the attention economy cannot merely argue that attention becomes a new form of labour without examining the historical mutations of this category. Hence an immanent critique must address the historicity of the category of labour and focus on how the specific transformations put forth by post-industrial capitalism have produced the conditions of possibility for attention to become a new source of surplus value. Accordingly, a critique of the attention economy from the perspective of time cannot simply oppose a human, non-technical time to a cyber-time (as if the former were a transcendental framework from where to evaluate the detrimental effects of the latter). Rather, an examination of the temporality of the attention economy should highlight the fact that human time is always the result of a technical process of exteriorisation. From this perspective, both clock-time and cyber-time appear as two ways in which human activity is subsumed under capital (which at the same time correspond to two different forms of generating surplus value). Finally, in the case of the analysis of attention as a power apparatus, this study attempts to overcome any concept of society based on a transhistorical definition of the individual (e.g. a fully formed subject that uses or is used by digital technologies). Instead, it follows Deleuze and Guattari’s social theory according to which society is the result of an immanent organization of flows (of desire, bodies and codes) to analyse the internal contradiction between the deterritorializing and reterritorializing drives

that constitute contemporary capitalism. Furthermore, it examines how this contradiction triggers the historical transformation of the dominant diagram of power through which society is organized.

#### 4. CHAPTER OUTLINE

The overall structure of this thesis is composed of five chapters. Chapter one examines the attention economy from the standpoint of labour. More precisely, it uses Marx's distinction between labour power and labour process in order to show that the attention economy does not only constitute a scarce commodity but also an emerging form of labour, i.e. a new valorising activity. Using Jhally and Livant's (1986) seminal article on the topic, the chapter sets the basic theoretical framework for understanding how human attention can generate surplus value and how this surplus is exploited by media networks. At the same time, however, chapter one suggests that the main shortcoming of the critiques of the attention economy from the standpoint of labour is their tendency to universalise a certain notion of labour, thus neglecting its historical specificity. Following Postone's (1993) reinterpretation of Marx, the chapter shows that a critical theory of capitalism in general, and of the attention economy in particular, must not be a critique "from the standpoint of labour", but an immanent critique of the notion of labour as a strictly capitalist category (i.e. human activity measured in terms of abstract value). This means that the concept of labour cannot be grasped in its specificity without examining the historical transformations of the labour-value relation. Accordingly, a critique of the attention economy cannot limit itself to the standpoint of labour, but must address the specific changes in the labour-value relation that have created the conditions of possibility for attention to become a valorising activity.

Following the conclusions drawn in chapter one, chapter two attempts to contextualise the attention economy within the Marxist problematic of the labour-value relation. Using mainly the Marxist interpretation of some Italian post-Marxist authors (Alquati, Lazzarato, and Negri), this chapter contends that the social and technical transformations put forth by post-Fordism demand a radical reinterpretation of the opposition between living labour and machines which informs Marx's labour theory of value. The chapter uses Alquati's (1963) concept of valorising information and Lazzarato's (1996) concept of immaterial labour to examine the concrete mechanisms through which the attention economy becomes a new source of surplus value. In doing so, it provides a historical account of the labour-value

relation which challenges the traditional Marxist understanding of the valorisation process of capital. Furthermore, chapter two follows Negri's (1996; 2005; 2008) thesis regarding the obsolescence of Marx's labour theory of value for explaining the labour-value relation in post-industrial capitalism and how this calls for a new understanding of the Marxist notion of exploitation. From Negri's perspective, labour becomes disentangled from a strictly value relation and appears as a power apparatus aimed at the reproduction of capitalist power relations. This shift marks a significant step for an immanent critique of the attention economy since it allows understanding the attention economy not only as a new form of labour, but mainly as a concrete power apparatus whose function is to reproduce a given social order. This general shift from economics to the analysis of power relations sets the ground for the critique of the attention economy developed in the remaining chapters.

Chapter three focuses on the relationship between temporality and power that characterises the attention economy. Using Bernard Stiegler's (2011b) theory of originary technicity and his concept of cinematic time, this chapter challenges the opposition between a living time of labour and a dead time of technical machines. In Stiegler's view, living time is always the result of an ongoing process of technical exteriorisation. This places technicity at the heart of the production of temporality, unveiling the interrelation between dead technical memory and living memory. In this regard, chapter three allows for a more appropriate conceptualization of the organic composition of capital for the specific context of post-industrialism which does not simply oppose human time and technical time, but that grasps the interrelation that mutually defines them. To develop this argument, chapter three examines Stiegler's hypothesis regarding the political consequences of the massification of digital technologies and the subsequent industrialisation of memory and attention. Stiegler contends that the massification of digital technologies creates an industrialisation of consciousness that normalises a given experience of "real-time" (2006; 2011b). This leads to a systematic "loss of individuation" and a "ruin of narcissism" that undermines the very moving force that keeps capitalist consumption alive (Stiegler 2011a; 2011c). In this regard, this chapter connects the problem of temporality to those of power and desire. Chapter three ends by outlining the theoretical shortcomings of Stiegler's theory for a critique of the relation between temporality and power in the attention economy. Despite its novel theory of time and its contribution to advancing a reconceptualization of the organic composition of capital in a post-industrial context, Stiegler's insistence on the phenomena of individuation and normalisation turns his

analysis of the attention economy into an obsolete framework more suitable to industrial than to post-industrial capitalism.

Chapter four continues the analysis of the attention economy from the standpoint of power. This chapter uses Gilles Deleuze and Félix Guattari's (2004b) concept of machinic labour in order to show how the attention economy operates as a concrete power mechanism aimed at reterritorializing the productive forces unleashed by post-Fordism. The chapter begins by introducing Deleuze and Guattari's (2004a) social theory according to which every society is a specific organization of flows of desire. In particular, it focuses on these authors' definition of capitalism from the standpoint of the twofold movement of deterritorialization and reterritorialization. On the one hand, this chapter argues that Deleuze and Guattari's reading of Marx offers a novel interpretation of the relation between labour, value and technology that resembles that of Italian post-Marxism examined in chapter two. Most significantly, Deleuze and Guattari set forth an immanent analysis of post-industrial capitalism which puts into question the distinction between living labour and machines. On the other hand, these authors go beyond Italian post-Marxism by introducing a radical notion of machines (desiring-machines). For Deleuze and Guattari, there is no difference "in nature" between social and technical machines, only a difference in the "regimes" that govern them (2004a, p. 35). This means that the real difference is not between technical, organic, and social machines, but rather between the molecular level of desiring-machines and the molar level where technical, social and organic machines appear as separate entities. For this reason, chapter four concludes that the opposition between living labour and technical machines must be replaced with an immanent analysis of the legitimate and illegitimate uses of the syntheses of desiring-machines. From this perspective, the attention economy appears as a mechanism of reterritorialization aimed at the reproduction of an illegitimate use of the syntheses of desiring-machines. In other words, the attention economy reterritorializes post-fordism's deterritorialized flows of desire and labour in order to reproduce capital's command over life.

Chapter five carries on the analysis from chapter four by arguing that the attention economy is a concrete power apparatus which must be understood as a result of the passage from disciplinary to control societies sketched by Deleuze (1995). As such, the attention economy responds to the mutations of labour characteristic of post-industrial societies. The chapter begins by outlining the general characteristics of the shift from disciplinary to control societies and contends that the attention economy is an exemplary object to illustrate this transformation. To develop this point, chapter five compares the role of attention in

disciplinary societies as outlined by Foucault's analysis of the panopticon (1995) and the role of attention in the specific context of cognitive capitalism. In disciplinary societies, attention (or the gaze) operates as a mechanism for internalizing a given norm, hence individuating each subject within the mass. By contrast, in control societies, attention becomes a source of information about the behaviour of a broader object of power, the population. This means that the attention economy does not aim at the normalization of a mass of individuals (as Stiegler suggests). Rather, the attention economy turns human attention into a new source of information about a given population, hence transforming this new object of power into an economically manageable body. In this sense, this chapter concludes that in the attention economy the mass/individual dyad characteristic of disciplinary societies dissolves and is replaced gradually by the notions of 'dividuals' and 'markets'. The concluding section of chapter five uses Deleuze and Guattari's (2004b) concepts of machinic enslavement and social subjection in an attempt to bring together the main arguments presented throughout the thesis.

## **CHAPTER ONE**

### **THE WORK OF PAYING ATTENTION**

This chapter examines the attention economy from the standpoint of labour. More precisely, it uses Marx's concept of labour in order to develop a critical account of the attention economy as a new form of capitalist exploitation. As mentioned in the introduction, the concept of attention economy has been forged within the disciplinary field of political economy to define the commodification of attention in the age of so-called 'knowledge capitalism'. For the last two decades, the concept of attention economy has been gaining particular importance as a means of understanding the valorisation process of the internet and the monetisation of the online activities of its users. Parallel to this, however, the attention economy has become an important target of critical analyses which attempt to show that in the age of cognitive capitalism attention should be understood as a new form of labour and hence of capitalist exploitation (Beller 1994 & 2006; Terranova 2012; Marazzi 2008; Crogan and Kinsley 2012). The aim of this chapter is twofold. First, it lays down the basic Marxist categories for understanding how human attention is transformed into labour. Second, it challenges the way in which some of these Marxist critiques of the attention economy universalise a certain notion of labour in order to evaluate the exploitative nature of the attention economy. In contrast, this chapter argues for an immanent critique capable of addressing the internal contradictions that characterise the attention economy as a new form of labour.

This chapter is divided into three sections. The first part deploys Marx's distinction between labour power and labour process in order to show that the attention economy constitutes an emerging form of labour. The second section uses Jhally and Livant's (1986) seminal article on the topic in order to set the basic theoretical framework for understanding how attention can generate surplus value and how this surplus is exploited by media networks. This section

concludes by moving from Jhally and Livant's account of television towards more contemporary forms of the attention economy such as the monetisation of users' attention through the internet. The third section contends that the main shortcoming of the critiques of the attention economy offered so far is their tendency to universalise a certain notion of labour, thus neglecting its historical specificity. Following Postone's (1993) reading of Marx, the third section shows that a critical theory of capitalism in general, and of the attention economy in particular, must not be a critique "from the standpoint of labour", but an immanent critique of the notion of labour as a strictly capitalist category. This means that labour cannot be analysed without reference to the notion of value, a task that will be developed in chapter two.

## 1. THE ATTENTION ECONOMY FROM THE STANDPOINT OF LABOUR

In the traditional definition of the attention economy mentioned in the introduction, attention appears as a commodity among others, exchanged in the market and hence regulated by laws of supply and demand. Both Simon (1971) and Goldhaber (1997) conceive attention as a scarce commodity whose value is determined by the degree of information abundance. Methodologically, this understanding mimics that of political economy, focusing on the sphere of distribution (i.e. the market) in an attempt to unveil the laws of supply and demand that determine the value of a given commodity (e.g. human attention). The problem with this perspective is that it conceals the relation between value and labour that lies at the heart of the attention economy. In other words, by defining attention as a scarce commodity, political economy fails to understand how attention becomes a value-producing activity in the first place.

Following Marx's critique of political economy, this section argues that for an adequate understanding of the attention economy, a methodological reinterpretation must take place. To unveil the relation between value and labour in the attention economy, it is necessary to substitute the conceptualisation of attention as labour for that of attention as a commodity, which at the same time requires shifting the critique from the sphere of distribution to that of production.



One of the main differences between Marx's treatment of labour and that of political economy is Marx's conceptual distinction between labour power and labour process.<sup>1</sup> In *Capital*, Marx defines labour power as "labour-capacity", that is, as "the aggregate of those mental and physical capabilities existing in the physical form, the living personality, of a human being, capabilities which he sets in motion whenever he produces a use-value of any kind" (C, p. 270). In this sense, labour power refers to the capacity (or potentiality) of a human being to perform an activity capable of producing use-values. Labour process, on the other hand, is the materialisation of labour power. In the labour process, what was pure potentiality is actualised as value-producing activity. For Marx, labour is

a process between man and nature, a process by which man, through his own actions, mediates, regulates and controls the metabolism between himself and nature. He confronts the materials of nature as a force of nature. He sets in motion the natural forces which belong to his own body, his arms, legs, head, and hands in order to appropriate the materials of nature in a form adapted to his own needs. (C, p. 283)

As will be shown below, this particular definition of the labour process can be quite problematic as well, since it may be interpreted as repeating the ahistorical understanding of labour characteristic of political economy. Nevertheless, the distinction between labour power and labour process plays a crucial role when approaching the question of labour in the attention economy. This is so mainly because it facilitates uncovering the notion of surplus value that remains hidden for political economy. While the latter conceives the value of attention as the "natural" effect of the law of supply and demand, a critical approach to the attention economy must examine the way in which attention as labour process, that is, as a valorising activity, generates a surplus value that is then monetised and turned into profit.

According to Marx, the lack of a conceptual distinction between labour power and labour process inevitably creates the confusion between the value of labour (as a commodity bought by the capitalist in the job market) and the value created by labour and objectified in the commodity.<sup>2</sup> Consequently, political economy treats both as one and the same thing, concealing the fact that there is a difference (a surplus), between the value of the labour

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<sup>1</sup> This categorical distinction is developed in chapters six and seven of *Capital* and arises as part of the "explanation of the source of surplus value" (Foley 1991, p. 296). According to Foley (1991, p. 297), "Marx viewed the discovery of the distinction between labour power and labour process as his most important positive contribution to economic science".

<sup>2</sup> Duncan Foley (1991) states that despite its important contributions to a theory of value, political economy "was unable to resolve the confusion inherent in the concept of the 'value of labour', which in some contexts meant the wage, and in others the value produced by labour" (p. 297). In this regard, he adds, "Marx dissipates the confusion by splitting the concept of labour into the pair labour/labour power" (p. 297), which consequently allows understanding that "the sale of labour power to the capitalist for a wage precedes the production and emergence of a value in the product" (p. 297). This distinction makes it possible to see "the exact mechanism of the appropriation of a surplus value in capitalist production" (p. 297).

power bought by the capitalist and the value of the commodity produced by the labour process. For Marx, political economy places labour alongside other commodities, and hence explains its value through laws and tendencies belonging to the sphere of distribution. In doing so, political economy defines the relation between labour and value to be the result of a “natural” law of supply and demand. Contrary to this, Marx argues that only a critique of capitalism which focuses on the sphere of production will be able to denaturalise the relation between labour and value and to identify the exploitative nature of capitalist production. In other words, it is necessary to shift the analysis of labour from the sphere of distribution (where the value of labour power is thought of as being the “natural” result of supply and demand) to the sphere of production (where labour appears as a valorising process). This shift makes it possible to conceptualise the category of surplus value and hence to identify the key characteristics of capitalist exploitation.<sup>3</sup>

In chapter six of *Capital*, Marx argues that classic political economy is based on the ideological, liberal presupposition that all economic exchange takes place between two proprietors of commodities who enter freely into an exchange relationship in the pursuit of their self-interest. When these conditions are ensured, we have a free market that operates smoothly and regulates itself by the law of supply and demand (a view exemplified by Adam Smith’s notion of the ‘invisible hand’ and by Friedrich Hayek’s ‘price system’). In a well-known passage from this chapter, Marx refers sarcastically to the market as the “very Eden of the innate rights of man” (C, p. 280). Only in the market, as understood by political economy, do “Freedom, Equality, Property, and Bentham” rule (C, p. 280). Marx explains this as follows:

Freedom, because both buyer and seller of a commodity, say of labour power, are constrained only by their own free will. They contract as free agents, and the agreement they come to, is but the form in which they give legal expression to their common will. Equality, because each enters into relation with the other, as with a simple owner of commodities, and they exchange equivalent for equivalent. Property, because each disposes only of what is his own. And Bentham, because each looks only to himself. The only force that brings them together and puts them in relation with each other, is the selfishness, the gain and the private interests of each. (C, p. 280)

In the first line, Marx uses labour power as example of a commodity which is sold and bought in the market. This is no mere example, however. Marx is precisely trying to show the methodological inconsistency of political economy, which equates labour power with all

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<sup>3</sup> According to Marx, “what distinguishes the various economic formations of society – the distinction between for example a society based on slave-labour and a society based on wage-labour – is the form in which surplus labour is in each case extorted from the immediate producer, the worker” (C, p. 325).

other commodities, thus concealing the distinction between labour power and labour process. Furthermore, Marx points out that by focusing on the sphere of distribution, the asymmetric power relation that defines the sphere of production and which serves as the basis for the exploitation of surplus value becomes veiled by the notions of freedom, equality, property and self-interest that characterise the ideal relation between subjects in the market.

In the specific case of the attention economy, political economy seems to reproduce the same ideological principles that Marx denounces. A good example of this can be found in Seth Goldstein's attempt to form an "Attention Trust" that would fight for the attention rights of internet users. In a 2005 declaration, Goldstein defines four basic rights necessary for establishing an open and transparent market for the attention economy:

1) Property: I own my attention and I can store it securely in private; 2) Mobility: I can move my attention wherever I want whenever I want to; 3) Economy: I can pay attention to whomever I wish and be paid for it; 4) Transparency: I can see how my attention is being used. (Goldstein 2005)

These four basic rights, he claims, make it possible for individuals to participate in a "free, open market for exchanging their attention" (Goldstein 2005). When seen from the perspective of the market, these rights play the same role as those identified by Marx's critique of political economy: property, freedom, equality, and self-interest appear as the basic requirements for a transparent and effective economy of attention. This means that in Goldstein's view it is "presupposed that attention, like labour, belongs to a juridical subject, that is, a proprietor who has the right to bring it to the market" (Beller 2006, pp. 304-5).<sup>4</sup> The problem with this view is that it impedes grasping the category of surplus value that guides capitalist production, limiting the understanding of how the attention economy turns human attention into economic profit. This is so, mainly because the production and extortion of surplus value occurs "outside the limits of the market or of the sphere of circulation" (C, p. 279).

In his critique of political economy, Marx concludes that in order to develop an adequate understanding of the relationship between value and labour under capitalist conditions of production, it is necessary to move from the sphere of distribution to the sphere of production (C, p. 280).<sup>5</sup> This shift allows Marx to introduce the conceptual distinction between labour

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<sup>4</sup> It is interesting to note the similarities between political economy's understanding of the subject of labour/attention and the Lockean subject, who possess a natural right to the products of his or her labour. See the chapter on property in Locke's second treatise on civil government (1924).

<sup>5</sup> The sphere of distribution, Marx writes, is precisely the sphere that we are deserting, "within whose boundaries the sale and purchase of labour power goes on" (C, p. 280).

power and labour process. With it, Marx shows that although the capitalist is buying labour power at the price set by the laws of supply and demand dictated by the labour market, at the level of production the capitalist is in fact not paying the worker for the total value generated by his or her labour process. The capitalist is basically extorting part of the value produced by the worker during the working day. And he can do so only because of the asymmetric power relation that situates him as the owner and possessor of the means of production as opposed to the worker, who owns nothing but his or her labour power. This, Marx shows, is the source of surplus value, which can only be conceptualised once the analysis has moved from the sphere of distribution (where labour power is sold and purchased) to the sphere of production (where the labour process generates value).

Accordingly, a critique of the attention economy must shift from an understanding of attention as a scarce commodity to one where attention appears as a form of labour through which surplus value is generated and extorted. From the perspective of political economy, attention is not seen as a valorising process, but as a commodity governed by a law of supply and demand (a law intrinsic to the sphere of distribution, not production). In other words, political economy reproduces an unproblematic understanding of the attention economy which conceals the asymmetric relation between labour and capital that grounds the extortion of surplus value. Rather, it is necessary to understand attention as a new form of labour and to unveil the concrete mechanisms of production and extraction of surplus value that make of the attention economy a strictly capitalist phenomenon.

## 2. WATCHING AS WORKING

An important contribution to the critique of the attention economy from the standpoint of labour can be found in Sut Jhally and Bill Livant's 1986 article 'Watching as Working: The Valorisation of Audience Consciousness'. In this article, Jhally and Livant use the conceptual apparatus of Marx's critique of political economy in order to examine how allegedly 'free-media', like television, generate profit (1986, p. 125). Despite the fact that this article was written and published before the massification of the internet, its methodological approach to television provides important lessons for the current debate on the attention economy and digital technologies.

Jhally and Livant begin their article by referring to the importance of adopting a materialist approach to media and communication studies.<sup>6</sup> They argue that

most studies of the media (both in the mainstream and critical traditions) have focused on messages as their central unit of analysis. Despite the many differences within the field, there is a broad unstated agreement that the discipline of media communications is about the production, distribution, reception, interpretation, and effects of messages [...] More specifically, the concentration has been on how these messages are used, on what meanings are generated in the interaction between messages and people. The history of communication, then, has been a study of the use-values of messages, their meaning. (1986, p. 128)

The authors suggest that it is necessary “to break with message-based analysis and the study of use-values” (1986, p. 129) and to move towards a strictly economic analysis of mass-media. Accordingly, these authors contend that the commodity produced and exchanged by the culture industry is neither the medium nor the message, but the audience itself (p. 126).<sup>7</sup> This means that mass-media networks make a profit not by selling content to an audience, but by selling a manufactured audience to advertising agencies. More precisely, they add, the commodity being sold is not just an “audience”, but an audience’s “watching-time” (p. 130).<sup>8</sup> In order to understand how media networks produce surplus value, Jhally and Livant claim that the production of messages must be distinguished from the production of audiences, that is, the production of content to be consumed by spectators (e.g. a television show) has to be differentiated from the production of audience attention-time that is sold to advertisers (1986, p. 129). In this regard, while media content is often produced by media-industry

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<sup>6</sup> Jhally and Livant credit Dallas W. Smythe (1977) for outlining the main principles for a materialist approach to communication and media studies. In his article ‘Communications: Blindspot of Western Marxism’, Smythe contended that western Marxism had systematically neglected the role played by communications in the reproductive process of capital, reducing it to the mere ideological superstructure of society (1977, p. 1). He suggested that a new materialist approach was needed in order to adequately grasp how communication industries are “intimately connected with consumer consciousness, needs, leisure time use, commodity fetishism, work and alienation” (1977, p. 1). With this article, Smythe inaugurated what later became known as the ‘blindspot debate’, which contributed to rethink the role of communications in contemporary capitalism. Smythe’s article was heavily criticised for portraying a very limited understanding of western Marxism and thus neglecting a series of authors who did in fact examine the problem of mass media from a much wider scope than the one acknowledged by him (see for example Murdock’s 1978 response to Smythe). Regardless of the validity of this criticism, Smythe’s article does provide important methodological insight for an analysis of the exploitative nature of mass media. For an example of how Smythe’s ideas can be utilized for a concrete analysis of the attention economy and the current manufacturing of audiences by internet corporations, see Bermejo (2009) and Lee (2011).

<sup>7</sup> Also in this point Jhally and Livant are following Dallas W. Smythe’s insights. According to Smythe (1977, p. 3), instead of analysing mass media from the “idealist” standpoint of the meaning conveyed by its messages, it is necessary to take the “materialist” perspective of the audience as a “commodity”.

<sup>8</sup> Jhally and Livant argue that Smythe’s conceptualisation of the audience as the commodity produced and sold by media networks remains too vague (1986, p. 130). What advertisers really buy from media networks, they suggest, is not merely an audience, but an audience’s watching time. Furthermore, they add, “when media ‘sell time’ to a sponsor, it is not abstract time that is being sold but the time of particular audiences [...] What the media sell (because they own the means of communications) is what they control – the watching-time of the audience” (p. 130).

professionals, “the commodity audience-time is produced by both the networks and the audience” (p. 131). This means that the commodity that the media industry sells to advertisers (i.e. attention-time) involves the labour of the audience. Therefore, watching appears as a new form of working, that is, as valorising activity. As such, it implies the potential for generating something new in the form of a surplus which was not there before the act of watching. Jhally and Livant explicitly refer to Marx’s notion of labour in order to define their notion of watching as working.<sup>9</sup> Following Marx, they claim that attention is not simply a thing carrying a “congealed value”, but a valorising activity (p. 126). In this sense, watching has the potential to generate surplus value, which can then be alienated and exploited by capital. The distinction between labour power and labour process referred to above allows understanding the concrete mechanism through which media networks create and exploit this surplus value.

To identify the rate of exploitation of labour, Marx conceptualises the working day as having two separate parts, necessary labour time and surplus labour time (C, pp. 324-325). Marx argues that the worker, “during one part of the labour process, produces only the value of his labour power, i.e. the value of his means of subsistence” (C, p. 324). This part of the labour process constitutes the first portion of the working day, which Marx calls “necessary labour time”. During the second portion of the working day, however, the worker continues to produce value, “but his labour is no longer necessary labour, and he creates no value for himself” (C, p. 325). Instead, Marx adds, the worker “creates surplus-value which, for the capitalist, has all the charms of something created out of nothing” (C, p. 325). Marx calls this portion of the day “surplus labour time”. Following this distinction, Marx defines surplus value as objectified surplus labour, “a congealed quantity of surplus labour time” (C, p. 325). From this perspective, the degree of exploitation of labour power can be measured by calculating the difference between necessary labour time and surplus labour time. In Marx’s words, the rate of surplus value is “an exact expression for the degree of exploitation of labour power by capital, or of the worker by the capitalist” (C, p. 326).

Jhally and Livant (1986) apply this distinction in order to show how human attention can be exploited by media networks. As mentioned already, these authors argue that the commodity produced by media networks and sold to advertisers is audience watching-time, and that this

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<sup>9</sup> The authors write: “Central to the whole paradigm of Marxian economics is the notion that human labour – not capital or technology – is the basis of the productivity of societies. Similarly, in the analysis of broadcasting economics, it is the audience watching that is vital to the whole process. In a very real sense we can see that there are many similarities between industrial labour and watching activity. In fact, watching is a form of labour” (Jhally and Livant 1986, p. 135).

commodity is produced by both the network and the labour of the audience itself (1986, p. 131). On the one hand, the audience's labour power is purchased through the purportedly 'free content' they consume. On the other hand, the network sells the product of the audience's labour process (the manufactured audience time) for a higher price than the total cost of production of that 'free-content'. According to the authors, the audience's watching time can be divided between "necessary watching-time" (necessary to cover the cost of production of the media content) and "surplus watching-time". The latter, they conclude, is the source of profit of media networks (Jhally and Livant 1986, p. 132).

Furthermore, Jhally and Livant use Marx's distinction between absolute and relative surplus value in order to explain the two ways in which television networks may increase this watching surplus time (1986, pp. 133-4). It has been shown that, for Marx, surplus value is determined by the difference between the labour time of a whole working day and the portion of necessary labour time in which the worker produces enough value to cover the cost of his or her labour power. When faced with the question of how to increase the amount of surplus value, the capitalist has two options. On the one hand, surplus value can be increased in absolute terms, which means extending the working day or reducing wages. In both cases, the ratio between necessary labour time and the working day as a whole decreases and the amount of absolute surplus value increases. On the other hand, the capitalist can transform the direct production process (through cooperation or technological development, for example) in order to increase productivity and reduce necessary labour time. Considering the fact that the length of the working day remains unaltered, this intensification of productivity increases the amount of surplus value in relative terms. Marx sums up the notions of absolute and relative surplus value as follows:

I call that surplus-value which is produced by the lengthening of the working day, *absolute surplus value*. In contrast to this, I call that surplus-value which arises from the curtailment of the necessary labour time, and from the corresponding alteration in the respective lengths of the two components of the working day, *relative surplus value*. (C, p. 432)

Accordingly, Jhally and Livant argue that media networks can increase the amount of surplus watching-time in either absolute or relative terms (1986, pp. 133-4). On the one hand, they can increase the ratio of advertisement time in relation to content time, thus extending the amount of surplus time in absolute terms. This, however, has a limit beyond which advertisement time cannot be increased.<sup>10</sup> This limit pushes television networks to find

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<sup>10</sup> The authors write: "At a certain point, there is a limit to the expansion of advertising time. Audiences will simply stop watching if there is too much advertising and not enough programming. The TV Code of the

mechanisms to make people “watch harder” (1986, p. 133). One way of doing this, the authors claim, is audience segmentation, which allows media networks to sell the attention time of a specific target audience that will watch for the same time, but will probably watch in a more intense form since the message will be specially designed for that target audience. This is a form of generating “relative surplus watching time” (Jhally and Livant 1986, p. 134).

It could be argued, however, that it is only with the internet that the production of relative surplus attention time becomes a reality. Writing in 1986, the only example of an increase in surplus watching-time in relative terms that Jhally and Livant could provide was the demographic segmentation of audiences through the application of “people meters” (p. 139). This device makes it possible to estimate the total number of people watching a show at a given time and to offer basic information about the specific audiences that are doing so. Nevertheless, the basic technology of the “people meters” has been completely overtaken by digital technologies, which turn the production of ‘relative surplus attention-time’ into a concrete possibility. Google provides a clear example of this. As Jonathan Beller (2006) puts it, Google’s successful advertising strategy consists in the creation of “a massive algorithm that takes into consideration all known variables about a particular user – address, online purchasing history, web pages viewed, gender, age, and very likely class and frequency of orgasm – to link auctioned advertising to searches run by Google users” (p. 234). Furthermore, through mechanisms such as AdWords and AdSense, Google creates a vertically integrated search engine, advertising agency, and rating system, which not only produces segmented and specialized audiences, but also monopolises every aspect of the productive process.<sup>11</sup> As in the case of television analysed above, the attention paid by users of the allegedly ‘free search engine’ is in fact generating a surplus value that is then monetised. The difference, however, is that the technical possibilities offered by Google to personalise its audience make it possible to split the attention of each subject into a series of personalised “blocs of attention” (Beller 2006, p. 234). These blocs are then traded in an attention stock market where companies can bid for them, buying access to the attention-time of highly personalised audiences:

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National Association of Broadcasters limits non-programming time to 9.5 minutes per hour in prime time [...] The network in this situation must adopt new strategies to manipulate the ratio between necessary and surplus time. If the networks cannot make people watch advertising longer in absolute terms, they can make the time of watching advertising more intense – they can make the audience watch *harder*” (Jhally and Livant 1986, p. 133).

<sup>11</sup> For an analysis of Google, the production of segmented audiences, and the concept of vertical integration see Lee (2011) and Bermejo (2009).



This method of gathering, weighting, and bundling little pieces of attention more and more thoroughly distils units of abstract time to a universe of time/attention buyers. This computerized advance over the niche marketing practiced by television buyers and the product placement practiced by film and TV is linked to the practice of what Google calls the monetisation of content – where every instance of content on the web can, in principle, be treated simultaneously as a commodity and a medium. (Beller 2006, p. 234)

In the case of Google, there is no distinction between the content consumed by the user (e.g. the ‘free’ search engine) and the labour process he or she performs (e.g. the consumption of advertising content). These separate spheres become integrated under one single process through which the service provided (each single Google search) appears at the same time as the mechanism that produces the highly segmented blocs of attention, the advertising agency that finds the right advertiser (AdSense and AdWords) and the rating agency that evaluates its efficiency (Google Analytics). Following Jhally and Livant’s (1986) Marxist terminology and Beller’s (2006) analysis, it could be argued that Google effectively manages to turn attention into a source of relative surplus value.<sup>12</sup>

These analyses, however, raise a series of methodological problems. Despite its enlightening contribution, Jhally and Livant’s use of Marx’s categories to examine the attention economy reproduces an obsolete concept of labour and thus an obsolete category of exploitation. The problem with the examples presented above is that they conceive attention as labour but fail to provide a satisfactory analysis of the transformations that labour itself has suffered in post-industrial societies. Jhally and Livant uncritically use an abstract notion of labour to explain how attention produces value, without acknowledging the fact that the attention economy emerges as a response to the historical transformations of labour caused by the crisis of industrial capitalism. In doing so, these authors remain hindered from addressing the question of the validity of Marx’s labour theory of value in a post-industrial context and fail to offer a critical consideration of the adequacy of Marx’s theory for the critique of the attention economy. Moreover, even though Jhally and Livant (1986, p. 136) attempt to historicise their critique of the attention economy by referring to Marx’s thesis concerning the ‘real subsumption of labour under capital’, they fail to acknowledge the historical limits of Marx’s

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<sup>12</sup> Something similar can be said about online (or internet) television services such as *Netflix* or *Amazon Instant Video*. Online television is usually defined as the online distribution of television content. However, these services provide a much wider range of tools for the analysis of consumption behaviour than those of traditional media. Instead of relying on “people meters”, pilot episodes, and focus groups, these websites use the data it has accumulated from its users’ consumption behaviour in order to predict the economic feasibility of future projects (and hence to turn television production into a more cost effective and profitable business). Through the use of algorithms, online television providers are effectively generating “relative surplus attention time” in which the attention of users operates immediately as valorising activity. For a critical analysis of the way in which *Netflix* uses algorithms to predict users’ preferences, see Hallinan and Striphas’ article “Recommended for You: The Netflix prize and the production of algorithmic culture” (2014).

own theory of value and the inadequacy of its understanding of exploitation for the phenomena that characterise this new productive context.

Furthermore, it could be said that Jhally and Livant's work repeats a classic methodological inaccuracy which typifies the vast majority of traditional western Marxism approaches, namely, the eternalisation of the category of labour as a standpoint external to history and from where the critique of capitalism is developed. As Moishe Postone suggests, traditional Marxism has systematically misread Marx's critical theory and hence established a critique of capitalism from the standpoint of labour as a transhistorical category, instead of developing a critique of labour as a category specific to the capitalist mode of production (TLD, p. 53). Although Jhally and Livant try to differentiate their critique from that of political economy, their analysis universalises a given notion of watching which supposedly exists independently of any specific mode of production, and from where a critique of the alienating character of the attention economy is then deployed.<sup>13</sup> In this sense, Jhally and Livant assume an external, transhistorical point of view which impedes them from developing an adequate analysis of the historical transformations of labour. Put differently, their critique of the attention economy lacks historical specificity, thus re-establishing a transcendental notion of labour through which capitalism is seen as an exploitative mode of production.

### 3. A REINTERPRETATION OF MARX'S CONCEPT OF LABOUR

The analysis of the attention economy from the standpoint of labour raises a fundamental problem in Marx's critique of capitalism. If the attention economy appears as an exploitative and alienating mechanism, then two questions arise: how can we evaluate and measure this exploitation? And what does it alienate us from? To address these questions, at least two methodological clarifications regarding Marx's notion of labour are necessary. The first one refers to the historicity of the category of labour. This includes not only acknowledging the fact that labour as the source of value is subject to historical transformations, but mainly

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<sup>13</sup> It is interesting to note that in this respect, the concept of attention in Jhally and Livant's (1986) account does not differ from the way in which political economy understands it. In their book on the attention economy, Davenport and Beck (2001) define attention in the following terms: "Attention is focused mental engagement on a particular item of information. Items come into our awareness, we attend to a particular item, and then we decide whether to act. Attention occurs between a relatively unconscious narrowing phase, in which we screen out most of the sensory inputs around us [...], and a decision phase, in which we decide to act on the attention-getting information. Without both phases, there is no attention" (2001, pp. 20-1). Like in Jhally and Livant's definition, Davenport and Beck also understand attention as a "human capacity for activity" which lies at the heart of its "value-producing character". This is a good example of how the interpretation of traditional Marxism reproduces the transhistorical concept of labour of political economy.

understanding that the conceptualisation of the category of labour as the source of value is itself only possible in a given historical context, namely, capitalism. This is important because it casts new light on the question of alienation: if the notion of abstract labour is itself the result of the capitalist mode of production, then how can labour be posed as an external standpoint from where to appraise the alienating nature of capitalism? Secondly, it is necessary to address the problem of the historicity of the value-labour relation which lies at the heart of Marx's labour theory of value. In other words, it is necessary to evaluate the historical limits of this theory and its validity for understanding how value and labour relate to each other under post-industrial conditions of production. This allows for a reconsideration of how the attention economy actually creates and exploits surplus value. In this respect, Marx's notion of relative surplus value appears as extremely useful since it explains the role played by technical transformations in the historical mutation of the value-labour relation.

This section uses Moishe Postone's (1993) reinterpretation of Marx's method in order to develop the first methodological clarification mentioned above. In general terms, Postone's work allows migrating from a critique of capitalism from the standpoint of a transhistorical notion of labour to a critique of labour as a historically specific, capitalist concept. This shift paves the way for examining, in chapter two, the attention economy in relation to the notion of relative surplus value and the specific transformations of labour put forth by post-industrial capitalism.

In his book, *Time, Labour and Social Domination*, Postone (1993) develops an important reinterpretation of Marx's thought which aims at showing the historical specificity of his social theory.<sup>14</sup> As Postone puts it, Marx's theory "should not be understood as a universally applicable theory but as a critical theory specific to capitalist society" (TLD, p. 5). Postone's work can be seen mainly as a methodological reflection regarding the category of labour in Marx's works and as a critique of the way this category has been misread by what Postone calls traditional Marxism. This methodological reinterpretation offers important insight for an immanent critique of the attention economy, since it allows locating attention as a specific form of labour within the historical context of post-industrial capitalism. More precisely, thanks to Postone's methodological contribution it is possible to challenge any critique of the attention economy which conceives attention from the perspective of alienated labour. It is in turn possible to propose an alternative analysis of the interrelation between the historical

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<sup>14</sup> For an extensive analysis of Postone's project, see the special issue of the journal *Historical Materialism* (2004, volume 12, issue 3) edited by Guido Starosta.

mutations of labour under post-industrial conditions of production and the emergence of attention as a new territory for the production and reproduction of surplus value. As will be shown, this interrelation plays a crucial role for a critique of the attention economy since it demands a new theoretical framework which can account for the obsolescence of Marx's labour theory of value and the simultaneous persistence of both the category of exchange-value and the social relations governed by this category.

Moishe Postone distinguishes between two ways of interpreting Marx's social critique: "a critique of capitalism *from the standpoint of* labour, on the one hand, and a critique *of* labour in capitalism, on the other" (TLD, p. 5). Postone suggests that what has been called traditional Marxism has systematically reproduced the first interpretation of Marx's critique of capitalism,

which is based upon a transhistorical understanding of labour [and which] presupposes that a structural tension exists between the aspects of social life that characterize capitalism (for example, the market and private property) and the social sphere constituted by labour. Labour, therefore, forms the basis of the critique of capitalism, the standpoint from which that critique is undertaken. (TLD, pp. 5-6)

Put differently, Postone's critique of traditional Marxism is mainly a critique of this transhistorical conception of labour.<sup>15</sup> Traditional Marxism, he suggests, grounds its critique of capitalism on the "centrality of labour to social life, which is generally considered to lie at the core of [Marx's] theory" (TLD, p. 4). Furthermore, Postone claims that traditional Marxism fails to differentiate accurately the transhistorical concept of labour in Marx's early writings from that presented in his mature economic works. As he puts it, "the meaning of the category of labour in [Marx's] mature works is different from what traditionally has been assumed: it is historically specific rather than transhistorical" (TLD, p. 4). Unlike the universal definition of labour as the essence of the human as a 'species-being' in the *1844 Economic and Philosophical Manuscripts* or as 'the first historical fact' in *The German Ideology*, "in Marx's mature critique, the notion that labour constitutes the social world and is the source of all wealth does not refer to society in general, but to capitalist, or modern, society alone" (TLD, p. 4).<sup>16</sup>

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<sup>15</sup> Postone defines traditional western Marxism not as a specific historical tendency in Marxism, but more generally "to all theoretical approaches that analyse capitalism from the standpoint of labour and characterize that society essentially in terms of class relations, structured by private ownership of the means of production and a market-regulated economy" (TLD, p. 7).

<sup>16</sup> In *The Human Condition*, Hanna Arendt points out the contradiction in Marx's attitude toward labour "which runs like a red thread through the whole of [his] thought, and is present no less in the third volume of *Capital* than in the writings of the young Marx" (1958, p. 104). According to Arendt (1958, p. 104), labour appears in Marx's thought as an "eternal necessity imposed by nature" (i.e. "the most human and productive of man's

In his *1844 Economic and Philosophical Manuscripts*, Marx claims that the merit of political economy is to have discovered labour as the subjective essence of wealth (1977, p. 89). Marx credits Adam Smith for this radical discovery, arguing that he was the first to break fully with the mercantile and physiocratic doctrines that tried to explain value based either on external wealth (belonging to the object itself) or on the productive character of land. According to Marx, Smith made a significant contribution to political economy by revealing that the sole source of wealth was “not a specific form of labour bound to a particular element – a particular expression of labour – but labour in general” (1977, p. 92). This discovery marks the beginning of a transhistorical understanding of labour, which political economy then projects back into the past, eternalising it as the universal truth of human nature and as the basis of all human social orders.

The problem with Marx’s 1844 manuscripts is that, despite his explicitly stated desire to break with political economy, his work does not fully overcome this transhistorical concept of labour. In the last section of the first manuscript, Marx develops his critique of political economy from the standpoint of estranged (alienated) labour. He argues that, unlike political economy, his analysis does not proceed by referring to a “fictitious primordial condition” as political economy does, but instead begins from the examination of a concrete, “actual economic fact” (1977, p. 67). This fact, he claims, is the phenomenon of the alienation of the worker under capitalist conditions of production. For Marx, alienation is a threefold phenomenon which occurs at the level of the object (the worker is alienated from the object of his or her labour), of the subject (the worker is alienated from his or her labour itself, which appears to him or her merely as a means for a salary) and of the species (the worker is alienated from his or her own human essence to transform nature through labour in order to produce his or her means of subsistence). Marx appeals to the concept of species-being in order to argue that the source of private property, and hence of the entire capitalist mode of production, is grounded in the alienation of labour (1977, pp. 72-75).<sup>17</sup> Accordingly, in the

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activities”), and at the same time as that of which man will be emancipated by revolution. This means that “we are left with the rather distressing alternative between productive slavery and unproductive freedom” (Arendt 1958, p. 105). From Postone’s (1993) perspective, however, Arendt fails to correctly distinguish between a transhistorical category of labour in Marx’s early writings and a mature use in which labour refers to a strictly capitalist category. By failing to provide this distinction, Arendt repeats the transhistorical reading of the category of labour in Marx that characterises traditional Marxism and that Postone (1993) denounces.

<sup>17</sup> Arthur Bradley (2011) suggests that because of its grounding on the notion of ‘species-being’, the concept of labour from the *1844 Manuscripts* refers to a metaphysical, transhistorical human essence. As Bradley puts it, it is through labour that man “actualises or externalises his own nature onto the organic world and recognizes himself within, and as, that world” (2011, p. 24). This transhistorical definition of man, Bradley adds, “is the basis of what the young Marx famously (or notoriously) calls human species-existence” (p. 24).

third manuscript Marx suggests that the goal of communism is to overcome the conditions that generate this alienation and therefore to achieve man's re-appropriation of his own species-being (1977, p. 96). As a result, it could be stated that Marx's critique of capitalism in the *1844 Manuscripts* is above all a critique of estranged labour. In this respect, Marx is committed to endorsing an external, transhistorical concept of labour (the essence of man as species-being) from where he proceeds to evaluate the contradictions of political economy and capitalism in general.<sup>18</sup>

According to Postone, most critical analyses of capitalism developed by traditional Marxism have reproduced this transhistorical understanding of labour, considering labour as "the principle of social constitution and the source of wealth in all societies" (TLD, p. 6).<sup>19</sup> In this sense, traditional Marxism poses labour as a universal human essence and then limits the critique of capitalism to the way in which it alienates this essence (this is why Postone claims that for traditional Marxism the problem of capitalism lies not in the way it produces value, but in how it distributes it). Put differently, Postone claims that traditional Marxism reads Marx using a transhistorical category of labour identical to that of political economy, hence limiting the critique of capitalism to a critique of the distribution of value (TLD, pp. 8-9).

This misreading of Marx's concept of labour identified by Postone can also be found in the critical discourse on the attention economy. For example, in Jonathan Beller's "attention theory of value" (2006), the attention economy is understood mainly as an "alienation of vision" which "is leading up to a generalized expropriation of attention" (2006, pp. 7-8).<sup>20</sup> To

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<sup>18</sup> The same could be argued regarding Marx and Engel's *The German Ideology* (written between 1845 and 1846). In this text, Marx and Engels argue that the first historical fact is man's transformation of nature through labour in order to produce and reproduce his means of subsistence. In *The German Ideology*, as in the *1844 Manuscripts*, there is a transhistorical notion of labour which operates as the material ground for historical movement. Marx and Engels argue that with the division of labour, which becomes fully constituted with the division between manual and mental labour, this first historical fact becomes alienated and an ideological relation to the world emerges. Again, it could be said that in *The German Ideology* the critique of capitalism (as the zenith of the division of labour) implies a transhistorical concept of labour. Contrary to this, the notion of praxis introduced in the *Theses on Feuerbach* defines labour as a "socially constitutive activity" which already grasps the historical specificity and social mediation of this activity (TLD, p. 220). For this reason, Postone argues that Marx's mature social theory in *Capital* is the categorical unfolding of the category of praxis first introduced in the *Theses on Feuerbach* (TLD, p. 219). For a similar analysis of the importance of the notion of praxis in Marx's oeuvre, see Althusser (2005) and Agamben (1993).

<sup>19</sup> Postone argues that traditional Marxism understands labour as "a purposive social activity involving the transformation of material in a determinate fashion which is an indispensable condition for the reproduction of human society" (TLD, p. 124). This definition, Postone adds, eternalises the concept of labour, reducing its historical transformation "to the modes of its social distribution and administration" (TLD, p.124).

<sup>20</sup> According to Jonathan Beller, the attention economy "represents a tendency towards increasingly abstract instances of the relationship between labour and capital, a new regime of the technological positioning of bodies for the purpose of value extraction [...] In other words, some people make a profit from other people's looking" (1994). Beller (2006) introduces the idea of an "attention theory of value" according to which, in contemporary capitalism, attention becomes a form of labour that functions as a new source of surplus value and thus as a new

sustain this claim, Beller explicitly refers to the notion of alienation in Marx's *1844 Economic and Philosophical Manuscripts*, arguing that "the separation and expropriation of labour from the labourer, is a precursor to the separation and expropriation of vision from the spectator" (2006, p. 8).<sup>21</sup> In other words, Beller establishes a direct connection between the capitalist alienation of labour and the alienation of vision put forth by the attention economy. By doing so, Beller reproduces the transhistorical concept of labour that the concept of alienation necessarily entails (alienation from a human essence).<sup>22</sup> This becomes clear in Beller's description of the specific process involved in the alienation of vision:

this alienation of vision, in which vision is captured to produce worlds that confront spectators as something hostile and alien, depends upon a kind of disembedding of the commons – the expropriation of a communal province (nature) that was heretofore and inalienable characteristic (possession) of humanity. (2006, p. 8)

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territory for capitalist exploitation. He writes: "what I call 'the attention theory of value' finds in the notion of 'labour', elaborated by Marx's labour theory of value, the prototype of the newest source of value production under capitalism today: value-producing human attention" (2006, p. 4).

<sup>21</sup> It is important to bear in mind that Beller (2006) locates the attention economy in a broader social context which he defines using Guy Debord's concept of society of spectacle (Debord 2006). From this perspective, when Beller claims that attention becomes a central form of labour in contemporary society, he is directly following Debord's thesis according to which the society of spectacle represents the complete subsumption of society under the commodity-form. According to Debord, the commodity-form implies an abstract, scopic relation to the world, to others, to the products of our labour and hence to labour itself (2006, p. 17). Therefore, the total subsumption of society to the commodity-form (the consummation of the spectacle) necessarily entails that "looking" becomes the central and dominant structure of labour.

<sup>22</sup> The same could be argued regarding both Nick Dyer-Witheford's (2009) and Fuchs and Sevignani's (2013) uses of Marx. Dyer-Witheford (2009, p. 484) uses Marx's concept of species-being to explain how the internet alienates and exploits labour in contemporary capitalism, and claims that although it was "long-eclipsed" the concept of species-being is nowadays "timely again". This "renewed interest" in the concept of species-being is the result, he states, of the emergence of digital technologies and the new stage of capitalist development that has accompanied these technologies (2009, p. 485). Dyer-Witheford (2009) falls back upon Marx's analysis of alienation from his *1844 Manuscripts* in order to argue that digital technologies exploit and alienate labour at a planetary level. Despite the author's efforts to contextualise his analysis within the transformations of labour put forth by post-Fordism (referring constantly to the work of Michael Hardt and Antonio Negri), his central hypothesis reproduces the misreading of Marx's critical theory denounced by Postone (1993). By bringing back the concept of species-being, Dyer-Witheford is unwillingly establishing a transhistorical concept of labour that he then uses to develop a "normative judgement" regarding the exploitative nature of capitalism and digital technologies (Dyer-Witheford and Fuchs 2012). Although Dyer-Witheford (2009) does not directly address the issue of the attention economy as part of his critique of the internet, his use of the notion of species-being as a resource to evaluate the exploitative nature of contemporary capitalism provides another example of a social critique developed from the standpoint of a transhistorical concept of labour. The same applies to Fuchs and Sevignani's (2013) attempt to distinguish between digital labour and digital work. According to these authors, the former represents a historical, capitalist, and hence alienated form of human activity, whereas the latter is a transhistorical character of human beings. By posing this distinction, Fuchs and Sevignani (2013, p. 237) believe that it is possible to distinguish between a non-alienated use of technology (in which human activity "with the help of the human brain, digital media and speech" creates new products) and an alienated use in which this work is conceived as valorising activity. For these authors, the attention economy would represent a form of digital labour, as opposed to other non-alienated forms of digital work. From Postone's (1993) perspective, Fuchs and Sevignani repeat the same methodological mistake as Dyer-Witheford, posing a transhistorical understanding of human activity as an external standpoint from where to assess the alienating character of capitalism in the digital age.

Just like the work of Jhally and Livant (1986), Beller's (2006) attention theory of value presupposes labour as an external standpoint from where to appraise the alienating and exploitative nature of the capitalist mode of production, thus ignoring the fact that both labour and attention are historical categories determined by the transformation of the modes of production. In Beller's reading of Marx, labour is presented as the universal force behind any social constitution: "it takes labour to build a world – the labour of the masses", he claims (2006, p. 66), adding that what characterises the attention economy is that this labour becomes exploited "through a visual pathway" (p. 66). Hence the attention economy is explained mainly as a process of alienation of the labourers' sensual labour, an alienation of their human senses.<sup>23</sup>

The example of Beller's attention theory of value helps identify (in the specific context of the critical discourse on the attention economy) what Postone believes to be the central flaw of traditional Marxism, that is, the eternalisation of a transhistorical notion of labour which reproduces the methodological limitations of political economy. For Postone, "the *essential* difference between Marx's critique of political economy and classical political economy is precisely the treatment of labour" (TLD, p. 54). In this respect, Postone claims that Marx's theory "proposes that what uniquely characterizes capitalism is precisely that its basic social relations are constituted by labour and, hence, ultimately are of a fundamentally different sort than those that characterize non capitalist societies" (TLD, p. 6). Postone calls for a critique of labour specific to capitalism: since "labour in capitalism is historically specific and constitutes the essential structures of that society", labour must be "the *object* of the critique of capitalist society" (TLD, p. 6).

To better understand Postone's reinterpretation of Marx's social theory, it is useful to examine *Notebook M* of the *Grundrisse*, also known as the *1857 Introduction*. In this text, Marx explicitly examines the historicity of his analysis of capitalism. To do so, he uses the specific example of labour. "Labour", he says,

seems a quite simple category. The conception of labour in this general form – as labour as such – is also immeasurably old. Nevertheless, when it is economically conceived in this simplicity, 'labour' is as modern a category as are the relations which create this simple abstraction. (G, p. 103)

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<sup>23</sup> This point reinforces the connection between Beller's (2006) critique of the attention economy and the notion of alienation in Marx's 1844 manuscripts. In the latter, Marx defines human senses as the historical result of labour which private property alienates under the empire of "having" (1977, p. 101). For this reason, Marx writes that "the abolition of private is therefore the complete emancipation of all human senses and qualities" (1977, p. 101). The fact that, for Beller, the attention economy implies an alienation of our senses means that there must be a transhistorical notion of labour which defines these senses as "humans" in the first place.



Following what he had already stated in the *1844 Manuscripts*, Marx refers to the importance of Adam Smith's discovery of labour as the sole source of wealth. He writes: "it was an immense step forward for Adam Smith to throw out every limiting specification of wealth-creating activity – not only manufacturing, or commercial or agricultural labour, but one as well as the others, labour in general" (G, p. 104). This discovery, Marx suggests, given its abstract character, provides an insight "into the structure and the relations of production of all the vanished social formations out of whose ruins and elements it builds itself up" (G, p. 105). Nevertheless, and this is the crucial point, Marx suggests that the historical specificity of the abstract notion of labour also limits its validity for social critique. As Marx puts it,

the example of labour shows strikingly how even the most abstract categories, despite their validity – precisely because of their abstractness – for all epochs, are nevertheless, in the specific character of this abstraction, themselves likewise a product of historic relations, and possess their full validity only for and within these relations. (G, p. 105)

Marx argues that even though the concept of abstract labour discovered by political economy, given precisely its abstract character, appears as a transhistorical category, we must not forget that its validity is limited to the specific context which provides the historical conditions for its conceptualisation. In Postone's words,

Marx's analysis does not refer to labour as it is generally and transhistorically conceived – a goal directed social activity that mediates between humans and nature, creating specific products in order to satisfy determinate human needs – but to a peculiar role that labour plays in capitalist society alone. (TLD, pp. 4-5)

Unlike his early works, Marx's *1857 Introduction* does not pose labour as a universal, transhistorical human activity which becomes alienated when subjected to capitalist forms of production. Instead, Marx becomes aware of the fact that labour is a strictly capitalist category which refers to a specific form of human activity subjected to an abstract measure of value.<sup>24</sup> Furthermore, Marx notes that the abstract category of labour is conceptually possible

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<sup>24</sup> According to Postone, in Marx's social theory the category of value constitutes the foundation of capitalist production (TLD, p. 24). The singularity of the category of value is that it "expresses both a determinate form of social relations and a particular form of wealth" (TLD, p. 24). Postone points out that Marx distinguishes between wealth and value (TLD, p. 25). This distinction, he claims "is crucial to [...] understanding Marx's theory of value and his notion of the basic contradiction of capitalist society. It clearly indicates that value does not refer to wealth in general, but is a historically specific and transitory category that purportedly grasps the foundation of capitalist society" (TLD, p. 25). From this perspective, value appears as a "historically specific form of social wealth [...] intrinsically related to a historically specific mode of production" (TLD, p. 25). Moreover, what characterises value as a historically specific form of wealth is "that it is constituted by the expenditure of direct human labour in the process of production, it remains bound to such expenditure as the determining factor in the production of wealth, and it possesses a temporal dimension. Value is a social form that expresses, and is based on, the expenditure of direct labour time" (TLD, p. 25). For this reason, Postone claims that Marx's labour theory of value "is not a theory of the unique properties of labour in general, but is an analysis of the historical specificity of value as a form of wealth, and of the labour that supposedly constitutes it" (TLD, p. 26). All of this entails that the relation between labour and value has to be examined from the

only because an abstract notion of value has become the sole measure of human activity. This indicates that the notion of abstract labour (as a transhistorical source of value) is valid only within the historical context of capitalism (in which human activity and human relations are reduced to an abstract, single system of measure).<sup>25</sup> For Marx, the limit of political economy is that it projects the abstract category of labour onto non-capitalist societies, concealing its historical specificity and eternalising the social relations that it attempts to deconstruct. Accordingly, Postone claims that the methodological error of traditional Marxism is to reproduce the naturalisation of the category of labour and to limit the critique of capitalism to the transhistorical standpoint of labour. Instead, Postone calls for a historically specific critique of the notion of labour which unveils the underlying abstract social relations and their objectified modes of domination.<sup>26</sup>

In accordance to this, an immanent critique of the attention economy should not conceptualise attention as a new form of alienation (as Jhally and Livant [1986] and Beller [2006] do), but as a historically specific form of labour which responds to the particular demands of post-industrial capitalism. Put differently, Postone's reinterpretation of Marx can be used to show that the attention economy does not entail a form of labour in general, but a historically specific form of labour which emerges in response to the transformations of the value-labour relation that characterise post-industrial societies. As such, an immanent critique of the attention economy demands a theoretical framework capable of addressing the particularities of the new mechanisms of production and exploitation of value.

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historical perspective of the continuous transformations of the capitalist mode of production and of the development of its productive powers.

<sup>25</sup> From this perspective, it could be said that Marx's method implies an epistemological novelty which lies at the heart of his break with political economy. Put differently, Marx's theory appears as a self-reflexive methodology which is aware of its own historicity. As Postone puts it, Marx's "analysis of the relation of theory and society is such that it can, in an epistemologically consistent manner, locate itself historically by means of the same categories with which it analyses its social context" (TLD, p. 5).

<sup>26</sup> For Postone, relations of domination in capitalist societies do not consist in "the domination of people by other people", but rather in "the domination of people by abstract social structures that people themselves constitute" (TLD, p. 30). Marx's mature critical theory allows both acknowledging this form of domination and unveiling the abstract relations that constitute it.

## CHAPTER TWO

### VALORISING INFORMATION, VALORISING ATTENTION

The previous chapter examined the attention economy from the standpoint of labour. It showed how, according to a certain Marxist discourse, attention can be conceived of as a new form of capitalist alienation and exploitation. At the same time, it introduced a methodological reflection regarding the historicity of labour in order to argue that labour is a strictly capitalist category and that, as such, it must be understood in relation to another strictly capitalist category, value. Briefly, value can be conceived of as the capitalist representation of labour, and labour can be defined as human activity which is both founded on and measured through abstract value. This tautological relation between labour and value portrays them as two sides of the same coin, demanding that any critical inquiry into labour becomes also a critical inquiry into the notion of value. Chapter one concluded that the attention economy should not be critiqued from the transcendental standpoint of the alienation of labour, but rather from the immanent terrain of the historical transformations of the labour-value relation. Consequently, this chapter analyses the attention economy as a concrete response to the specific changes in the way in which surplus value is produced and exploited in post-industrial societies.

Strictly speaking, according to Marx's labour theory of value, living labour alone is responsible for the production of value.<sup>1</sup> Machines, on the contrary, create no value; their only economic function is to reduce the amount of necessary labour time required to produce

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<sup>1</sup> This principle is extremely problematic and has become one of the most contested ideas in the different readings not only of Marx's labour theory of value, but of his oeuvre as a whole. For some authors, Marx's labour theory of value (and thus his critique of capitalism) cannot be understood without this principle (see for example Caffentzis 1997 and Heinrich 2012). For others, Marx's labour theory of value should be understood as historically limited to the age of industrial capitalism, which in turn demands a reinterpretation of his critique of capitalism capable of explaining the transformations of labour put forth by post-industrialism (see for example Negri 1991 and 1996, Hardt and Negri 2008, and Vercellone 2007).

each commodity and hence increase the portion of surplus value appropriated by the capitalist (C, p. 438; G, p. 701). Accordingly, technological development in the field of communications and transportation create no value either, but merely accelerates the circulation time of commodities, thus shortening the time between the production of surplus value in the labour process and its realisation in the market (C, p. 266; Marx 1992, p. 327). It is useful to note that Marx's analysis of machines is mainly influenced by two theories of machines: a theory of simple mechanic machines and a theory of heat engines and thermodynamics (Caffentzis 1997, p. 32).<sup>2</sup> According to the first definition, a machine consists of three parts: "the motor mechanism, the transmitting mechanism, and finally the tool or working machine" (C, p. 494). From this perspective, the machine "is a mechanism that, after being set in motion, performs with its tools the same operations as the worker formerly did with similar tools" (C, p. 495). In this regard, a machine replaces a fragment of an already simplified labour process, rendering the worker redundant. As such, the development of a given machine is the direct consequence of the division of labour within the workshop.<sup>3</sup> In Marx's work, this definition of machinery is combined with a second concept based on the novel (at the time) theory of thermodynamics. Following this theory, Marx interpreted the labour process in terms of inputs and outputs of energy, which means that the relation between labour and value is one of transmission of energy between living labour and objectified value. By combining these two general theories, Marx defined a machine as objectified labour (fixed capital) which despite replacing a fragment of living labour in the production process, could not in itself generate new energy (value) but only transfer the already objectified value to the commodities it produced (Caffentzis 1997, p. 38).

The contention that machines generate no value leads Marx to identify a paradoxical tendency in capitalism: on the one hand, capitalism tries to replace living labour with machines in order to reduce costs and increase profit; on the other, however, each fragment of the productive process that is replaced with machines ceases to generate surplus value (since, according to Marx's labour theory of value, surplus value is produced only by exploiting

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<sup>2</sup> For an analysis of how these two different scientific theories influenced Marx's understanding of the relation between labour and value, see Mirowski's book *More Heat than Light* (1989, pp. 174-185).

<sup>3</sup> This relation between machinery and division of labour is developed extensively by Marx in his book *The Poverty of Philosophy* (1995). In this book, Marx challenges Proudhon's theory according to which machinery represents the antithesis of the division of labour (1995, p. 150). On the contrary, Marx argues that a machine is the putting in motion of the instruments of labour (already separated by the division of labour within the workshop) by the employment of natural forces (1995, p. 151). Marx quotes Babbage's explanation of how the division of labour provides the material ground for any machine: "when, by the division of labour, each particular operation has been simplified to the use of a single instrument, the linking up of all these instruments, set in motion by a single engine, constitutes a machine" (Babbage, quoted in Marx 1995, p. 151).

living labour), thus decreasing the total rate of profit and demanding the constant counteraction of capital.<sup>4</sup> In volume three of *Capital*, Marx suggests that one way in which capitalists counteract this tendency is by investing an even larger amount of surplus value in acquiring more technology, hoping this will increase productivity and with it also the return of profit (Marx 1991, p. 343). The result of this, however, is that the ratio between living labour and productivity keeps decreasing, causing, in Marx's prediction, an unavoidable crisis (1991, p. 375). It could be argued that post-Fordism realises Marx's prediction, since it emerges out of the internal limits of the development of industrial production. Nevertheless, contrary to what Marx presupposed, the crisis of industrial capitalism did not bring forward the end of capitalist society or the end of the rule of the value-form. Instead, it resulted in the radical transformation of the direct production process, involving, among other significant social changes, the emergence of cybernetic machines and immaterial labour.<sup>5</sup> Put differently, it could be said that the internal contradictions of capital (which demand its constant expansion) lead to the historical crisis of industrial capitalism, the advent of a post-industrial mode of production, and the integration of cybernetic machines as active elements of the productive process.

In this emerging context, the growing importance of knowledge and information demands a reinterpretation of the basic principles behind Marx's labour theory of value. In particular, a series of questions arises: does post-industrial capitalism represent a mere quantitative transformation in which the capitalist process of valorisation of modern industry is simply intensified? Or is there a qualitative break, a complete reorganisation of the productive process? Can Marx's labour theory of value still be deployed as a conceptual framework to explain the exploitation of labour under these new conditions of production? If not, does it mean that Marx's critique of capitalism as a whole has to be discarded together with his labour theory of value?

This chapter contends that it is only through the analysis of these specific questions that the problem of value in the attention economy can be addressed. Chapter one pointed out that the

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<sup>4</sup> This paradox is the basic principle behind the law of the tendency of the rate of profit to fall introduced by Marx in chapter thirteen of *Capital*, volume III (1991, pp. 317-338). For Marx, there are counteracting influences at work which keep this tendency from becoming a law of capitalist development (1991, p. 339). These include: the intensification of the exploitation of labour, the reduction of wages below their value, the cheapening of the elements of constant capital, the creation of a relative surplus population, foreign trade, and the increase in share capital (Marx 1991, pp. 339-348).

<sup>5</sup> For a further analysis on how post-Fordism counteracts the contradictory tendencies of industrial capitalism (and thus turns Marx's predictions into a reality not of revolution but of an intensified form of capitalist exploitation), see Virno (2007).

attention economy is a phenomenon that emerges as a consequence of the productive transformations put forth by the crisis of industrial societies and the rise of post-industrial capitalism. More specifically, chapter one argued that the appearance of attention as object of economic considerations had to be understood in proportional relation to the growing importance that knowledge and information acquire in this emerging productive arena. The more information becomes a central aspect of production, the more pressing the topic of attention becomes. This chapter continues the analysis of the attention economy from chapter one by addressing the specific question of the role of knowledge and information technologies as active agents of the valorisation process of capital.

It is important to note that there are at least three different interpretations of the relation between labour and value in post-industrial capitalism. First, neoliberal political economy introduces the notion of ‘knowledge-based economy’ in order to highlight the active role of knowledge and information in contemporary societies.<sup>6</sup> As mentioned in the introduction, the problem with this interpretation is that it takes into account “neither the antagonism between capital and labour nor the conflicts between knowledge and power investing the transformations of the division of labour” (Vercellone 2005, p. 2). In other words, neoliberal theories of knowledge economy exclude from the analysis of contemporary capitalism any reference to the asymmetric power relations that confront labour and technology and through which the dominant relations of production are reproduced.

Second, there are certain Marxist authors that claim that, despite all the technological transformations of production throughout the twentieth century, Marx’s labour theory of value is still the most solid conceptual apparatus within which to develop a contemporary critique of capitalism.<sup>7</sup> Since contemporary production is still dominated by the exploitation of surplus value, these authors claim that a Marxist critique of capitalism cannot be separated from Marx’s labour theory of value. The problem with this interpretation is that, on the one hand, it fails to offer a satisfactory explanation of the role of technology in the current exploitation of labour, and on the other, that it has to rely on a transhistorical definition of the

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<sup>6</sup> In chapter one it was mentioned that the notion of attention economy (Simon 1969) was coined as a response to the idea of a knowledge-based economy. It was also mentioned that the term ‘knowledge economy’ was first introduced by Fritz Machlup (1962) and later popularised by Peter Drucker (1969). According to the latter, in contemporary capitalism knowledge and information emerge as the new foundations of labour and productivity (1969, p. 247).

<sup>7</sup> Some of the authors that explicitly assume this position are George Caffentzis (1997), Peter Osborne (2008) and Michael Heinrich (2012).

labour-value relation in order to explain the transhistorical validity of Marx's labour theory of value.<sup>8</sup>

Third, a group of Italian post-Marxist authors argue that post-industrial capitalism (or post-Fordism as they call it) represents a radical break with previous forms of capitalist exploitation, rendering Marx's labour theory of value obsolete.<sup>9</sup> From this perspective, Marx's critique of capitalism must be updated for the productive scenario of the late twentieth century. For that, the labour theory of value must be understood in its historical specificity. Through concepts such as valorising information (Alquati 1962-3), social factory (Tronti 1966), socialised worker (Negri 2005), immaterial labour (Lazzarato 1996) and cognitive capitalism (Vercellone 2005), Italian post-Marxism has tried to define the most significant traits of post-industrial capitalism and to reinterpret Marx's critique of capitalism from a standpoint beyond Marx's labour theory of value.<sup>10</sup> For these authors, the key elements for a reinterpretation of Marx's critique of capitalism are to be found in Marx's 1857-1859 manuscripts, usually referred to as the *Grundrisse*. Of particular importance are the section in Notebook VII known as the 'Fragment on Machines' and the concept of 'general intellect' which Marx introduced in this notebook but never returned to (G, p. 706).

This chapter follows the interpretation of Marx developed by some of these Italian post-Marxist authors in order to examine the attention economy as a strictly post-industrial phenomenon. The analysis of the attention economy requires understanding the passage from industrial to post-industrial capitalism as a qualitative break. This means that information and

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<sup>8</sup> According to Caffentzis (1997), for example, the reason why machines, unlike labour, cannot create value is the negative capability of labour itself, "its capacity to refuse to be labour" (p. 54). Based on the Hegelian dialectic of master and slave, Caffentzis claims that "as long as it can be refused, as long as the transformation of labour power into labour is self-reflexively non-deterministic, then it can create value in its actualisation" (p. 55). In a similar way, Osborne (2008) develops a Heideggerian interpretation of Marx's labour theory of value according to which it is human finitude that makes our activity a source of value (p. 20). Put differently, labour is valuable strictly because we only have a finite amount of it. The problem is that in both of these examples there is a trans-historical explanation of labour as an intrinsic source of value. Following Postone's (1993) interpretation of Marx from chapter one, it can be said that the arguments of both Caffentzis (1997) and Osborne (2008) universalise a specific concept of labour. In this sense, their critique of capitalism uses this universal notion of labour as an external standpoint from where to assess its alienating and exploitative character.

<sup>9</sup> The term 'Italian post-Marxism' is used here to refer to the specific interpretation of Marx that came out of the so-called Italian *Operaismo* (through the journals *Quaderni Rossi* and *Potere Operaio*), which then turned into Italian Autonomist Marxism (the school of Padova, represented mainly by Antonio Negri), and which later was responsible for the theories of immaterial labour (Lazzarato), cognitive capitalism (Vercellone), and affective capitalism (Negri and Hardt), among others. For the sake of clarity, when referring to Mario Tronti and Romano Alquati, the terms *Operaismo* (or Workerism) will be used; and when referring to Antonio Negri, the term *Autonomia* (or Autonomist Marxism) will be preferred. All other Italian authors will be referred to as Italian post-Marxists. For a history of Italian post-Marxism, see Steve Wright's (2002) *Storming Heaven*.

<sup>10</sup> In a series of lectures given in 1978 in France, Antonio Negri introduces the idea of a Marx beyond Marx. In general terms, this means a Marxist critique of contemporary capitalism capable of explaining the power relations involved in the production of surplus value that does not rely on Marx's own labour theory of value (1991, p. 14).

knowledge become active elements in the valorisation process of capital. The approach developed by Italian post-Marxism allows for historicising the labour-value relation, understanding the new productive landscape as a result of the capital-labour struggle, without naturalising a trans-historical notion of labour.<sup>11</sup> In particular, this chapter focuses on the notions of valorising information (Alquati 1962; 1963) and immaterial labour (Lazzarato 1996), and tries to show how these notions contribute to further the analysis of the attention economy from an immanent perspective. The last section of this chapter returns to the question regarding the validity of Marx's labour theory of value. Following Negri's (1996; 2005; 2008) hypothesis, the chapter concludes by arguing that despite the obsolescence of Marx's labour theory of value, labour remains a core aspect of the forms of social constitution and social domination that characterise contemporary capitalism. This distinction between the validity of Marx's labour theory of value and the concrete function of labour in contemporary society triggers a series of questions regarding the temporality of labour in post-industrial capitalism and its role as a power mechanism. These questions will be developed in the remaining three chapters through the analysis of the attention economy.

## 1. THE NOTION OF VALORISING INFORMATION

Probably the first attempt in the Italian *Operaismo* to examine how information technologies were changing the productive arena is Romano Alquati's investigation into the Olivetti factory in Ivrea, Italy. During 1960 and 1961, Alquati conducted an empirical study of the way in which emerging information technologies were changing the productive process. His research was motivated by the assumption that the contradictions triggered by the transformations of the productive process represented a new stage in the development of advance capitalism (Alquati 1962, p. 65). According to Matteo Pasquinelli (2014),

Alquati interviewed the workers of the Olivetti computer factory, intrigued by the new cognitive dimension of labour in that new environment: he discovered then the category of

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<sup>11</sup> According to Antonio Negri (2008, p. 35), this immanent (endogenous) methodology that defines Italian post-Marxism derives from Italian *Operaismo*, in particular from the work of Mario Tronti in *Operai e Capitale* (1966) and his idea of an "autonomy of the working class". This idea, which "led to conceptualisations which ran directly counter to the causal determinism of classical Marxist dogma", was part of the "cultural ethos" of the 1960s (Negri 2008, p. 36). Accordingly, Jason Smith (2009, p. 14) suggests that Italian post-Marxism is "founded on three imbricated theoretical breakthroughs: the axiom asserting the primacy of worker's struggles in the development of capital, the study of the changing composition of the working class as the key for deciphering novel forms of political organization and action, and Marx's description (in the *Grundrisse*) of the emergence of the 'general intellect' as a form of worker power that threatens to destroy the bases for organizing production to extort surplus-value".



‘information’ as a new mediator between the traditional Marxist categories of variable capital and fixed capital, that is, between the categories of living labour and machinery. (p. 6)

Alquati published the results of his work in *Quaderni Rossi* (the founding journal of the Italian *Operaismo*) in 1962 and 1963, under the title “Organic composition of capital and labour power in the Olivetti factory” (“*Composizione organica del capitale e forza-lavoro alla Olivetti*”). One of the main contributions of Alquati’s text is that it offers a reinterpretation of Marx’s analysis of the organic composition of capital based on a novel understanding of the role of information within the productive process. For Alquati, Marx’s analysis of the organic composition of capital (composed of fixed and variable capital, and in which only living labour appears as the true source of surplus value) was incapable of correctly explaining the valorisation process taking place at the Olivetti factory. As mentioned above, Marx’s definition of machines is limited to theories of simple and thermodynamic machines. Therefore, it was impossible for him to think of information as an active element within the valorisation process. In his analysis, Alquati introduced the notion of valorising information (*informazioni valorizzanti*) in order to bridge Marx’s analysis of the organic composition of capital to the new forms of labour that he witnessed at the Olivetti factory (Alquati 1963, p. 122). This notion is extremely important for an analysis of the historical transformations of the labour-value relation and hence for a critique of the attention economy. Roughly said, it is only because information appears as an active agent within the valorisation process that attention becomes an economic territory. Therefore, to understand how attention can become a source of value, it is necessary to first examine the way in which information and knowledge become themselves active mechanisms of the valorisation of capital.

As Alquati notes, the concept of valorising information has to be understood in relation to Marx’s notions of valorisation and productive labour (1963, pp. 121-122). The latter refers to the fact that under capitalist conditions of production, labour is productive only as long as it produces surplus value, while the former defines the reproduction process through which capital generates more capital by appropriating the surplus value generated by productive labour (C, p. 644). Marx explains the relation between these concepts as follows:

Capitalist production is not merely the production of commodities, it is, by its very essence, the production of surplus-value. The worker produces not for himself, but for capital. It is no longer sufficient, therefore, for him simply to produce. He must produce surplus-value. The only worker who is productive is one who produces surplus-value for the capitalist, or in other words contributes towards the self-valorisation of capital. (C, p. 644)

This reference to Marx means that Alquati's question about the productive character of information in the Olivetti factory refers not to how information affects the production of commodities, but to the way in which information directly contributes to the production of surplus value and hence to the self-valorisation of capital. For Marx, the cycle of valorisation of capital is composed of productive and circulation processes that endlessly repeat themselves. Surplus value, Marx argues, is only produced in the circuit of production, meaning that circulation proper appears only as a mediating phase in which the surplus value objectified in the commodity is realised as profit (Marx 1992, p. 203). At the same time, Marx states that the rate of profit is directly determined by the organic composition of capital involved in the valorisation process (Marx 1991, p. 241). Therefore, Alquati argues, to understand how information has become productive of surplus value, it is necessary to examine the historical transformations of the organic composition of capital (Alquati 1963, p. 123).

### 1.1. THE TECHNICAL AND ORGANIC COMPOSITION OF CAPITAL

According to Marx, capitalism's productive process is composed of fixed and variable capital (1991, p. 244). The former refers to the means of production (objectified labour) whereas the latter includes both the material of labour (raw materials) and living labour itself (which from the perspective of capital is just one more variable cost within the productive process). The ratio between fixed and variable capital defines the organic composition of capital. At the same time, this ratio is determined by (and reflects) the technical composition of capital. Marx defines the latter term as the technical conditions that express a given stage of development of productivity:

A certain quantity of labour power, represented by a certain number of workers, is required to produce a certain volume of products in a day, for example, and this involves putting a certain definite mass of means of production in motion and consuming them productively – machines, raw materials, etc. A definite number of workers corresponds to a definite quantity of means of production, and thus a definite amount of living labour to a definite amount of labour already objectified in means of production [...] This proportion constitutes the technical composition of capital and is the actual basis of its organic composition. (Marx 1991, p. 244)

According to this definition, the technical composition of capital refers to the ratio between living labour and objectified labour (i.e. living labour that has been reified as means of production). This technical composition is determined by the historical transformations of the productive powers which constantly modify the average of necessary labour required for the

production of a given commodity. The organic composition of capital, on the other hand, is the ratio between living labour and objectified labour from the perspective of value, that is, the ratio between fixed capital and variable capital. Since the organic composition of capital is determined and reflects its technical composition, it is correct to say that the organic composition of capital is also subject to historical transformation. In this sense, the ratio between fixed and variable capital – and the specific role that technology plays for the valorisation process – has to be understood in its historical specificity.

In an unpublished section of the first volume of *Capital*, Marx argues that the first stage of capitalist development is the stage of formal subsumption of labour under capital (C, p. 1019).<sup>12</sup> By subsumption, Marx refers to the subordination of a labour process under the wage system. Subsumed labour means labour which is directed, organized and controlled by capital. Marx explains that, in capitalism, “the labour process becomes the instrument of the valorisation process – the process of the creation of surplus value” (C, p. 1019). This means that “the labour process is subsumed under capital [...] and the capitalist intervenes in the process as its director” (C, p. 1019). Furthermore, Marx suggests that formal subsumption does not imply a “fundamental modification” of the nature of the labour process, but rather that “capital subsumes the labour process as it finds it” (C, p. 1021).<sup>13</sup>

From the perspective of the organic composition of capital, in the stage of formal subsumption, the productive process is “simply included within capital” (G, p. 691). This means that capital simply takes over a given productive process, with a given technical composition, without changing the ratio between its elements. In this sense, the productive process appears as the ensemble between material of labour (the raw materials that enter the productive process), means of labour (the tools and instruments of production) and living labour (the actual labour that uses the means of labour to give a specific form to the material

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<sup>12</sup> This argument belongs to the unpublished chapter of the first volume of *Capital* known as *Results of the Direct Production Process*. In this text, Marx introduces the notions of formal and real subsumption of labour under capital to explain the historical transformations of the valorisation process. Nicholas Thoburn (2001) notes that this chapter is known as the “missing sixth chapter to *Capital*” (p. 77). He claims that, although it was first published in 1933 in German and Russian, it only “took on particular importance – especially for the Italian and French extra-parliamentary communists – when it was republished in other European languages in the late sixties” (2001, p. 92). All the references to this text used in here are taken from the appendix to the English edition of *Capital*, volume 1 (1976, pp. 943-1084).

<sup>13</sup> Marx writes that in formal subsumption, capital takes over an “available, established labour process” (C, p. 1021). For example, he writes, “handicraft, a mode of agriculture corresponding to a small, independent peasant economy. If changes occur in these traditional established *labour processes* after their takeover by capital, these are nothing but the gradual consequence of that subsumption. The work may become more intensive, its duration may be extended, it may become more continuous or orderly under the eye of the interested capitalist, but in themselves these changes do not affect the character of the actual labour process, the actual mode of working” (C, p. 1021).

of labour) (G, p. 691). In the stage of formal subsumption, capital takes over this threefold productive process and, although it begins to act as its director, the organic composition between its parts remains unchanged. As Marx puts it, “as long as the means of labour remains as means of labour in the proper sense of the term, such as it is directly, historically, adopted by capital [...] it undergoes a merely formal modification” (G, p. 692). In formal subsumption, the productive process does not suffer a material transformation but only a formal one. This means that from the standpoint of the capitalist, the means of labour appear now as fixed capital, while both the material of labour and living labour become one, represented as variable capital.

In terms of the production of surplus value, the stage of formal subsumption is rather straightforward. According to Marx’s definition presented in chapter one, surplus value is the result of the quantitative difference between the value produced by a worker’s labour process and the value of this worker’s labour power, his salary. In simple terms, surplus value is the difference between the value that a worker produces during a working-day and the wage he receives for that day. Conceived in this way, the working-day can be divided in two parts: necessary labour time, in which the worker produces the value equivalent to his wage, and surplus labour time, in which the worker is strictly producing profit for the capitalist. In formal subsumption, capital takes over a non-capitalist productive process and subsumes it under the formal figure of the wage system. The capitalist pays a worker to produce a particular commodity and then sells that commodity in the market for a higher price than the one paid for the labour necessary to produce it. Since the productive process itself has not been modified, in formal subsumption surplus value can only be increased by prolonging the labour process beyond the necessary time to reproduce labour power. Marx calls this absolute surplus value (C, p. 432).<sup>14</sup> In this regard, formal subsumption should not be thought of merely as a historical phase in the development of capitalism, but as a specific way of producing surplus value. Put differently, there is formal subsumption whenever the valorisation process of capital limits itself to the extraction of absolute surplus value; that means, when capital takes over a non-capitalist productive process and extends labour time beyond the necessary time for its reproduction in order to generate profit.

According to Hardt and Negri (2000), “Marx uses the term formal subsumption to name processes whereby capital incorporates under its own relations of production labouring

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<sup>14</sup> In formal subsumption, Marx writes, “surplus value can be created only by lengthening the working day, i.e. by increasing *absolute surplus value*. In the *formal* subsumption of labour under capital, this is the sole manner of producing surplus value” (C, p. 1021).

practices that originated outside its domain” (p. 255). In this sense, they argue, formal subsumption operates by constantly colonizing new territories and subordinating them to the wage system that defines it. In other words, the logic of formal subsumption is mainly extensive. At a certain point, however, “as capitalist expansion reaches its limit, the processes of formal subsumption can no longer play a central role” (Hardt and Negri 2000, p. 255). This external limit to formal subsumption forces capital to find new ways of growth which do not involve quantitative expansion, but a qualitative reshaping of the productive process.<sup>15</sup> Marx calls this the real subsumption of labour under capital (C, p. 1035). While formal subsumption refers to the form of capitalist production in which non-capitalist manufacturing processes are subsumed under the wage system, in real subsumption the productive process is transformed, and technological progress is deployed in order to increase productivity.<sup>16</sup> In real subsumption, Marx argues, “the *social forces of production* of labour are now developed, and with large-scale production, comes the direct application of science and technology” (C, p. 1035). For Marx, real subsumption is the specific mode of production of capitalist societies, which instead of colonizing non-capitalist forms of labour under the wage-system, completely reshapes labour in order to increase the production of surplus value. According to Hardt and Negri, in real subsumption “capital no longer looks outside but rather inside its domain, and its expansion is thus intensive rather than extensive. This passage centers on a qualitative leap in the technological organization of capital” (2000, p. 272). The consequence of this transformation, they add, is that “the integration of labour into capital becomes more intensive than extensive and society is even more completely fashioned by capital” (Hardt and Negri 2000, p. 255).

From the standpoint of the organic composition of capital, the real subsumption of labour under capital represents a drastic reorganisation of its elements. Marx argues that in real subsumption, with the technical evolution of the productive process,

the means of labour passes through different metamorphoses, whose culmination is the machine, or rather, an automatic system of machinery [...] set in motion by an automaton, a moving power that moves itself; this automaton consisting of numerous mechanical and

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<sup>15</sup> Marx describes capital’s need to shift from formal to real subsumption in the following way: “When surplus-value has to be produced by the conversion of necessary labour into surplus value, it by no means suffices for capital to take over the labour process in the form under which it has been historically handed down, and then simply to prolong the duration of that process. The technical and social conditions, and consequently the very mode of production must be revolutionised, before the productiveness of labour can be increased” (C, p. 432).

<sup>16</sup> With the real subsumption of labour, Marx writes, “a complete (and constantly repeated) revolution takes place in the mode of production, in the productivity of the workers and in the relations between workers and capitalists” (C, p. 1035).

intellectual organs, so that the workers themselves are cast merely as its conscious linkages (G, p. 692).

In formal subsumption, the distinction between material of labour, means of labour and living labour allowed distinguishing between the labourer and the instrument, which the labourer “animated and made into his organ with his skill and strength, and whose handling therefore depended on his virtuosity” (G, p. 693). With the development of machinery, instead, labour is reduced to the supervision of machines in order to guard them from interruption: “labour appears merely as a conscious organ, scattered among the individual living workers at numerous points of the mechanical system; subsumed under the total process of the machinery itself” (G, p. 693). This generates an inversion in the technical composition of capital between means of labour and living labour: fixed capital, in the form of machines, becomes the ruling power of the productive process, while rendering living labour as its mere subordinate, its appendage (C, p. 548; C, p. 614).<sup>17</sup>

From the perspective of value, modern industry generates surplus value not through the extension of the working-day, but rather by decreasing the necessary labour required to produce each commodity. Marx calls this relative surplus value, which he defines as the strictly capitalist mode of valorisation, the “material expression” of the real subsumption of labour under capital (C, p. 1025). Unlike absolute surplus value (based strictly on an extensive increase of labour time), relative surplus value is based on the reduction of necessary labour time by integrating labour together with scientific knowledge, machinery and social cooperation.<sup>18</sup>

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<sup>17</sup> The problem with modern industry, Marx notes, is that objectified labour “appears not only in the form of product or of the product employed as means of labour, but in the form of the force of production itself” (G, p. 694). With machinery, living labour is absorbed by capital, meaning that machinery appears “as opposed to labour”, entering the productive process as its conductor. This is the real subsumption of labour under capital: the means of labour become “fixed capital and confronts the worker physically as capital” (G, p. 695).

<sup>18</sup> As Marx puts it, in real subsumption, surplus value is produced through “cooperation, division of labour within the workshop, the use of *machinery*, and in general the transformation of production by the conscious *use* of the sciences, of mechanics, chemistry, etc.” (C, p. 1024). The aim of this transformation of the productive process is to reduce the necessary time for the production of a commodity and thus to increase surplus time and surplus value. Nevertheless, Marx argues that from a historical perspective, machinery was first used as a means of increasing absolute surplus value by employing cheap labour of women and children. In chapter fifteen of *Capital*, Marx claims that initially, machinery allowed capitalists to employ women and children “of slight muscular strength” and henceforth reducing labour costs. Marx writes: “in so far as machinery dispenses with muscular power, it becomes a means of employing labourers of slight muscular strength [...] The labour of women and children was, therefore, the first thing sought for by capitalists who used machinery” (C, p. 517). In other words, it could be said that the first use of machinery corresponds to formal subsumption of labour under capital and that only with the development of machinery and its integration with scientific knowledge, did capital shift from formal to real subsumption of labour and from absolute to relative surplus value. Marx argues that machinery began producing relative surplus value when it began “converting the labour employed by the owner of that machinery into labour of a higher degree and greater efficacy, by raising the social value of the

The notion of relative surplus value is extremely important for understanding the historical development of the organic composition of capital and for examining the role of technology and information for the valorisation process of capital. In the specific case of industrial capitalism, the concept of relative surplus value allows Marx to address the question of the productive character of machinery, and to argue that fixed capital is productive of value only to the extent that it reduces necessary labour time (C, pp. 437-438). In this sense, despite acknowledging the fact that real subsumption transforms the organic composition of capital, Marx continued defining living labour as the sole source of value. From the perspective of the role of knowledge and information within the valorisation process, this becomes problematic and raises a series of questions: from the standpoint of the organic composition of capital, do knowledge and information belong to the sphere of living labour or of fixed capital? What happens to the productive function of knowledge and information when they become objectified as fixed capital in modern industry? Does post-industrial capitalism imply a qualitative change regarding the function of knowledge and information in the organic composition of capital? Or should this transformation be considered in merely quantitative terms?

These questions sum up Alquati's main concerns in his research at the Olivetti factory. In particular, his investigation focuses on how information becomes a mediator between fixed and variable capital and how this challenges the traditional understanding of the organic composition of capital. To develop this point, the next section returns to Alquati's notion of valorising information and contextualises it as part of the historical mutation of the productive process. More precisely, the next section examines how the introduction of cybernetic machines transforms the relation between labour, knowledge and value.

## 1.2. KNOWLEDGE AND INFORMATION IN THE VALORISATION PROCESS

It has been argued that in the stage of formal subsumption, capital takes over a given labour process and subsumes it under the wage system in order to produce surplus value. In this sense, formal subsumption does not modify the labour process itself, but only its formal aspect. Accordingly, the knowledge involved in the labour process remains unchanged, and is only formally subsumed to a new conducting force (i.e. capital). As Carlo Vercellone puts it, in formal subsumption “the control of the labour process and the modalities of appropriation

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article produced above its individual value, and thus enabling the capitalist to replace the value of a day's labour power by a smaller portion of the value of a day's product” (C, p. 530).

of the surplus are founded [...] on mechanisms external to the directly productive sphere” (2007, p. 20). One important theoretical consequence of Marx’s concept of formal subsumption is that it shows that “far from being born in the industrial revolution, capitalism developed for a long phase of its history without accelerating technical progress and on the basis of forms of surplus appropriation essentially indirect and external to the sphere of production” (Vercellone, 2007, p. 21). This means that during this long phase of formal subsumption, the knowledge guiding the direct productive process remained incorporated in the living labour of the worker. From the perspective of the organic composition of capital under formal subsumption, knowledge pertains to the domain of living labour. Hence in formal subsumption of labour under capital, knowledge is productive of value as far as it remains an important aspect of living labour.

On the contrary, in the stage of real subsumption of labour under capital, the direct production process is modified in order to increase productivity. This implies a modification of the organic composition of capital, in which more and more of the living knowledge of the worker becomes objectified as fixed capital, turning into an autonomous conductor of the labour process and confronting living labour as an external force. One consequence of this is the separation of the worker from the knowledge that guides the overall productive process. As Vercellone suggests, in the stage of real subsumption “the division of labour is characterised by a process of polarisation of knowledge which is expressed in the parcelling out and disqualification of the labour execution and in the overqualification of a minoritarian component of labour power, destined to intellectual functions” (2007, p. 16).<sup>19</sup> In formal subsumption, capital takes over a given labour process and the specific knowledge guiding this process. This means that knowledge remains a part of living labour and, as such, it is an active source of surplus value. In real subsumption, capital shapes the labour process in order to integrate scientific knowledge as part of its valorisation process. In doing so, it objectifies the living knowledge of the labour process as fixed capital, degrading labour itself to a repetitive task devoid of any skill. From the perspective of the organic composition of capital, knowledge and information appear as elements belonging no longer to living labour but objectified as fixed capital. This raises the question of the productivity of information and

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<sup>19</sup> Vercellone adds that, “the process that leads to the real subsumption of labour under capital begins with the first industrial revolution. It is based on a series of tendencies which flow into Fordism: the progressive separation of intellectual and manual labour, the separation of conceptual and material tasks, and the polarisation of knowledges and the parcelisation of labour which determine the dynamic of technical and organisational change by means of which capital progressively affirms its control of the product and the labour process” (2007, p. 23).



knowledge in industrial capitalism (once they have been objectified as fixed capital).

According to Marx, fixed capital is productive of value only in two respects:

(1) in so far as it has value; i.e. is itself the product of labour, a certain quantity of labour in objectified form; (2) in so far as it increases the relation of surplus labour to necessary labour, by enabling labour, through an increase of its productive power, to create a greater mass of the products required for the maintenance of living labour capacity in a shorter time. (G, p. 701)

In this sense, fixed capital produces value only as long as it decreases necessary labour time and thus increases the portion of surplus-value absorbed by capital. Marx writes:

Capital [employs machinery] only to the extent that it enables the worker to work a larger part of his time for capital, to relate a larger part of his time as time which does not belong to him, to work for another. 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. (G, p. 701)

In the context of the real subsumption of labour, the organic composition of capital tends to the constant increase of the ratio between living and fixed capital. The more living labour is reabsorbed as fixed capital, the less living labour is necessary in the productive process. This leads to what Marx defines in the *Grundrisse* as the core contradiction of the capitalist mode of production, the contradiction between value and labour time. Marx expresses this contradiction in the following terms: “Capital itself is the moving contradiction, in that 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” (G, p. 706). On the one side, he explains, capital

calls to life all the powers of science and of nature, as of social combination and of social intercourse, in order to make the creation of wealth independent (relatively) of the labour time employed on it. On the other side, it wants to use labour time as the measuring rod for the giant forces thereby created, and to confine them within the limits required to maintain the already created value as value (G, p. 706).

Put differently, capital revolutionises the productive process by integrating labour together with technology and scientific knowledge, hence creating the impression that living labour is no longer the only source of value but only one element within a broader productive force. At the same time, however, Marx notes that the main preoccupation of the capitalist is not to reduce necessary labour time for the sake of productivity but rather to increase the portion of surplus time that he can extract from the labour process.<sup>20</sup> In this sense, the technical transformation of the labour process is seen by the capitalist only from the perspective of the

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<sup>20</sup> In the section on relative surplus value in *Capital*, Marx writes that “the shortening of the working-day [...] is by no means what is aimed at in capitalist production, when labour is economised by increasing its productivity. It is only the shortening of the labour time necessary for the production of a definitive quantity of commodities that is aimed at” (C, pp. 437-438).

reduction of necessary labour time. The consequence is the paradigmatic tendency of capitalism to strive to reduce labour time to a minimum while preserving labour time as the only measure of value. Nevertheless, despite the fact that the capitalist's sole purpose is to increase the portion of surplus value he or she extracts from the labour process, the inevitable consequence is a general increment in the total productive powers of society (G, p. 706).

According to the interpretation of Italian post-Marxism, the development of the productive forces, tied to the capitalist search for larger portions of surplus value, leads to the crisis of industrial capitalism and to the emergence of a post-industrial mode of production characterised by an even greater dependence on knowledge and information for the valorisation process of capital. This historical transformation, which roughly coincides with the end of the Second World War in developed countries, raises once again the question regarding the productive character of fixed capital. For Marx, only living labour is responsible for the production of value; thus, the productive character of fixed capital remains tied to the reduction of necessary labour time and the subsequent increase of the portion of living labour appropriated by the capitalist. In post-industrial societies, however, the radical transformation of the direct production process demands an equally radical conceptualisation of the organic composition of capital capable of explaining the role of knowledge and information beyond the logic of labour time that guides Marx's labour theory of value. In other words, the passage from industrial to post-industrial capitalism demands a reconceptualization of the relation between fixed and variable capital that allows for the challenging of the opposition between living labour and technical machines.

Alquati's research at the Olivetti factory is one of the first attempts amongst the Italian *Operaismo* to examine the cybernetic transformations of the productive arena and to offer a novel interpretation of Marx's labour theory of value by introducing the notion of valorising information as a mediator between living labour and fixed capital.<sup>21</sup> For Alquati, the main difference between the industrial machines analysed by Marx and the cybernetic machines of the Olivetti factory is marked by the different ways they relate to the labour process. Industrial machines, on the one hand, take over different portions of the labour process by replacing the physical expenditure of energy of the worker. In doing so, machines increase productivity, reduce necessary labour time and increase the amount of surplus value extracted

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<sup>21</sup> A year earlier, Raniero Panzieri had published "On the capitalist use of machines in neocapitalism" ("*Sull'uso capitalistico delle macchine nel neocapitalismo*") examining similar theoretical issues to those addressed by Alquati. The main contribution of the latter however is coining the notion of valorising information to explain the growing importance of knowledge and information within the valorisation process.

from the worker. However, by replacing portions of living labour with machinery, the overall effect is that the rate of profit tends to fall (Marx 1991, p. 317). In the case of cybernetic machines on the other hand, the labour process does not appear as the mere expenditure of physical energy, but as a process that involves information as one of its essential characteristics (Alquati 1963, p. 121). According to Alquati, information defines one of the core aspects of labour power. This means that in the labour process, the worker transmits to the machine a series of micro-decisions (evaluations, measurements, etc.) that guide the production of use-values (Alquati 1963, p. 121).<sup>22</sup> In the traditional understanding of machines, these micro-decisions could not be reduced to the domain of fixed capital and remained a constitutive aspect of living labour. With the emergence of cybernetic machines, however, the micro-decisions which constitute the valorising information that define the singularity of living labour could become transmitted to, translated into, and finally integrated in the means of production themselves (Alquati 1963, p. 121). For Alquati, this drastically modifies the traditional understanding of the organic composition of capital.

It is important to note that, in order to define the notion of valorising information, Alquati distinguishes between two forms of information within the productive process: control information (*informazioni di controllo*) and operative information (*informazioni operative*) (1963, p. 121). The latter constitutes all the information transmitted by the worker to the machine during the labour process; all the micro-decisions that Alquati defines as an essential character of living labour. This information constitutes the collective asset of the working class who elaborate and transmit it (Alquati 1963, p. 122). In this respect, Alquati adds, operative information is valorising information “tout-court” (1963, p. 122). Control information, on the other hand, is the translation of operative information into the bureaucratic language of management (Alquati 1963, p. 121). Instead of flowing horizontally among the working class, this information now flows vertically from the base of the productive process to the vortex of capitalist appropriation (Alquati 1963, p. 121). Control information appropriates the micro-decisions of the workers, translates them into the language of the bureaucratic organization of labour, and then feeds them back into the

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<sup>22</sup> Matteo Pasquinelli argues that, “at the beginning of the industrial age capitalism started to exploit human bodies for their mechanical energy, but soon it became clear [...] that the most important value was originated by the series of creative acts, measurements and decisions that workers constantly had to perform. Alquati calls information precisely all the innovative micro-decisions that workers have to take along the production process, that give form to the product, but also that give form to the machinic apparatus itself. If information enters in this way in the Marxist definition of production, thereafter it has to affect also the traditional definitions of living labour and surplus value” (2014, p. 7).

productive sphere in order to improve and optimize the production of commodities.<sup>23</sup> By doing so, capital extracts surplus value from the living knowledge of the worker. With the notion of valorising information, Alquati explains the process through which capital uses cybernetic machines to absorb the horizontal (collective) knowledge of the worker into the vertical organization of labour and hence to constantly adjust its productive process.<sup>24</sup>

Following Alquati's exploration of the labour process at the Olivetti factory, it can be argued that the attention economy is a concrete mechanism that expands the appropriation of valorising information from the limited space of the factory to the whole of society. More precisely, the attention economy relies on cybernetic machines in order to absorb the endless flow of valorising information produced along the whole social field, translating it into control information and feeding it back into the productive process (to constantly adjust the self-valorising cycle of capital). It is in this regard that attention becomes a direct source of surplus value. In order to develop this argument and to connect the concept of valorising information to the critique of the attention economy, it is helpful to introduce a second concept, Maurizio Lazzarato's immaterial labour (1996). As will be shown, this concept makes it possible to develop a concrete analysis of how the attention economy operates as a source of value in contemporary capitalism. Lazzarato's concept of immaterial labour follows the exact same argument as the one presented by Alquati. The difference, however, is that the notion of immaterial labour pushes the analysis of the valorising role of information beyond the limited sphere of the factory. In this way, Lazzarato attempts an analysis of how the capital-labour relation diffuses throughout society in contemporary capitalism. In particular, he examines how the consumer begins intervening actively in the composition of the product, thus blurring the traditional norms and measures of productivity (Lazzarato 1996, p. 142).

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<sup>23</sup> Alquati notes that it is precisely because of the numerical dimension of cybernetic machines that living information can be translated and appropriated as control information (Alquati 1963, p. 134). As Pasquinelli puts it, "it is the numeric dimension of digital information that makes it possible to translate knowledge into information, information into numbers, and numbers into value" (2014, p. 8).

<sup>24</sup> According to Pasquinelli (2014), the cybernetic apparatus is "an extension of the internal bureaucracy of the factory, that monitors the production process by the means of control information" (p. 6). This means that "bureaucracy descends into the bodies of the workers to record control information via the mediation of the circuits of cybernetic machinery" (Pasquinelli 2014, p. 6).

## 2. IMMATERIAL LABOUR AND THE INFORMATIONAL CONTENT OF THE COMMODITY

Like Alquati, Maurizio Lazzarato (1996) gives special importance to the cognitive character of labour in post-industrial capitalism. For him, the changes in the productive process during the twentieth century, combined with a significant “theoretical reflection”, have made possible “the identification of a new conception of what work is nowadays and what new power relations it implies” (p. 133). He coins the concept of immaterial labour as a synthesis of the emerging forms of labour that replace the traditional understanding of work in industrial capitalism. For Lazzarato, the concept of immaterial labour emerges as part of the “debate on the nature of work in the post-Fordist phase of the organization of labour” (1996, p. 139).<sup>25</sup>

One aspect of immaterial labour identified by Lazzarato is the labour that produces the “informational content of the commodity” (1996, p. 133). This aspect “refers directly to the changes taking place in workers’ labour processes in big companies in the industrial and tertiary sectors, where the skills involved in direct labour are increasingly skills involving cybernetics and computer control (and horizontal and vertical communication)” (Lazzarato 1996, p. 133). The informational content of the commodity is the body of information and knowledge involved in the direct production process. It has been mentioned above that in the stage of real subsumption of labour under capital, knowledge and information become objectified as fixed capital. As such, knowledge and information confront living labour as an external, autonomous force that enters the productive process as its conductor, thus deepening the division between manual and intellectual labour. It has also been shown that Alquati (1963) coins the concept of valorising information in order to offer a reinterpretation of Marx’s definition of the organic composition of capital. In accordance with Alquati’s discoveries at the Olivetti factory, Lazzarato (1996, p. 134) argues that post-Fordism leads to “the centrality of an ever increasingly intellectualised living labour within production”, hence

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<sup>25</sup> According to Moulner Boutang (2011, pp. 31-32), there is “major misunderstanding regarding immaterial labour” which is similar to that surrounding the idea of abstract labour in Marx. According to this author, the notion of immaterial labour does not refer to an empirical transformation of the labour process in which labour becomes an “immaterial” activity (just like Marx’s concept of ‘abstract labour’ does not refer to an empirical change of the labour process). For Marx, ‘abstract labour’ refers to the objectified abstraction used to measure the exchange value of a commodity. Accordingly, Moulner Boutang argues that immaterial labour refers to the new mechanisms of capitalist valorisation that are no longer grounded on the expenditure of abstract labour time, but on invention power and communications (2011, p. 32). Moulner Boutang writes: “When a pair of trainers cost £4 or 5 to make and £2 or 3 to transport, but then it sells for between £20 and £300 depending on whether it is branded Nike or Adidas, we can say that most of the exchange value or market value derives from the value of the brand, and thus from a factor which is immaterial or intangible” (2011, p. 32).

challenging the dichotomy between manual, material labour on the one side and intellectual, immaterial labour on the other. Fordism systematically organised the labour process by, on the one hand, clearly defining the repetitive and mechanised action that each worker should perform and, on the other, expecting each worker to passively repeat his or her prescribed task. Post-Fordism, on the contrary, forces the workers to communicate and actively engage in the organisation of the labour process (Lazzarato 1996, p. 135).<sup>26</sup> By doing so, workers contribute to the productive process not only with their manual labour, but also with their knowledge, which is used to improve the organisation of the productive process and to ease the communication between all the spheres that compose it. In this sense, post-Fordism integrates communication into the cycle of reproduction of capital (Lazzarato 1996, p. 140).<sup>27</sup>

So far, Lazzarato's argument mimics that of Alquati. The difference, however, is that Lazzarato examines the productive role of communications beyond the domains of the factory. The location in which immaterial labour operates, Lazzarato claims, is outside of the factory, "in the society at large, at a territorial level that we could call 'the basin of immaterial labour'" (1996, p. 137).<sup>28</sup> In this respect, one of the central functions of immaterial labour is to establish the fluid communication (the fluid flow of valorising information) between all moments of the productive process, in particular between the spheres of consumption and production:

Immaterial labour finds itself at the crossroads (or rather, it is the interface) of a new relationship between production and consumption. The activation of both productive cooperation and the social relationship with the consumer is materialised within and by the process of communication. The role of immaterial labour is to promote continual innovation in the forms and conditions of communication (and thus in work and consumption). (1996, p. 138)

This means that, from a strictly economic point of view, "the cycle of reproduction of immaterial labour dislocates the production-consumption relationship [...] Now, rather than speaking of the toppling of 'supply and demand', we should speak about a redefinition of the production-consumption relationship" (1996, pp. 140-1). One of the main contributions of Lazzarato's notion of immaterial labour is to expand Alquati's idea of the valorising

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<sup>26</sup> For Lazzarato (1996), the new managerial "mandate to become subjects of communication threatens to be even more totalitarian than the earlier rigid division between mental and manual labour (ideas and execution), because capitalism seeks to involve even the worker's personality and subjectivity within the production of value" (p. 136).

<sup>27</sup> Lazzarato (1996, p. 137) contends that "once we abandon our factoryist prejudices", immaterial labour and communications appears as what they really are, active elements in the "organization of the cycle of production".

<sup>28</sup> Lazzarato writes: "I want to demonstrate in particular how the process of valorisation tends to be identified with the process of the production of social communication and how the two stages (valorisation and communication) immediately have a social and territorial dimension" (Lazzarato 1996, p. 140).

character of information to the social field. In particular, Lazzarato focuses on how the consumer becomes an active source of information and thus an essential agent of the productive process. Put differently, in post-Fordism the consumer begins to intervene directly in the composition of the product by actively contributing to the production of the informational content of the commodity (Lazzarato 1996, p. 142).

## 2.1. THE EXAMPLE OF TOYOTISM

Lazzarato refers to the car industry to illustrate how immaterial labour dislocates the relationship between consumption and production, and how the consumer becomes an active agent in the production of the post-industrial commodity (1996, p. 141). He writes:

Prior to being manufactured, a product must be sold, even in ‘heavy’ industries such as automobile manufacturing; a car is put into production only after the sales network orders it. This strategy is based on the production and consumption of information. It mobilises important communication and marketing strategies in order to gather information (recognizing the tendencies of the market) and circulate it (constructing a market) [...] It seems, then, that the post-industrial commodity is the result of a creative process that involves both the producer and the consumer. (Lazzarato 1996, pp. 141-142).

Following Lazzarato’s example, it could be argued that Toyotism (another term for post-Fordism) emerges as a response to the logical limitations of Fordism, such as the excessive waste produced, the vast storage capacity required for individual parts and finished products, its lack of flexibility, and the limited product diversity it could handle.<sup>29</sup> Taichii Ohno, founder of the Toyota Production System, claims that in order to overcome the limitations of Fordist production, Toyota implemented the ‘just-in-time’ principle (Ohno 1988, p. 4). The basic idea behind this principle is to reduce storage costs by having each individual part arrive at the assembly line ‘just-in-time’, i.e. as and when required. As Ohno puts it, “just-in-time means that, in a flow process, the right parts needed in assembly reach the assembly line at the time they are needed and only in the amount needed. A company establishing this flow throughout can approach zero inventory” (1988, p. 4). This applies to the whole production process, from the moment customers order a product until the raw material enters the factory. To achieve this, Ohno inverts Ford’s productive flow so that each later process communicates with the previous one when a part is needed and is then delivered ‘just-in-time’. By doing so, Toyotism efficiently reduces costs of storage and overproduction.

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<sup>29</sup> For a comparison between Fordism and Toyotism (between mass and lean production as the authors call them) see Womack, Jones, and Roos’ (1991) book *The Machine That Changed the World* (in particular chapters two and three).

It is important to note, however, that through the implementation of the ‘just-in-time’ principle, Toyotism replaces the hierarchic relationship between production and consumption with a complex bidirectional communication process that tends towards the merging of these two traditionally separated stages. In general terms, Fordism operates with the classic schema of mass-production, that is, it first produces as many items as possible in order to decrease production cost and afterwards tries to sell these items in the market hoping that the cheap price made possible by mass-production would be on its own enough to motivate their mass-consumption. On the contrary, Toyotism is characterised by establishing a rich and constant communication system between consumption and production which aims at regulating production according to the requirements and tendencies of consumption.

In addition to this, Taichii Ohno designed a complex system of distribution which aimed at developing “a direct link between the manufacturing system and the customer” (Womack, Jones and Roos 1991, p. 180). Among several other strategies aimed at generating a constant feedback between production and consumption, Ohno developed a door-to-door approach to car selling. To do so, highly trained salesmen

draw up a profile on every household within the geographic area around the dealership, then periodically visit each one [...] During their visits the sales representative updates the household profile: How many cars of what age does each family have? What is the make and specifications? [...] When does the family think it will need to replace its car? (Womack, Jones and Roos 1991, p. 182)

On the basis of the gathered information, the sales department generates a statistical database which forecasts the possible demand waves for every specific product. At the same time, the manufacturing plant relies on these predictive patterns in order to adjust their production to consumer demand. In this respect, Toyotism treats the buyer as an “integral part of the production process [since] the elaborate data collection on owner preferences for new vehicles is fed systematically to development teams for new products” (Womack, Jones and Roos 1991, p. 187). With the door-to-door selling approach, Toyotism inaugurated a tendency towards the integration of production and consumption.<sup>30</sup> Hardt and Negri explain this tendency as follows:

Toyotism is based on an inversion of the Fordist structure of communication between production and consumption. Ideally, according to this model, production planning will

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<sup>30</sup> Political economy has indeed forged the concept of prosumption to define the tendency towards the merging of the spheres of production and consumption. The idea of individuals becoming prosumers in post-industrial societies was first introduced by Alvin Toffler in his book *The Third Wave* (1984). For an overview of the terms prosumer and prosumption and their economic implications, see Ritzer and Jurgenson (2010). Also, for a critique of the ideological aspects of prosumption, see Zwick, Bonsu and Darmody (2008).



communicate with markets constantly and immediately. Factories will maintain a zero stock, and commodities will be produced just in time according to the present demand of the existing markets. This model thus involves not simply a more rapid feedback loop but an inversion of relationship because, at least in theory, the production decision actually comes after and in reaction to the market decision. In the most extreme cases, the commodity is not produced until the consumer has already chosen and purchased it. In general, however, it would be more accurate to conceive the model as striving toward continual interactivity or rapid communication between production and consumption. This industrial context provides a first sense in which communication and information have come to play a newly central role in production. (2000, p. 290)

The example of Toyotism illustrates the new productive role of the consumer within the productive process. The consumer is no longer limited to the mere consumption of commodities (their destruction in consumption), but becomes an active agent in the production of the informational content of the commodity. Consumption, Lazzarato writes, is “first of all a consumption of information. Consumption is no longer only the ‘realization’ of a product, but a real and proper social process that for the moment is defined with the term communication” (1996, p. 141). In this sense, Lazzarato’s notion of immaterial labour displaces Alquati’s concept of valorising information from the factory to the whole of society. Furthermore, it could be argued that the attention economy constitutes a specific form of immaterial labour aimed at the appropriation of valorising information in order to regulate the self-valorising process of capital. With the assistance of cybernetic machines and advanced information technologies, the attention economy turns consumer’s attention into a constant source of information about his or her consumption habits, preferences, trends, lifestyles, etc., which is then utilised to facilitate the constant adjustment of the production of commodities. In the case of the internet, for example, our online attention is permanently contributing to the gathering of data used for establishing consumer patterns and hence reshaping the productive process. In this sense, it is correct to argue that the production of knowledge and information “tends to become immediately the process of valorisation” (Lazzarato 1996, p. 144). In post-Fordism, attention becomes a specific form of labour not in the abstract sense of passively paying attention to advertisement, but in the concrete form of actively facilitating the constant communication between the consumption and production of commodities.

## 2.2. THE ATTENTION ECONOMY FROM THE STANDPOINT OF THE VALORISATION PROCESS

As mentioned above, the concepts of valorising information and immaterial labour allow for reinterpreting the productive function of the attention economy. Using the work of Jhally and Livant (1986), the previous chapter examined how media networks exploit attention as a source of profit. For these authors, media networks sell attention-time to advertisers for a higher price than the total cost of production of its media content, generating surplus value (1986, p. 127). To explain this, Jhally and Livant coin the terms necessary and surplus watching-time, and contend that the former represents the amount of attention-time necessary to pay for the allegedly free content consumed, while the latter constitutes the surplus of attention that the media network turns into profit. Furthermore, it was shown how these authors use the Marxist notions of absolute and relative surplus value in an attempt to identify two ways of increasing the rate of surplus watching time (1986, pp. 133-134). Nevertheless, the claim that advertisement-based commercial media make a profit by selling attention-time to advertisers implies that the real source of value lies somewhere else, namely, in the sphere of the industrial processes which buy advertising space to sell commodities. In this sense, media networks receive a share of the value produced by and expropriated from the worker's labour process within the factory, and not from the activity of consumers sitting in front of the television set. This means that the main economic function of attention is only to accelerate the process of consumption of mass-produced commodities and, hence, reduce the time between the extraction of surplus value from the workers in the factory and the realisation of that surplus value in the market. As Jhally and Livant sum it up,

The media speed up the selling of commodities, their circulation from production to consumption. Hence, they speed up the realisation of value (the conversion of value into a money form) embodied in commodities produced everywhere in the economy. Through advertising, the rapid consumption of commodities cuts down on circulation and storage costs for industrial capital. Media capital (e.g. broadcasters) receives a portion of the surplus value (profits) of industrial capital as a kind of rent paid for access to audiences. The differences between this rent and its costs of production (e.g. wages paid to media industry workers) constitute its profit. (1986, p. 125)

Jhally and Livant's framework reproduces the main presuppositions of Marx's labour theory of value according to which human labour remains the sole source of economic value. In other words, Jhally and Livant's understanding of the productive role of attention is limited to an industrial, Fordist mode of production where the role of advertisement is merely to shorten the time between the production and consumption of commodities. As has been argued above, from the perspective of Marx's labour theory of value, machinery appears as fixed

capital, that is, as objectified labour. In this regard, machines produce surplus value only to the extent that they reduce the labour time necessary to produce a commodity, thus increasing the portion of labour appropriated by capital. Similarly, the cycle of circulation produces no surplus value and the technical development of communication and transportation technologies can only shorten the realisation of the surplus value produced in the productive cycle (Marx 1992, p. 203).<sup>31</sup> In this sense, it can be said that from the perspective of industrial capitalism, attention produces surplus value only to the extent that it shortens the time between the production and consumption of a commodity.

Using the notions of valorising information and immaterial labour, however, a different interpretation of the attention economy can be offered. From this perspective, it could be argued that in post-Fordism the productive role of attention acquires a different dimension. Instead of trying to shorten circulation time, post-Fordism aims (at least in principle) to the complete merging of the spheres of production and consumption, blurring the distinction between the two and turning all human activity (including attention) into a source of surplus value. In post-Fordism, the central economic function of the attention economy is not simply to accelerate consumption (as in the traditional understanding of advertisement), but to facilitate the fluid flow of valorising information from the social field into the productive arena. As Lazzarato (1996) puts it,

Audio-visual production, advertising, fashion, software, the management of territory, and so forth are all defined by means of the particular relationship between production and its market or consumers. Here we are at the furthest point from the Taylorist [Fordist] model. Immaterial labour continually creates and modifies the forms and conditions of communication, which in turn acts as the interface that negotiates the relationship between production and consumption. (pp. 142-3)

Just as the implementation of cybernetic machines represents an alteration in the understanding of the valorising character of information (illustrated by Alquati's research at the Olivetti factory), the use of information technologies marks a shift in the economic function of attention. In the context of the traditional mass-media, advertisement is seen as a means to accelerate the circulation time of industrial capital; in contrast, in the age of the attention economy, cybernetic machines use attention as a mechanism to harvest valorising information from across the social field, turning the consumer into an active agent of

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<sup>31</sup> In volume two of *Capital*, Marx examines the productive and the circulation phases of capital. He suggests that these two stages – which constitute essential parts of the reproductive circuit of capital – are “mutually exclusive” (1992, p. 203). According to him, during circulation time, “capital does not function as productive capital, and therefore produces neither commodities nor surplus value” (Marx 1992, p. 203). This means that the more circulation time is reduced and tends to zero, the more capital functions as productive of surplus value and the greater is “its productivity and self-valorisation” (Marx 1992, p. 203).

production. Every consumer becomes a source of valorising information, of micro-decisions that help adjust the production of commodities and thereby ease the reproductive cycle of capital.<sup>32</sup>

This shift in the economic function of attention raises at least two important theoretical problems regarding the validity of Marx's labour theory of value for post-industrial capitalism. On the one hand, the notions of valorising information and immaterial labour challenge the traditional understanding of labour time as the sole source of economic value. If the attention economy dislocates the production-consumption dyad, expanding the exploitation of living labour to the whole of society and to every stage of the productive process, then labour time seems an obsolete category for measuring the exploitation of labour. On the other hand, the diffusion of labour beyond factory walls demands the question of power to be investigated. In order to reproduce the social relations of production, post-industrial capitalism has created the paradoxical situation in which it tends to eliminate more and more of the living labour from the manufacturing process while simultaneously expanding labour to the whole of society, turning every aspect of life into a potential valorising activity. Labour no longer appears as the universal source of economic value and social wealth, but above all it becomes a power mechanism that reproduces a given social order. The following section considers Antonio Negri's reading of Marx's labour theory of value (Negri 1988; 1996; 2008) in order to examine how these theoretical problems directly affect the critique of the attention economy.

### 3. THE DECONSTRUCTION OF MARX'S LABOUR THEORY OF VALUE

According to Antonio Negri (1996, p. 149), the transformations put forth by post-Fordism have raised a series of questions regarding the validity of Marx's labour theory of value.<sup>33</sup> In

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<sup>32</sup> It is interesting to note that, when discussing the cycle of circulation of commodities, Marx describes the reduction of circulation time to zero as the ideal tendency of the self-valorisation process of capital. When circulation time is reduced to zero (at least in principle) all the time in the reproductive cycle of capital appears as productive of surplus value. Marx writes that "if a capitalist works to order, receives payment on the delivery of his product and is paid in his own means of production, then the time of circulation approaches zero" (Marx 1992, p. 203). It could be argued that this short example illustrates the essential characteristic of post-Fordism, which in order to reduce circulation time to zero, transforms every aspect of the cycle of capital into a source of surplus value. Put differently, post-Fordism does not replace a society of mass-production with a society of mass-consumption (see for example Baudrillard 1997), but turns every stage of the reproductive cycle of capital (including consumption) into a process of self-valorisation. In doing so, circulation time is indeed reduced to zero, completely reshaping the conceptual distinctions established by Marx's labour theory of value.

<sup>33</sup> Marx's labour theory of value has been the object of extensive criticism from both supporters and rejecters of Marxist thought (see for example Sraffa's *Production of Commodities by Means of Commodities*, 1960; and Steedman's *Marx after Sraffa*, 1977). Given the fact that the labour theory of value plays such a central role in

simple terms, Negri argues that Marx's labour theory of value is tied to an obsolete organisation of labour and accumulation, and thus it is insufficient for explaining neither the labour-value relation nor the nature of exploitation in post-industrial societies (1996, p. 149). For this reason, Negri contends that a deconstruction of Marx's labour theory of value is needed (1996, p. 158). This deconstruction implies both an unveiling of the historical limits of the theory itself and a reinterpretation of what exploitation becomes in an age of immaterial labour.

### 3.1. THE CRISIS OF MEASURABILITY

The first step in Negri's deconstruction of the labour theory of value is the acknowledgement of its historical limits. Negri suggests that the labour theory of value (sometimes referred to as the law or theory of value), "formulated by Ricardo and developed by Marx", is in effect formed during the historical period of "the first industrial revolution" (Negri, 1996, p. 157). Seen from the perspective of contemporary capitalism, however, the law of value appears as the result of an obsolete organization of labour. This, Negri continues, "is the source of the theory's great shortcomings, its ambiguities, its phenomenological holes, and the limited plasticity of its concepts" (1996, p. 157). In particular, Negri addresses the problem of the historical limits of labour time as the abstract measure of value. He contends that in post-industrial capitalism, the shift from industrial to immaterial labour has caused a general crisis of measurability which makes it impossible to pose labour time as a universal measure of value.

Although Marx never explicitly defines a labour theory of value as such, it could be argued that this theory forms the theoretical core of *Capital* and is systematically presented in its first chapter through the analysis of the twofold character of the commodity form.<sup>34</sup> Marx begins

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Marx's *Capital*, its crisis could be interpreted as a crisis of Marx's thought in general and as a main proof of the inadequacy of its analysis. Other authors more sympathetic to Marxism have asked what would be left of Marx's thought if the labour theory of value were removed from it (see, for example, Hodgson 1991). Negri's critique of the labour theory of value and his return to the *Grundrisse* can be categorized as belonging to this last group. In Negri's words, he is looking for a Marx beyond the labour theory of value, a *Marx beyond Marx* (see Negri 1991). Contrary to this, George Caffentzis (2005) suggests that Negri's "criterion" for accepting or rejecting parts of Marx's theory is useless because it "simply espoused excising the whole value discourse from the 'usable' part of Marx's canon and thus threatened to eliminate nearly everything in it" (p. 100). Furthermore, Caffentzis argues that the concept of subsumption to which Negri gives so much importance to is inseparable from the problem of quantity that he rejects in the labour theory of value (2005, p. 100).

<sup>34</sup> Hodgson (1991) suggests that "Marx never made it clear what was meant by 'the labour theory of value'" (1991, p. 68). "In fact", he adds, "as far as I am aware, he never used the term. Sometimes, but rarely, he used the term 'law of value'. Hence, it is very difficult to impute a precise meaning to the former phrase" (1991, p. 68). This makes the interpretation of the labour theory of value a "highly controversial" issue (1991, p. 67).

this chapter by distinguishing between use value and exchange value (a distinction that was already fully present in the works of Adam Smith and David Ricardo). Based on this distinction, Marx differentiates abstract labour from concrete labour. He summarises the relationship between these four terms as follows:

on the one hand all labour is, speaking physiologically, an expenditure of human labour power, and in its character of identical abstract human labour, it creates and forms the value of commodities [exchange value]. On the other hand, all labour is the expenditure of human labour power in a special form and with a definite aim, and in this, its character of concrete useful labour, it produces use values. (C, p. 137)

When two commodities are exchanged in the market, their exchange value is set by the common attribute of both commodities, i.e. by the fact that they are both products of human labour in its abstract form. Furthermore, in order to measure this abstract value, a common quantity must be found. For Marx, this common measure is the amount of abstract labour time embodied in each commodity (C, p. 129).

As David Harvey (2006) notes, so far “the argument is almost identical to that laid out in Ricardo’s *Principles of Political Economy and Taxation*. Marx appears to follow Ricardo entirely in treating the problem of value, at this stage, as one of finding an appropriate standard of value” (p. 14).<sup>35</sup> Marx, however, introduces an important innovation to Ricardo’s theory of value. The measure of the value of a commodity, Marx argues, does not simply depend on the amount of labour time spent by an individual producer, but on the average of “socially necessary labour time” (C, p. 129).<sup>36</sup> This means that the value of a commodity must be measured by the amount of labour “required to produce an article under the normal conditions of production and with the average degree of skill and intensity prevalent at the time” (C, p. 129). By introducing the concept of socially necessary labour time, Marx defines

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Accordingly, David Harvey (2006) states that “the proper interpretation of Marx’s theory of value is a matter of great contention” (p. 35). This contention has “set the stage for a more careful reconstruction of what Marx himself said” (2006, p. 36). To do so, Harvey suggests a return to *Capital*, in particular to its opening chapters where the exposition of the theory of value can be found (2006, p. 14). For an extensive discussion of Marx’s labour theory of value see Rubin (1973), Cohen (1979), Harvey (2006), and Heinrich (2012).

<sup>35</sup> For Ricardo, the value of a commodity corresponds to the amount of labour time realized in it: “if the quantity of labour realized in commodities regulate their exchange value, every increase of the quantity of labour must augment the value of that commodity on which it is exercised, as every diminution must lower it” (2001, p. 10).

<sup>36</sup> Michael Heinrich (2012) notes that this last argument (that the value of a commodity depends on the average of socially necessary labour time) is what Marxists commonly refer to as the ‘law of value’ (p. 44). He contends that most Marxists incorrectly interpret this law as the core of Marx’s labour theory of value. If this were the case, he adds, “Marx’s value theory would not have gone very far beyond classical political economy” (2012, p. 44). Conversely, Heinrich argues that the core of Marx’s law of value has to be found on his analysis of the fetishism of the commodity form. From this perspective, Marx’s law of value is less about the measure of labour and more about the concrete mechanisms through which this measure is imposed as “a certain form of rationality to which all individuals must adhere if they wish to maintain their existence within the given conditions [of society]” (2012, p. 46). In this sense, he claims that the value theory aims at uncovering “a specific social structure that individuals must conform to, regardless of what they think” (Heinrich 2012, p. 46).

the relationship between labour and value as an inherently historical relation: with the development of the productive forces, the relationship between labour time and value changes.<sup>37</sup> This is so because the average time necessary to produce a commodity is reduced by the technical transformation of the productive process. As Cohen notes,

the central claim of the labour theory of value is that a magnitude of value is determined by socially necessary labour time. To be more precise: the exchange-value of a commodity varies directly and uniformly with the quantity of labour time required to produce it under standard conditions of productivity, and inversely and uniformly with the quantity of labour time standardly required to produce other commodities, and with no further circumstance. (1979, p. 339)

Negri's deconstruction of Marx's law of value focuses precisely on the historical limit of the notion of socially necessary labour time. This limit, Negri contends, is marked by Marx's conception of the form of value as "an objective measure" (Negri 1996, p. 151). As has been shown above, in contemporary capitalism labour diffuses from the factory to the whole of society, turning every individual activity into a potential source of profit. In post-Fordism, Negri claims, "works abandon the factory in order to find, precisely in the social, a place adequate to the functions of concentrating productive activity and transforming it into value. The prerequisites of these processes are present in, and diffuse throughout, society" (2005, p. 88). Therefore, value is no longer produced strictly within the four walls of the factory (and commanded by industrial capital), but through a complex network of social cooperation involving the integration of technology, science and immaterial labour. This means that "every subject of this productive complex is caught up in overpowering cooperative networks" (Negri 2005, p. 77). In this new productive arena, Negri contends,

the distinction between 'simple labour' and 'socially necessary labour' loses every importance [...] showing the impossibility of defining the genealogy of socially necessary labour; and most importantly, the distinctions between 'productive labour' and 'unproductive labour', between 'production' and 'circulation', between 'simple labour' and 'complex labour' are all toppled; [with the disappearance of these core distinctions] essential characteristics of the theory of value begin to fade away. (Negri 1996, p. 157)

Hence the question is: "how can one calculate the value, surplus-value, wages and profits that are produced and distributed within this new productive structure?" (Negri 2005, p. 77). In post-Fordism, Negri contends, it becomes impossible to trace a "genealogy of socially necessary labour" (1996, p. 157).

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<sup>37</sup> It was shown in chapter one that Marx historicises the concept of labour and hence challenges the naturalization of the capitalist mode of production implied in classic political economy. Analogously, David Harvey argues that by understanding the concept of abstract labour as a historical product, "Marx turns an a-historical, universal statement into a theory of value that operates solely under capitalist relations of production" (2006, p. 15).

In order to develop his deconstruction of Marx's law of value, Negri highlights the significance of Marx's *Grundrisse*. In Negri's view, these manuscripts provide a more adequate approach to the historicity of the value-labour relation than *Capital* does.<sup>38</sup> Negri suggests that some sections from the *Grundrisse* (the so-called *Fragment on Machines* from Notebook VII) can be read as Marx's own critique of the historical and theoretical limits of the labour theory of value.<sup>39</sup> In the *Fragment*, "Marx made certain predictions regarding advanced capitalist development; he described lucidly the moment in which the law of value would come to be extinguished and labour would no longer be subsumed but formally suppressed within capitalist command" (Negri 1988, p. 97). Of particular significance for Negri's interpretation is the notion of general intellect that Marx uses to define the vast productive powers that are set in motion by modern industry and which involve social cooperation, scientific knowledge and technological development (G, p. 706).

According to Marx, in the search for shorter necessary labour time and thus for larger amounts of surplus time, industrial capital turns more and more of the surplus value into fixed capital. This means that, in order to generate more profit, capitalism is constantly investing in more efficient machinery, constantly revolutionizing its means of production. The direct consequence of this tendency is the constant reduction of the average of socially necessary labour time and the constant increase of the "true wealth" of society (G, p. 705).<sup>40</sup> Modern industry, Marx suggests, reveals to us that society's true wealth "manifests itself in the monstrous disproportion between the labour time applied, and its product, as well as in the

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<sup>38</sup> Contrary to the classic interpretation which sees in the *Grundrisse* a mere preparative work of *Capital* (Rosdolsky 1977), Negri argues that these manuscripts provide an alternative critique of capitalism not based on the homogeneity of the law of value. In other words, the *Grundrisse* allow Negri to imagine a Marx beyond the labour theory of value, a "Marx beyond Marx" (1991, p. 14). Similarly, Félix Guattari writes that "Marx himself had perfectly pinpointed the growing discrepancy between machinic, intellectual, and manual components of labour. In the *Grundrisse*, he had emphasized that the totality of knowledge tends to become an immediate productive power. He then insisted on the absurdity and the transitional character of a measure of value based on work-time" (2009, p. 247).

<sup>39</sup> This fragment has become one of the most commented passages from Marx's work, not only by Hardt and Negri, but also by most authors of Italian post-Marxism. "Since its first publication in Italian in 1964", Nicholas Thoburn writes, "the interpretation of the *Fragment on Machines* [...] has been akin to biblical exegesis. Such exegesis has not been a replication of authorial truth, but an iteration of the text in different socio-historical contexts as part of the composition of varying political forms" (2001, p. 80). In the same tone, Paolo Virno (1996) writes: "we have referred back many times to these passages – written in 1858 in a moment of intense concentration – in order to make some sense out of the unprecedented quality of workers' strikes, of the introduction of robots into the assembly lines and computers into the office, and of certain kinds of youth behaviour. The history of the *Fragment's* successive interpretations is a history of crises and new beginnings" (p. 265).

<sup>40</sup> To define the notion of wealth, Marx quotes Charles Wentworth: "Truly wealthy a nation, when the working day is 6 hours rather than 12 hours. *Wealth* is not command over surplus labour time (real wealth), but rather, *disposable time* outside that needed in direct production, for every *individual* and the whole society" (quoted in G, p. 705).



qualitative imbalance between labour, reduced to a pure abstraction, and the power of the production process it superintends” (G, p. 705). Marx defines this enormous productive power put forth by modern industry with the English term general intellect.<sup>41</sup> Modern industry, he writes, is the

*organ of the human brain, created by the human hand; the power of knowledge, objectified. The development of fixed capital indicates to what degree general social knowledge has become a direct force of production, and to what degree, hence, the conditions of the process of social life itself have come under the control of the general intellect and been transformed in accordance with it. (G, p. 706)*

Broadly speaking, the concept of general intellect refers to the vast social productive powers accumulated as fixed capital in modern industry. This entails the combination of scientific knowledge, technology and social cooperation put to the service of the production of commodities. For capital, this increase in productivity is merely a means to achieving the ultimate aim of constantly increasing the amounts of surplus time produced. Nonetheless, Marx notes, the constant search for shorter necessary labour time generates an increase in the “real wealth” of society, not measured in terms of surplus value, but in terms of the development of its productive forces:

to the degree that large industry develops, the creation of real wealth comes to depend less on labour time and on the amount of labour employed than on the power of the agencies set in motion during labour time, whose ‘powerful effectiveness’ is itself in turn out of all proportion to the direct labour time spent on their production, but depends rather on the general state of science and on the progress of technology, or the application of this science to production. (G, p. 704-5)

From the perspective of Italian post-Marxism, the *Fragment on Machines* and the concept of general intellect constitute an essential toolbox for the analysis of post-Fordism.<sup>42</sup> In this regard, some authors (Negri 2008, Virno 2007, Vercellone 2007, Lazzarato 1996) argue that it is only in post-Fordism that the tendencies analysed by Marx in the *Grundrisse* (and

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<sup>41</sup> Paolo Virno (2007) suggests that the term general intellect (used originally by Marx in English), is an expression of unknown origin, “perhaps a rejoinder of Rousseau’s *volonte generale*, or a materialist echo of the *Nous Poietikos*, the impersonal and separate *active mind* discussed by Aristotle in *De Anima*” (p. 4).

<sup>42</sup> According to Paolo Virno (2007, p. 3), Marx’s *Fragment on Machines* “is a crucial text for the analysis and definition of the post-Fordist mode of production” because it provides a series of reflections “on the basic trends of capitalist development” from a perspective which is “not to be found in any of Marx’s other writings”. For this reason, the fragment provides an alternative to Marx’s “habitual formula” in understanding the development of capitalism throughout the twentieth century (Virno 2007, p. 3). Virno writes that “In post-Fordism, the tendency described by Marx is actually fully realised but surprisingly with no revolutionary or even conflictual repercussions. Rather than a seedbed of crisis, the disproportion between the role of the knowledge objectified in machines and the decreasing relevance of labour time has given rise to new and stable forms of domination” (2007, pp. 4-5); and then he adds: “Rather than alluding to the overcoming of the existent, the ‘Fragment’ is a sociologist’s toolbox and the last chapter of a natural history of society. It describes the empirical reality that is under everyone’s gaze” (2007, p. 5).

synthesised in the notion of general intellect) become wholly realized. Both the notions of valorising information and that of immaterial labour, for example, could be read as reinterpretations of the notion of general intellect (Negri 2008, p. 62; Vercellone 2007, p. 16). For Negri, the notion of general intellect identifies a general tendency of capitalism towards immateriality, that is, a tendency to become increasingly dependent on “the intellectual and scientific energies that constitute [labour]” (2008, p. 62). This tendency towards immaterial labour, which is accelerated with the introduction of cybernetic machines, “renders unnecessary and ineffective (in other words destroys) the conditions within which accumulation has developed up to that point” (Negri 2008, p. 62). One direct consequence of this is the fact that it “renders irrelevant the measurement of labour time as a norm for fixing an order of labour in the world” (Negri 2008, p. 62).<sup>43</sup> In post-Fordism,

value exists wherever social locations of working cooperation are to be found and wherever accumulated and hidden labour is extracted from the turgid depths of society. This value is not reducible to a common standard [...] its apprehension and quantification are impossible. As to the act of measurement, it is interminable. (Negri 2005, pp. 91-92).

Hence Marx’s labour theory of value becomes “circular and tautological” and ceases to “fulfil its rationalizing function in political economy” (Hardt and Negri 1999, pp. 81-2).

The crisis of measurability identified by Negri becomes an important theoretical contribution to a critique of the attention economy. By diffusing the valorisation process of capital to the whole of society, the attention economy blurs the limits established by the classic division of the workers’ day between working-time and non-working-time. In this sense, large portions of what traditionally would be conceived of as non-working time become appropriated as productive but unpaid labour. Tiziana Terranova (2004), for example, coins the term ‘free labour’ to encapsulate how the internet exhibits a tendency to appropriate the work of its users as an essential part of its valorising process. Terranova writes: “we call this excessive activity that makes the internet a thriving and hyperactive medium ‘free labour’ – a feature of the cultural economy at large, and an important, yet unacknowledged, source of value in advanced capitalist societies” (2004, p. 73). For Terranova (2004, p. 91), “of the incredible amount of labour which sustains the Internet as a whole [...], we can guess that a substantial amount of it is still ‘free labour’”, i.e. a form of immaterial labour which generates value but

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<sup>43</sup> Negri writes: “We are in a situation where *labour time* on the one hand and, on the other the *criterion of measure* of this time (and hence the law of value) become less and less important as *central quantifying elements of production*. It will be, rather, the social and collective individual who will determine the value of production, since, given that labour is organised in communicative and linguistic forms, and given that knowledge is something cooperative, production will depend increasingly on the unity of connections and relations that constitute intellectual and linguistic labour” (Negri 2008, p. 63).

which is unpaid for. The internet is an extremely productive territory for these processes, where unpaid activities are turned into value-producing ones, dissolving the boundaries between labour time and free time. From Terranova's perspective, it could be said that the attention economy constitutes a specific form of free labour, in the sense that it works as a mechanism aimed at the appropriation of the general intellect as a source of economic profit.<sup>44</sup>

Furthermore, the transformation of the labour process from repetitive factory task to the kind of language-based activity characteristic of immaterial labour leads to a crisis of the measurability of value based on chronological labour time. In his book *Capital and Language* (2008), Christian Marazzi suggests that the attention economy, given its cognitive properties, challenges chronometric time as the single measure of the productivity of commodities (p. 43). Similarly, Davenport and Beck (2001) argue that one of the central problems of the attention economy is the lack of an adequate method for measuring attention. In the absence of a precise system, the authors state, "we often use the proxy of time" (2001, p. 11). The problem, however, is that "time is not the same as attention and is sometimes a poor proxy for it" (p. 11). Davenport and Beck differentiate time management from attention management, and claim that too often these two forms of management are taken as synonyms, homogenizing attention time and labour time (2001, p. 27). For a long period, they state, capitalism has been running on the axiom that "time is money", which "worked very nicely in the industrial age" (2001, p. 28). In other words, they acknowledge that the use of labour time as a measurement of value is historically specific to the age of industrial production. In that context, the "motion and time studies" of Frederick Taylor and the assembly line implemented by Henri Ford represent the high point of a world dominated by the clock (Davenport and Beck 2001, p. 29). With the advent of post-Fordism, however, labour time becomes an obsolete form of measure. The "time century is over", Davenport and Beck claim, arguing that

the utility of such a system has long since disappeared, although the time-based system has become deeply ingrained in our culture and work practices [...] In a world in which speed, knowledge, and creativity are vital, does it not seem odd that most of us are still paid for how

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<sup>44</sup> Mark Andrejevic's text *Exploiting Youtube: Contradictions of User-Generated Labour* (2009) is a good example of how Terranova's concept of 'free labour' has been used to explain and critique the attention economy. However, in this text Andrejevic also questions to what extent is Marx's concept of exploitation an adequate concept to define the production of profit by sites like Google or Youtube (2009, p. 417). As it will be shown in the next section, the crisis of the traditional notion of exploitation is an essential problem that needs to be addressed in order to understand the transformations of labour in post-Fordism and to grasp the role of the attention economy within this process.

long we take to complete a job or how much the deliverable weighs, rather than the attention paid to the project? (2001, p. 29)

The impossibility of establishing a genealogy of socially necessary labour time in the attention economy means that it is no longer possible to define exploitation based on the classic Marxist definition according to which the capitalist expropriates a portion of the worker's working-day without paying for it. Therefore, a critique of the attention economy demands a reinterpretation of the nature of capitalist exploitation under post-Fordist conditions of production. This constitutes the second aspect of Negri's deconstruction of the labour theory of value.

### 3.2. LABOUR, EXPLOITATION AND POWER

For Negri, the fact that the labour theory of value has been thrown into crisis does not mean that labour has stopped being a central element in the constitution of society. On the contrary, with the consolidation of post-industrialism (and the expansion of the factory to the whole of society) labour becomes a central mechanism of social control.<sup>45</sup> This means that capital "becomes more and more dissociated from a purely value definition and operates more and more in a context of relations of force" (Negri 1988, p. 127).<sup>46</sup> In other words, despite the fact that the law of value has become tautological as a measuring mechanism for political economy, labour still functions as a key aspect of social constitution.<sup>47</sup> The contemporary "end of the law of value", Negri writes, "does not diminish the centrality of the contradictions tied to social labour" (1996, p. 149). The most important of these contradictions is the fact that despite the tendency to completely eliminate labour from the productive process, capitalism continues exploiting labour as the sole source of surplus value. At the same time,

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<sup>45</sup> Negri's thesis of the role of labour in post-Fordism is contrary to the one sustained by Claus Offe in his essay "Work: the key sociological category?" (1985). For Offe, the passage from an industrial to a post-industrial society signifies the end of labour as a central category in the constitution of society. This change happens at an objective and a subjective level: objectively, automated factories displace labour as a necessary element in the productive process; subjectively, labour stops being a central mechanism in the constitution of people's subjectivities (see Offe 1985 and Cleaver 1989).

<sup>46</sup> Harry Cleaver (1989) explains that, according to Negri, labour in post-Fordism "has been transformed from the hidden secret of commodity fetishism and market relations whose workings could be understood through Marx's labour theory, to an unmediated vehicle of capitalist command" (p. 7). In other words, Cleaver adds, "the capitalist imposition of work is now separated from wealth creation; it is purely a repressive mechanism of control" (p. 8).

<sup>47</sup> Negri writes that, "when we say that there is a crisis of the law of value, we mean that today value cannot be reduced to an objective measure. But the incommensurability of value does not eliminate labour as its basis" (Negri 1996, p. 151).

the impossibility of measuring value in terms of labour time demands a reinterpretation of the idea of exploitation.

According to Marx, capitalist exploitation is based on the extortion of surplus value from the worker. As such, it is based on the labour theory of value, according to which the worker is paid only for a portion of his labour time while the capitalist expropriates the rest without paying for it. This is the origin of surplus value and the basic definition of capitalist exploitation. The problem with the crisis of the labour theory of value, Negri contends, is that once we lack a theory of measure, “it is no longer possible to define these quantities” (1996, p. 153). Put differently, in contemporary capitalism the concept of exploitation can no longer be defined by the extortion of a quantity of labour time from the workers simply because it has become impossible to measure value by means of labour time.<sup>48</sup> This does not mean that exploitation ceases to occur; it only needs to be redefined.

For Marx, the wage system exploits the worker by paying him only for a fraction of his labour time and expropriating the rest. For Negri, the social character of production renders this individual-oriented account of exploitation obsolete: “wages are the expression of individual expropriation, whereas in advanced capitalism, expropriation directly affects the community and the collectivity. Advanced capitalism directly expropriates labouring cooperation” (2005, p. 116). What defines post-Fordism is that capital penetrates

the entire society by means of technological and political instruments in order, not only to follow and to be kept informed about, but to anticipate, organize and subsume each of the forms of labouring cooperation which are established in society in order to generate a higher level of productivity. (2005, p. 116)

In this productive context, exploitation consists not in the extortion of a fraction of labour time, but in the extortion of “science, communication and the communication of knowledge” (Negri 2005, p. 116). In other words, exploitation is the extortion of the general intellect, “form and product of social cooperation” (Negri 1996, p. 153). In post-Fordism, the nature of capitalist exploitation has expanded its domain both extensively and intensely. On the one hand, it has subsumed areas of life that used to be foreign to it; on the other, it has changed its

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<sup>48</sup> For Negri, “the criteria of exploitation come to be placed under critique. Its concept can no longer be brought back within the category of quantity” (1996, 157). Following Negri, Max Haiven and Scott Stoneman (2009) claim that “when capitalist discipline no longer relies primarily on the factory or, more accurately, when factory discipline becomes more broadly social, capital’s former technology of measure (socially-necessary labour time) is thrown into crisis. For capital, value is no longer only produced by the incarceration of workers’ time but by broader struggle over social temporality directly” (p. 23). Similarly, Félix Guattari claims that nowadays wages do not only buy a duration of average social labour, but they exercise a power relation between the “workers and the social groups that control the arrangements of production and social formations” (SS, p. 248). In this sense, he says, “the capitalist does not extort a surplus of time, but a complex qualitative process” (SS, p. 248).

nature so as to exploit not only labour time, but the totality of social cooperation. In this sense, the political constitution of post-industrial society functions by “stripping from the social process of productive cooperation the command over its own functioning” and by doing so, “closing social productive power within the gridding of the system of power” (Negri 1996, p. 154). Negri concludes that, while the law of value considers labour time as the individual unfolding of human energy, in post-Fordism exploitation is

the production of an armory of instruments for the control of the time of social cooperation. The labour time of full, whole social cooperation is here submitted to the law of the maintenance of domination. The time of liberation, which is the very time of the highest productivity, is therefore cancelled in the time of domination. (Negri 1996, p. 154)

It is important to note in this quote the distinction between “time of liberation” and “time of domination”. Following Marx, Negri defines the time of liberation as the time “of the highest productivity”. This means that the technical and scientific development of modern industry has generated an enormous reduction of the necessary time for production, thus creating vast amounts of disposable time. For Marx, this disposable time becomes time for “higher activities”, transforming “its possessor into a different subject, [who] then enters into the direct production process as this different subject” (G, p. 712). The more this develops, “the more does it become evident that the growth of the forces of production can no longer be bound up with the appropriation of alien labour, but that the mass of workers must themselves appropriate their own surplus value” (G, p. 708). This is the emancipative character of modern industry, identified by Marx in the *Fragment on Machines*, and which Negri refers to as time of liberation. However, this time of liberation is “cancelled” in another time, the time of domination. By this, Negri refers to the process in which labour time extends from the factory to the whole of society, thus exploiting not only a fraction of the working day but the totality of social life. This becomes clear in Paolo Virno’s (2007) interpretation of the *Fragment on Machines*. For Virno, although Marx was correct to point out that with the reduction of necessary labour time the worker engages in “higher activities” which transform him or her into a different subject, this does not necessarily translate into the workers re-appropriating the surplus value they produce. On the contrary, Virno claims that in post-Fordism, the labouring process

actually takes advantage in its own way of this very transformation, albeit depriving it of all emancipatory aura. What is learned, experienced and consumed in the time of non-labour is then utilised in the production of commodities, becoming a part of the use-value of labour power and computed as profitable resource. Even the greater ‘capacity to enjoy’ is always on the verge of being turned into labouring task. (2007, p. 5)

In order to preserve its command, capitalism demands a constant cancellation of the time of liberation that it has created through the reproduction of a time of domination. In post-Fordism, labour is no longer the only source of value; it is now integrated in a broader network of technology, science and social cooperation. At the same time, however, labour has become the main mechanism of capitalist command, which cancels the time of liberation put forth by the development of the productive forces in a time of domination that extends labour time to the whole of society.

The attention economy can be understood as a concrete mechanism aimed at reproducing the systematic cancellation of the time of liberation created by the technical transformations of industrial processes and, in doing so, reproducing the time of capitalist domination. By turning every aspect of life into a source of valorising information (and hence into a form of immaterial labour), the attention economy subsumes the enormous productive powers unleashed by post-Fordism under the homogeneous logic of surplus value. The attention economy does in fact exploit labour, but not in the traditional sense of expropriating a portion of the working day. It does so by means of appropriating the general intellect, the collective knowledge produced day and night with every single micro-decision of men, women and children that cybernetic machines record, process and feed back into the valorising cycle of capital. In doing so, the revolutionary promises of technological development are negated and the empire of the value-form reproduced.

This shift in the forms of capitalist valorisation and capitalist exploitation that characterises the attention economy demands a new critical approach capable of addressing the specific issues of temporality and power. As mentioned above, the attention economy cancels a time of liberation (put forth by the development of the productive forces) and reproduces a time of domination (i.e. the capacity of capital to command human activity). In other words, by expanding the valorisation process of capital from the factory to the whole of society, the attention economy establishes an immediate relation between labour and power that is no longer mediated by abstract labour time. In this context, the traditional categories that inform Marx's critique of political economy and his labour theory of value become insufficient for the task of conceptualising the internal relation between temporality and power that defines the attention economy. The next chapter will examine this relation in an attempt to contribute to a better understanding of the way in which the attention economy reproduces the subsumption of human activity under capital.

## **CHAPTER THREE**

### **HYPER-ATTENTION AND THE INDUSTRIALISATION OF TEMPORALITY**

Chapters one and two have examined the attention economy from the perspectives of labour and value. More specifically, chapter one considered the attention economy as a new form of labour and hence as a new territory of capitalist exploitation. At the same time, however, chapter one noted the historical character of the category of labour. This means that labour has to be understood as a strictly capitalist category which, as such, cannot be grasped without examining the historical transformations of value. Using the concepts of valorising information and immaterial labour, chapter two explored how the attention economy becomes a new source of surplus value. In doing so, it challenged the traditional opposition between living labour and machines. Through the prism of Italian post-Marxism, chapter two contended that the attention economy demands a reconceptualization of the organic composition of capital which in turn unveils the obsolescence of Marx's labour theory of value. Furthermore, chapter two argued that the obsolescence of the labour theory of value calls for a new understanding of the exploitation of labour, i.e. a new understanding of the relation between labour and power. What happens is that labour becomes disentangled from a strictly value relation and appears more and more as a power apparatus aimed at reproducing capitalist relations of force. This shift marks a significant step for an immanent critique of the attention economy since it allows understanding the attention economy not only as a new form of labour, but mainly as a concrete power apparatus whose function is to reproduce a given social order.

To advance the analysis of the attention economy, this chapter focuses on the relationship between temporality and power. On the one hand, this chapter uses Bernard Stiegler's concept of cinematic time (2011b) in order to challenge the opposition between living labour time and dead technical time that informs Marx's account of the organic composition of



capital. In this sense, this chapter attempts a conceptualization of the organic composition of capital more adequate to a post-Fordist mode of production. On the other hand, this chapter examines Stiegler's hypothesis regarding the political consequences of the massification of digital technologies and the industrialisation of memory in contemporary capitalism. From this perspective, this chapter connects the problem of labour time to its political dimension.

In chapter two, it was argued that the cognitive turn that characterises post-Fordism (which places knowledge and information at the heart of the productive process) turns labour time into an obsolete category to act as the measure of value. As Franco Berardi puts it, with the technological mutations introduced by post-Fordism,

something new happens in the relationship between time, work, and value [...] work ceases to be the strong, muscular work of industrial production, and begins producing signs – products that are essentially semiotic. In order to establish the average time needed to produce a glass, one simply needs to understand the material labour involved in converting sand into glass, and so forth. But try to decide how much time is needed to produce an idea, a project, a style, a creation, and you find that the production process becomes semiotic, with the relationship between time, work, and value suddenly evaporating, melting into air. (2011)

Berardi (2011) also notes that Marx himself was the first to pose the question of the historical limits of labour time.<sup>1</sup> In the *Grundrisse*, Marx defines capitalism as “the moving contradiction” which employs technology to reduce necessary labour time while at the same time posing labour time as “sole measure and source of wealth” (G, p. 706). In order to counteract the tendency to crisis inherent in this contradiction, capitalism is forced to reduce constantly the amount of necessary labour time and increase the amount of relative surplus value. This tendency propels capitalism into a continual process of acceleration. In Berardi's words, “when Marx speaks of relative surplus value he is speaking about acceleration: if you want a growth in productivity – which is also a growth in surplus value – you need to accelerate work time” (2011). With the historical transition to post-Fordism and the implementation of automation and information technologies in the productive process, the tendency towards acceleration and speed proper of capitalism enters a new phase (Berardi 2011).<sup>2</sup>

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<sup>1</sup> Similarly, Félix Guattari argues that in the *Grundrisse*, Marx identifies the “absurdity and the transitional character of a measure of value based on work-time” (SS, p. 247).

<sup>2</sup> There have been several theoretical responses to the new phase of acceleration characteristic of post-Fordism (or late capitalism): David Harvey defines this stage through the notion of a “postmodern time-space compression” in which time “annihilates” space (1989, p. 299); Paul Virilio (1991; 1995; 2006) analyses the relation between speed, capitalism and politics in a world in which real-time gradually replaces the physical limits of space; Manuel Castells proposes the notions of flexible and network times as an alternative to the linear time of industrial capitalism (2010, p. 467-8); Jonathan Crary argues that digital technologies are creating a “24/7” time where no aspect of life escapes the economic cycles of capitalism, thus causing a “brutal

In the case of the attention economy, the logic of acceleration can be employed to explain the growing discrepancy between human attention-time and the inhuman time of the flows of information.<sup>3</sup> Franco Berardi, for example, argues that when labour becomes cognitive, acceleration comes to depend less on manual work and more on the speed of the info-sphere (2011). The problem, he notes, is that since the brain “functions in time, and needs time in order to give attention and understanding [...] attention cannot be infinitely accelerated” (2011). Therefore, Berardi concludes, in the attention economy speed and acceleration are “linked to the relation between the amount of semiotic goods being produced and the amount of attentive time being disposed of” (2011).<sup>4</sup> From this perspective, the temporality of the attention economy appears as the result of an asymmetrical relation between the limited temporality of the subject (or user) and the relatively unlimited temporality of the flows of information (or cyber-time).

The problem with this understanding of the temporality of the attention economy is that it reproduces an obsolete opposition between the temporality of living labour and that of dead, fixed capital. Put differently, by defining the temporality of the attention economy through the discrepancy between a human, subjective time and the cyber-time of the info-sphere, Berardi (2009; 2011) repeats Marx’s distinction between living labour time and dead

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discrepancy between the temporal operation of deregulated markets and the intrinsic physical limitations of the humans required to conform these demands” (2013, p. 15); finally, Cristian Marazzi suggests that together with the crisis of industrial capitalism comes a crisis of “Newtonian time”, a crisis “of industrial time as homogeneous, abstract, chronometric, computable objectifiable time, external to human beings and to things” (2008, p. 51). At the same time, a series of authors have appropriated the term accelerationism to describe a political program based on the acceleration of the tendencies and contradictions of capitalism in order to facilitate its own destruction (see for example Nick Land’s notion of “meltdown acceleration”, 2012, p. 449; and Williams and Srnicek’s *Accelerate Manifesto for an Accelerationist Politics*, 2013).

<sup>3</sup> Since its original formulation by Herbert A. Simon (1971), the question of time as the measure of the value of attention has been a central concern for both the apologists and critics of the attention economy. Simon suggests that to efficiently allocate attention, “ways must be found to measure the quantities of the scarce resource” (1971, p. 7). A way of doing this, he suggests, is measuring the attention-time necessary for the consumption of a given message: “scarcity of attention in an information-rich world will be measured by the time, in minutes or in hours, say, of a human executive” (1971, p. 8). For Simon, this is possible because human attention is essentially a serial activity, i.e. if we attend to one thing, we cannot, “simultaneously, attend to another” (1971, p. 8). In this respect, even contemporary multi-tasking has to be seen as the sharing of linear attention-time between several objects. As Simon puts it: despite the fact that modern multi-task users “seem able to attend to one hundred things at once; they really do not, of course. Rather, they share their time and attention among these hundred things. Hence, the attention-capacity measure I am proposing will work for time-sharing systems as well as for more conventional computing systems or human beings. An organisation employing many people can also be viewed as a time-sharing system, and its attention-allocation problem treated accordingly” (1971, p. 8).

<sup>4</sup> Berardi (2009) writes that the essential problem with the attention economy is that “the rhythms of the technological mutation are a lot faster than those of mental mutation. Hence the expansion of cyberspace is incommensurably faster than the human brain’s capacity to expand and adapt. We can increase the length of time an organism is exposed to information, but experience can’t be intensified beyond a certain limit. Acceleration provokes an impoverishment of experience, given that we are exposed to a growing mass of stimuli that we can’t digest in the intensive modes of enjoyment and knowledge” (p. 89).

technical time. In doing so, Berardi fails to acknowledge the obsolescence of Marx's account of the organic composition of capital, thus universalising abstract human time as the sole source and measure of value. Furthermore, Berardi poses human time as an external, ahistorical standpoint from where to develop a critique of the attention economy. Hence, Berardi replicates the methodological error that is committed by traditional Marxism: he universalises a given notion of time and thereby renders it a transcendental character of the human constitution. Chapter one argued that labour should not be understood as a transhistorical category that grounds all forms of social constitution. Instead, labour should be conceived of as a strictly capitalist category (i.e. human activity measured in terms of abstract value). Moreover, chapter one examined Postone's (1993) critique of traditional Marxism according to which its notion of labour reproduced that of political economy. For Postone (1993, p. 7), the problem with traditional Marxism is that it presupposes a universal notion of labour as an external standpoint from where it develops its critique of capitalism, instead of developing a critique of the notion of labour itself. The same can be said of Berardi's (2009; 2011) account of the temporality of the attention economy: he opposes a human-time to a dehumanising cyber-time (as if the two were completely independent from each other) and uses the former as an ahistorical criterion from where to criticize the rapid acceleration of the latter.

By contrast, Bernard Stiegler's (1998; 2009) theory of originary technicity offers a new definition of technology which allows us to question the opposition between living labour and technology that grounds Marx's account of the technical and organic composition of capital. Furthermore, Stiegler's (2011b) concept of cinematic time lays the foundations for breaking with the distinction between labour time and technology. In this regard, Stiegler's theory of originary technicity and his concept of cinematic time allow the immanent analysis of the attention economy to be moved forward by addressing the insufficiency of Marx's labour theory of value for the specific context of post-Fordist capitalism.

To develop this hypothesis, this chapter is divided in three parts. The first one introduces Stiegler's (2011b) concept of cinematic time and its relation to his broader theory of originary technicity (1998; 2009). In Stiegler's view, cinema has to be understood as a "technical temporal object" (TT3, p. 12). This demands contextualising Stiegler's theory in relation to Husserl's concept of temporal object and the philosophy of time contained in it. At the same time, Stiegler deploys the concepts of deep- and hyper-attention in order to analyse what happens to temporal experience in an age where attention becomes governed by digital

technologies. The second part focuses on what Stiegler, following Adorno and Horkheimer, calls the “industrialisation of schematism” (TT3, p. 38). For Stiegler, the massification of digital technologies and industrial temporal objects creates an industrialisation of consciousness that normalises a given experience of time. This section compares Heidegger’s reading of the temporality of imagination with that of Stiegler. While the former reproduces an ahistorical reading of the temporality of imagination, Stiegler introduces an audacious theory of time that attempts to link the transcendental production of time together with technical and social changes. In doing so, Stiegler shows the interrelation between dead technical memory and living memory, thus challenging the opposition between living labour time and the temporality of fixed, dead capital. The chapter ends by outlining the theoretical shortcomings of Stiegler’s theory insofar as it fails fully to grasp the phenomenon of the attention economy. Despite its novel theory of time and its contribution to advancing a reconceptualization of the organic composition of capital, Stiegler’s insistence on the phenomena of normalisation and individuation renders his analysis of digital technologies an obsolete framework. By introducing the limitations of Stiegler’s theory, this last section paves the way for chapter four, which employs Deleuze and Guattari’s concept of machinic labour to advance the immanent critique of the attention economy.

## 1. THE NOTION OF CINEMATIC TIME

Bernard Stiegler introduces the concept of cinematic time in the third volume of his *Technics and Time* book series (1998; 2009; 2011b). As part of this series, the concept of cinematic time belongs to Stiegler’s broader theory of originary technicity. Stiegler claims that technology is not external to the human constitution (i.e. a tool that a fully constituted individual uses for a specific goal), but rather that humans are constituted by technology through an on-going process of exteriorisation (or grammatization).<sup>5</sup> Furthermore, the theory of originary technicity implies a theory of temporality according to which our internal capacity to temporalise (to experience the world as a temporal flow) is shaped by this continuous process of exteriorisation (Bradley 2011, p. 120).<sup>6</sup> Put differently, technics is an

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<sup>5</sup> According to Arthur Bradley (2011), the term “originary technicity” was first coined by Jacques Derrida as a crucial element of his “deconstruction of the western metaphysics of presence” (p. 3). In this sense, he argues, Stiegler’s treatment of technicity is a continuation of Derrida’s idea that the origin of temporality lies in an originary process of “grammatization” (Bradley 2011, p. 11-2).

<sup>6</sup> Bradley (2011) writes: “Stiegler’s philosophy of technology is based on the audacious claim that there is an essential relation between technics and time: what phenomenology calls the human capacity to ‘temporalise’ – to organise its experience of the flow of time – is constituted through, rather than merely supplemented by,

“external” memory support which determines our “internal” temporal experience, thus blurring the limits between inside and outside, between a living experience of time and technical, dead memory.

The concept of cinematic time has to be understood as part of this broader relationship between technics and time. In this sense, cinematic time presupposes an interrelation between images (as an external, technical memory support) and our human capacity to experience these images temporally.<sup>7</sup> Stiegler employs a very broad concept of cinema which includes any set of images in movement (e.g. cinema, television, analogue and digital video, etc.). Accordingly, his analysis applies to any device on which these images in movement are contained (i.e. not only cinema screens, but also television sets, smart-phones, computer screens, tablets, street billboards, etc.). This understanding of cinematic time is significant for an analysis of the temporality of the attention economy. As mentioned above, the temporality of the attention economy is often understood as the result of an asymmetrical relation between the limited temporality of the subject (or user) and the unlimited temporality of the flows of information (or cyber-time). As Berardi (2011) puts it, attention is a brain function that requires time (and cannot, thus, “be infinitely accelerated”). The problem with this conception is that it naturalises a given notion of human time, thus failing to grasp the interconnection between the temporality of the subject and the historical, technical and social transformations that have made the attention economy possible. In other words, this understanding reproduces what Stiegler claims to be the common trait of Western

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mnemo-technical prostheses [...] For Stiegler, western philosophy from Greek metaphysics to modern phenomenology instead constitutes a series of oppositions *between* technics and time that relegates the former to a purely incidental or supplemental position. To Stiegler’s way of thinking, by contrast, we can no longer oppose technics and time: *all* time [...] is technical all the way down” (p. 120). Accordingly, Patrick Crogan (2006) claims that: “Time itself as lived by human beings is constituted in and through this technical prostheticity. Both anticipation of the future and memory of a past not lived become possible with the advent of the tool. The tool is a kind of external memory of the experiences and knowledges of those who devised and refined it and passed it down. To use it is to anticipate the future resulting from its deployment, a future inherited from those past lives of which it is the crystallised exteriorisation” (p. 40).

<sup>7</sup> It is useful to note that Stiegler’s broad definition of cinematic time breaks with the representational understanding of the relation between images and temporality. Traditionally, the relation between images and temporality has been reduced to the sphere of representation: be it cinema or photography, an image is conceived of as an external memory support that fixes a fleeting moment, that is, it represents a specific fragment of time (see Bazin 2004 and Doane 2002). By contrast, Stiegler’s theory of originary technicity allows thinking both time and images from a perspective beyond representation. As will be shown, for Stiegler, images do not represent time; rather, they produce a given temporality that shapes the temporal experience of the subject. In this regard, Stiegler’s non-representational treatment of cinematic time could be understood within the rather small tradition of film phenomenology. Casebier (1991), Sobchack (1992), Susan Buck-Morss (1994), and Shaw (2008) constitute some of the few attempts to construct a phenomenology of film. Stiegler’s use of Husserl’s concept of temporal object seems to place him within this tradition. However, his particular reading of Husserl (influenced by Derrida’s own reading) also marks an important break with the phenomenological concept of subjectivity.

metaphysics, i.e. the opposition between “living psychic time” and “dead technical memory” (2006, p. 23). Furthermore, it could be said that Marx’s labour theory of value, too, reproduces the metaphysical understanding of time by opposing living labour time to dead time (coagulated in fixed capital).

Alternatively, Stiegler’s theory of cinematic time attempts to “rethink memory as a process of grammatisation in which living memory and dead memory permanently rub shoulders with one another” (2006, p. 23). By posing tertiary memory as originary, Stiegler claims that living psychic memory is the result of a process of temporal organization in which dead technical memory plays a determining role. With this novel theory of time, Stiegler introduces an important conceptual framework from where to reflect upon the temporality of the attention economy; one which makes it possible to move away from the human-time/cyber-time opposition. By identifying an internal relation between images and time, Stiegler aims to show that the temporal experience of the subject is constantly shaped by external surfaces of inscription that function as an external memory support. Stiegler’s notion of cinematic time breaks with the opposition between a natural, subjective time and a time of information (or cyber-time), posing the former as the result of an endless process of exteriorisation in which the historical transformations of the surfaces of inscription constantly modify the temporal organisation of consciousness. In this regard, Stiegler’s theory provides a novel framework to reinterpret Marx’s account of the industrial composition of capital that puts into question the main presuppositions of his labour theory of value. As such, Stielger paves the way towards constructing an alternative perspective for understanding the relation between value, technology and time in the age of the attention economy.

### 1.1. CINEMA AS A TECHNICAL TEMPORAL OBJECT

For Stiegler, cinema is a “technical temporal object” (TT3, p. 12). This means that cinema contains a temporal extension in itself which “coincides with the stream of consciousness of which it is the object” (TT3, p. 12). He borrows the notion of temporal object from Husserl (1991). According to the latter, our consciousness is always consciousness of something. In other words, our consciousness is always intentional. This means that it is not possible to examine our consciousness as if it were an empty container, free from an object. Therefore, the temporal unfolding that characterises consciousness can only be the object of phenomenological inquiry through the analysis of a temporal object, i.e. an object whose

temporality coincides with that of consciousness (Husserl 1991, p. 24).<sup>8</sup> For Husserl, the privileged temporal object for a phenomenological analysis of the temporal character of consciousness is the melody (1991, p. 24). Through the analysis of the melody, Husserl unveils the basic concepts that explain the phenomenological experience of the passage of time: retention and protention. Every time we hear a melody, each present note (“now”) is determined by the preceding note that remains in our consciousness as “just-past-now” (retention) and by the following note that we expect to come (protention).<sup>9</sup> In this sense, Husserl explains temporal experience not as a mere succession of “nows”, but as a permanent flux in which each instant is immediately interlaced with the “just-past-now” and the “not-yet-now” (1991, pp. 34-5).

Stiegler borrows the notion of temporal object to explain his concept of cinematic time, displacing his analysis from the melody to the visual domain. Like Husserl, he claims that “it is only possible to account for the temporality of consciousness by analysing an ‘object’ that is itself temporal” (TT3, p. 13). Nevertheless, Stiegler adds the term “technical” in order to challenge Husserl’s own understanding of temporality and to suggest a new theory according to which the experience of a temporal object is the result of a process of pre-conscious temporal organization determined by technical exteriorisation. In other words, living time is constantly being shaped by traces of dead memory (Stiegler 2006, p. 23). In this regard, the originality of Stiegler’s notion of cinematic time has to be understood in the light of Husserl’s own philosophy of time.

Husserl (1991) carefully distinguishes between primary memory (pre-conscious retention), secondary memory (active recalling) and tertiary memory (external memory support). At the same time, he claims that the study of the “origin of time” must focus strictly on the analysis of primary memory and should, therefore, bracket out secondary and tertiary memories (1991, p. 47). For Husserl, the separation between these three forms of memory is crucial for distinguishing the presentation of time (its perception) from the representation of time (its

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<sup>8</sup> In Husserl’s words, “a phenomenological analysis of time cannot clarify the constitution of time without considering the constitution of temporal objects” (1991, p. 24). “By temporal objects”, Husserl writes, “we understand objects that are not only unities in time but that also contain temporal extension in themselves” (1991, p. 24).

<sup>9</sup> David Couzens (2009) summarizes it like this: “Protention is the projected horizon, the intentional anticipation that reaches toward the immediate future, just as the retention holds onto the immediate past in the fading out of the primal impression. Past, present, and future are different from retention and protention. We experience ourselves as in time and as having a past, present and future because our temporality involves the structure of protention, retention and primal impression” (p. 51). Nevertheless, Couzens (2009) also notes that Husserl’s analysis of the melody says much more about retention than about protention (p. 52).

imagination).<sup>10</sup> Primary memory, which retains the “just-past-now” in the following “now”, belongs to the living-experience of perception, whereas secondary memory, the active recalling of a past event, belongs to the faculty of imagination (Husserl 1991, p. 43). In this sense, Husserl contends that, strictly speaking, every act of recalling is indistinguishable from phantasy (since it relies on representation and not presentation). Furthermore, Husserl uses this distinction between imagination and perception as a refutation of Franz Brentano’s theory of the “origin of time” (1991, p. 47).

In Brentano’s view, the experience of the passing of time is possible only because of the primary association of instants which is carried out by the faculty of imagination. By contrast, Husserl claims that the true origin of the experience of time is found in primary memory or retention (i.e. in perception). For this reason, imagination should be bracketed out of a strictly phenomenological analysis of temporality (Husserl 1991, p. 14). Husserl writes:

At this point our position with respect to Brentano’s theory that the origin of the apprehension of time lies in the domain of phantasy is definitely decided. Phantasy is consciousness characterized as representation (reproduction). Now there certainly is represented time; but it necessarily points back to a time that is given originally, a time not phantasied, but presented. (1991, p. 47)

The source of this “presented time” (as opposed to “represented time”) lies precisely on the mechanism of retention characteristic of primary memory. As Husserl puts it:

Only in primary memory do we see what is past, only in it does the past become constituted – and constituted presentatively, not representatively. The just past, the before in opposition to the now, can be directly seen only in primary memory; it is its essence to bring this new and original past to primary, direct intuition, just as it is the essence of the perception of the now to bring the now directly to intuition. On the other hand, recollection, like phantasy, merely offers us representation. (1991, p. 43)

Stiegler’s notion of cinematic time has to be understood from the perspective of the Husserl-Brentano debate on the origin of time. Contrary to Husserl, Stiegler contends that primary retention (i.e. the pre-conscious capacity to organise temporal experience) is constantly determined by the technical exteriorisation of temporal objects (i.e. tertiary memory). In this sense, Stiegler suggests, Husserl’s bracketing out of secondary and tertiary forms of memory ignores the fact that the distinction between these three levels of memory is foremost the result of the technical support through which we experience a temporal object (TT3, p. 21).

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<sup>10</sup> Husserl writes that perception is “the act that places something before our eyes as the thing itself, the act that *originally constitutes* the object. Its opposite its *re-presentation*, understood as the act that does not place an object itself before our eyes but just *re-presents* it” (1991, p. 43); and then he adds that “representation is the opposite of the act that gives something originally; no presentation can ‘spring’ from it” (1991, p. 47).



Using the same example as Husserl, Stiegler argues that when listening to a melody for a second time, temporal experience is changed by the memory of the first listening:

It is enough to have heard a melody twice through in order to be able to state that in these two hearings consciousness had not been listening with the same ears: that something happened between the first and second hearing [...] From one hearing to another it is a matter of different ears, precisely because the ear involved in the second hearing has been affected by the first. The same melody, but not the same ears nor, thus, the same consciousness: consciousness has changed ears, having experienced the event of the melody's first hearing. (TT3, p. 17)

In this sense, Stiegler contends that every time an individual hears a melody, his or her hearing cannot be disengaged from secondary and tertiary memories; instead, Stiegler adds, the experience of a melody has to be understood as the result of everything that “has already musically happened to me” (TT3, p. 19). This is so precisely because of the technical exteriorisation of temporal objects (tertiary memory) which guides the interaction between primary and secondary memory. Tertiary memory, Stiegler says, “is what finally roots the primary and the secondary [memories] in one another” (TT3, p. 21).<sup>11</sup>

This is the basic principle behind Stiegler's reinterpretation of Husserl's notion of temporal object. By introducing the term “technical”, Stiegler emphasizes the dependence of primary and secondary memories on tertiary, external memory. In this sense, Stiegler's concept of cinematic time implies a novel theory of time in which tertiary memory determines the disposition between primary and secondary memories. For Stiegler, consciousness operates as a “post-production centre”: “a control room assembling the montage, the staging, the realization and the direction, of the flow of primary, secondary and tertiary retentions, of which the unconscious, full of potential possibilities, would be the producer” (TT3, p. 28). Stiegler's philosophy of time contends that technical transformation (e.g. the invention of the phonogram and cinema, or the massification of personal computers and smart-phones), directly modifies the temporal organisation of experience. In this sense, Stiegler challenges the metaphysical opposition between technics and time which conceives the former as an external, historical element and the latter as a transcendental, ahistorical faculty. This entails putting into question the basic presuppositions of Marx's labour theory of value. Whereas for Marx there is a clear distinction between living labour and fixed capital (according to which only living labour can produce value), from Stiegler's perspective it is possible to say that living labour time is the result of a process of technical exteriorisation that depends upon the

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<sup>11</sup> For Stiegler, the awareness of this process is possible only because of the technical possibility of the temporal object's repetition. In this regard, Stiegler states that “it cannot be emphasized strongly enough that before the phonograph, as before the cinema, such repetitions were strictly impossible” (TT3, p. 21).

development of the productive forces of a given society. Put differently, Marx's distinction between living labour and fixed capital can be read retrospectively as repeating Husserl's phenomenological distinction between the presence of living time and its representation. For this reason, Stiegler's reinterpretation of Husserl can also be used to reinterpret Marx's general understanding of the relation between labour and technology. From the perspective of Stiegler's theory of originary technicity, labour time is not a universal measure of value, but the result of an ongoing process of technical exteriorisation.

In relation to the specific object of the attention economy, Stiegler's thesis challenges the opposition between a natural, human time of attention and an inhuman, technical time of information. Stiegler's framework proposes that the temporality of the subject is the result of a process of production in which technical temporal objects constantly organize temporal experience. In this sense, Stiegler offers a quasi-transcendental theory of time which, on the one hand, identifies a series of *a priori* principles in order to explain the production of time while, on the other, contends that these *a priori* principles are historically, socially and technically determined.<sup>12</sup> Following this twofold connection between living time and technology, Stiegler argues that the growth of global mass-media and the massification of digital technologies have a direct impact on the temporal constitution of the subject, rearranging the *a priori* organization of temporal flows that constitute his or her experience. For Stiegler, the historical emergence of the attention economy coincides with the exponential growth of "industrial temporal objects" which simultaneously expose billions of conscious beings to the same temporal experience (TT3, p. 3). This creates a "homogenization of the temporality of consciousness" which at the same time leads to a systematic "loss of individuation" (TT3, pp. 3-4).

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<sup>12</sup> According to Bradley (2011, p. 121), Stiegler's work combines a "quasi-transcendental critique of the repression or forgetting of technics in western philosophy of time" together with a "quasi-empirical genealogy of the evolving historical and political relation between technical prostheses and human processes of temporalisation from the birth of alphabetic writing to the epoch of digitalisation". Bradley (2011, p. 127) notes that Stiegler's method has been criticized for either reproducing a determinist account of technology (Bennington 1996) or for not pushing his materialist critique of technology far enough (Hansen 2004). In other words, for "being excessively transcendentalist and empiricist, or not empiricist or transcendentalist enough" (Bradley 2011, p. 127). In his defence, Bradley contends that Stiegler's methodological confusion is the consequence of his novel attempt to overcome the opposition between technics and time and hence reorganize "the empirico-transcendental opposition in terms of the technicity of temporalisation" (2011, p. 127). In this regard, Bradley suggests that Stiegler's work oscillates "back and forth between transcendental critique (metaphysics, phenomenology, deconstruction) and empirical history (evolutionary biology, palaeontology, techno-science) without ever coming to rest in one or the other" (Bradley 2011, p. 127). Put differently, Bradley argues that the combination between these two apparently incompatible methodologies is not a fault of Stiegler's work but something demanded by the theory he tries to construct (the overcoming of the metaphysical distinction between living and dead time).

## 1.2. FROM DEEP TO HYPER ATTENTION

In an article directly addressing the concept of attention economy (2012), Stiegler suggests that attention should not be understood as a natural human capacity, but as a technically and historically determined mode of relating to the world. Following the notion of cinematic time, he claims that each mode of attention is the result of the concrete surfaces of technical exteriorisation that mould it. He uses the concepts of deep and hyper attention to explain how digital technologies and globalised mass media have transformed our attentional capture (2012, p. 8).<sup>13</sup> Whereas deep attention (what Stiegler calls the “literal attentional form”)<sup>14</sup> corresponds to the age of the written word, hyper attention defines the “new attentional forms” that have emerged in the age of digital technologies and global mass media (2012, p. 8). The invention of the modern press and the hierarchy of the book as the privileged source of knowledge created a very specific form of paying attention that defined western culture for a long period of its modern history. During the twentieth century, however, the emergence of “audio-visual temporal objects” (such as cinema, television, and digital media) generated a shift from this dominant form of attention towards its hyper-industrialisation (Stiegler 2012, p. 5). This inaugurates a systematic “industrialisation of consciousness” that becomes “an obstacle to the very individuation process of which consciousness consists” (TT3, p. 4).

Regarding temporal experience, this industrialisation generates a homogeneous state of “real-time” in which “technical temporal objects” are consumed simultaneously by millions of consciousnesses on a global scale (TT3, p. 73). Since external memory support plays a decisive role for the constitution of temporal experience (through the permanent reorganization of primary and secondary memories), Stiegler suggests that the industrialisation of temporal objects creates a “hyper-synchronisation of the time of consciousness” (2011a, p. 57). Put differently, the shift from a deep, “literal attentional form” based on the written word as its main technology of exteriorisation towards a hyper attention

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<sup>13</sup> Stiegler uses Katherine Hayles’ (2007) concepts of deep and hyper attention to illustrate the transformation of attention put forth by digital technologies. For Hayles, a generational divide is currently taking place. This divide can be identified in the change in cognitive styles from what she calls deep attention towards hyper attention. She writes: “Deep attention, the cognitive style traditionally associated with the humanities, is characterised by concentrating on a single object for long periods (say, a novel by Dickens), ignoring outside stimuli while so engaged, preferring a single information stream, and having a high tolerance for long focus time. Hyper attention is characterised by switching focus rapidly among different tasks, preferring multiple information streams, seeking a high level of stimulation, and having a low tolerance for boredom” (2007, p. 187).

<sup>14</sup> According to Stiegler, this “literal attentional form” comprises “an ensemble of mental disciplines that each constitute an attentional form furnished with its own attentional rules. It is the concert and unity of this always diverse collection of literal techniques for the formation of attention that amounts to the deep attention that the Greeks named *logos*” (2012, p. 6).

governed by digital mass-media and “real-time” programming at a planetary level, creates a homogenisation of temporality (2012, p. 13). According to Arthur Bradley’s reading of Stiegler, “contemporary capitalism produces [a] hyper-industrialisation of memory, temporal objects and consciousness: the human capacity to temporalise – itself inherently technical – is now subject to a techno-economic act of appropriation that is without parallel in history” (2011, p. 121). This is most evident in the case of “real-time” temporal objects (phenomenon put forth by globalised film and television industry), which “collapse the complex human/technical temporalisation of time into an endless synthetic present time that can only be consumed passively and uncritically” (Bradley 2011, p. 121).<sup>15</sup> Likewise, Patrick Crogan (2006) suggests that “real-time” temporal objects

form an increasing proportion of one’s experience in the modern era, giving [it] an increasing potential to influence the nature and the ordering of retentions in consciousness, out of which come the potential principles for selectively producing the primary retentions in an ongoing real-time montage of the present moment. (p. 45)

For Stiegler, this carries deep political consequences. Most significantly, it gives rise to a process of disindividuation characterised by “alienation, coercion, dependency, submission, short-circuit, and finally by a proletarianisation of psychic individuation” (2012, p. 10). In other words, the homogenisation of temporality threatens the processes of singularisation that determine individual desire (2011a, p. 58). From this perspective, the loss of individuation represents “the ruin of narcissism” (of our capacity to desire as reflective individuals) and leads in turn to “political and economic disarray” (2011a, p. 58).<sup>16</sup>

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<sup>15</sup> Bradley (2011) notes that Stiegler’s work has been criticized for the apparent contradiction between his “technophilia (which consistently stresses that there is nothing outside technics, least of all humanity)” and the “technophobia of his politics” (p. 135). From this perspective, Stiegler could be seen as valorising “a simple, homogeneous and ahistorical time of consciousness – a consciousness which is actually technically mediated all the way down – over and against the speed of hyper-industrialised time” (2011, p. 135). For Bradley, however, Stiegler’s work should not be understood as a critique of the industrialisation of temporality *per se*, but as a critique of the way in which the industrialisation of temporality becomes the homogeneous process of singularisation in contemporary societies. Bradley writes that “Stiegler’s critique of real-time concerns its monopolisation over the processes of temporalisation: real time leaves us with no other way of technically temporalizing time” (2011, p. 135). The problem, then, is not the industrialisation of time in itself, but the fact that the industrialisation of memory “monopolises both the production and consumption of tertiary memory today and, with it, the human experience of time” (2011, p. 135). Stiegler’s critique of the industrialisation of temporality should not be seen as a critique of the technical aspect of memory from the perspective of a non-technical, natural time, but a critique of the monopoly of one specific form of time. This means that the political question regarding the industrialisation of time is “who appropriates and who controls the processes of trans-individuation that could be defined as meta-transindividualising?” (Stiegler 2006, p. 35).

<sup>16</sup> For Stiegler, “before being a pathology, narcissism conditions the psyche, desire, and singularity” (2011a, p. 58). At the same time, the hyper-synchronisation of consciousness “leads to the loss of individuation” which is key to the development of individual desire: “I can only desire the singularity of something to the extent which this thing is the mirror of the singularity that I am” (Stiegler 2011a, p. 59). In the process of normalisation, capitalism is undermining its own driving force: “The cultural industry and marketing strive for the development of the desire for consumption, but in reality they strengthen the death drive to provoke and exploit the

Stiegler speaks of the process of industrialisation of consciousness in the same tone as Adorno and Horkheimer spoke of the culture industry in *Dialectic of Enlightenment* (2002). In fact, Stiegler explicitly refers to Adorno and Horkheimer's critique of the culture industry in order to define what he calls the "imminent arrival" of a modern "spiritual catastrophe" (TT3, p. 35). However, Stiegler contends that Adorno and Horkheimer did not push their critique of the culture industry far enough, precisely because they were still relying on a traditional conception of technics (TT3, p. 39). In contrast, Stiegler claims that only by understanding technics from the perspective of originary technicity we can draw out all the consequences conveyed by the massification of industrial temporal objects at a planetary level. To envisage the political significance of the industrialisation of temporality and its relation to the specific phenomenon of the attention economy, it is useful to focus on Stiegler's reading of Adorno and Horkheimer, particularly on his reinterpretation of the relation between technics and schematism.

## 2. INDUSTRIALISATION OF SCHEMATISM

In Kant's *Critique of Pure Reason*, 'schematism' refers to the transcendental ability of the subject to produce a synthesis between sensibility and understanding. For Kant, this ability is important not only because it makes knowledge and experience possible, but also because it guarantees the unity of consciousness itself (CPR, p. 272). Every time a subject experiences an object, schematism organizes the manifold sensory data under a specific concept of the understanding. In this sense, schematism "mediates the subsumption of the latter [sensory data] under the former [concept of the understanding]" (CPR, p. 272).

In Adorno and Horkheimer's view (2002), modern industry commodifies this transcendental faculty, providing the consumer with an already schematized organization of sensuous multiplicity. For these authors, "the active contribution which Kantian schematism still expected of subjects – that they should, from the first, relate sensuous multiplicity to fundamental concepts – is denied to the subject by industry" (2002, p. 98). Put differently, the systematic normalisation of consumption generated by modern industry has created a reification of schematism: it is now offered to the consumer as a commodity, freeing his or her imagination from the task or organizing multiplicity under transcendental concepts of understanding. As Adorno and Horkheimer put it, "for the consumer, there is nothing left to

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compulsive phenomenon of repetition. In this way they thwart the life drive. In this regard, and since desire is essential for consumption, this process is self-destructive" (Stiegler 2011a, p. 59).

classify, since the classification has already been pre-empted by the schematism of production” (2002, p. 98).

It is important to note that for Kant, schematism belongs to the faculty of imagination. Therefore, the commodification of schematism has to be understood as a commodification of the faculty of imagination. For Adorno and Horkheimer, the culture industry “denies its audience any dimension in which they might roam freely in imagination” (2002, p. 100).<sup>17</sup> In Stiegler’s words, Adorno and Horkheimer denounce the culture industry for “paralyzing the spectator’s imagination and, more generally, the spectator’s discernment, to the extent that he or she can no longer distinguish between perception and imagination” (TT3, p. 38).

Stiegler agrees with Adorno and Horkheimer that modern industry has radically transformed schematism. However, he also contends that Adorno and Horkheimer reproduce a metaphysical definition of the faculty of imagination, hence failing to see the technical character of schematism (TT3, p. 39). In other words, Adorno and Horkheimer interpret the reification of schematism as a direct result of modern industry, hence opposing a natural, human form of schematism to an industrial, reified one. Stiegler argues that “Horkheimer and Adorno refer to Kant’s schematism as if the concept were self-evident and contained nothing problematic, no critical question” (TT3, p. 40). By contrast, Stiegler conceives schematism as inherently technical and thus as indissociable from the process of technical exteriorisation: “if there is an ‘industrial schematism’, it is because the schematics are originarily, in their very structure, industrializable: they are functions of tertiary retentions; that is, of technics, technology, and, today, industry” (TT3, p. 41).

What is at stake in Stiegler’s critique of Adorno and Horkheimer is the opposition between living and dead time. Stiegler criticizes Adorno and Horkheimer for universalising a specific form of schematism and for using this universal notion as an external standpoint from where to measure the alienating character of modern industry. In this sense, what Stiegler criticizes is Adorno and Horkheimer’s understanding of schematism as a transhistorical source of

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<sup>17</sup> For Adorno and Horkheimer, Hollywood is the best example of the industrialisation of schematism. When a spectator watches a film, they write, “the required qualities of attention have become so familiar from other films and other culture products already known to him or her that they appear automatically. The power of industrial society is imprinted on people once and for all. The products of the culture industry are such that they can be alertly consumed even in a state of distraction” (2002, p. 100). A similar argument can be found in Susan Buck-Morss (1994). For her, “the surface of the cinema screen functions as an artificial organ of cognition. The prosthetic organ of the cinema screen does not merely duplicate human cognitive perception, but changes its nature” (p. 48). With the culture industry, the prosthetic condition of cinema leads to a standardization of mass cognition. Buck-Morss says that this standardization of mass cognition “substitutes for *a priori* universality” (1994, p. 54). This anchors a political danger and shows how cinematic prosthesis may operate “as an organ of power” (1994, p. 55).

living time. Conversely, Stiegler suggests that schematism is in itself industrializable, i.e. it is subject to historical and technical transformation. Stiegler attempts to break with the metaphysical opposition between living human time and dead technical time. To achieve this, he develops a new critique of the industrialisation of consciousness capable of addressing the question of technics “as the horizon of all tertiary retention and the initial condition of industrial technology” (TT3, p. 40). In other words, Stiegler contends that schematism and living time are the result of an ongoing process of technical exteriorisation.

It has been mentioned above that Stiegler’s concept of time makes it possible to challenge Marx’s understanding of the organic composition of capital. From Stiegler’s perspective, the problem with post-Fordism is not simply that it substitutes human labour time with the inhuman speed of machines and information. Instead, post-Fordism directly modifies the temporal organization of consciousness that defines human labour time in the first place, rendering abstract time an obsolete measure of value and labour. Accordingly, the attention economy not only reproduces an asymmetrical relation between human- and cyber-time, but rather modifies the temporality of the user by normalizing a new surface of externalization. In order to develop this argument and to show how Stiegler’s critique of the industrialisation of schematism may be used to critique the notion of living time that informs Marx’s organic composition of capital, it is necessary to address Stiegler’s reinterpretation of the three passive syntheses of imagination in Kant’s *Critique of Pure Reason*.

## 2.1. THE THREE PASSIVE SYNTHESSES OF IMAGINATION

The theory of the three syntheses is introduced by Kant in the first edition of the *Critique of Pure Reason*. In this treatise, Kant defines knowledge as the process of connecting and comparing representations. In the first edition of the *Critique* (published in 1781), the task of mediating representations is assigned to the transcendental faculty of imagination. This faculty comprises a threefold transcendental process known as the three syntheses of imagination (apprehension, reproduction, and recognition). These syntheses are responsible for bridging perception and understanding and thus making knowledge possible.

Kant presents the theory of the three syntheses of imagination in the chapter “On the Deduction of the Pure Concepts of the Understanding” (CPR, pp. 228-234). Kant suggests that imagination is “the ground for a threefold synthesis, which is necessarily found in all

cognitions” (CPR, p. 228). This threefold synthesis, Kant continues, consists of apprehension, reproduction and recognition:

apprehension of the representations, as modification of the mind in intuition; of the reproduction of them in the imagination; and of their recognition in the concept. Now these direct us toward three subjective sources of cognition, which make possible even the understanding and, through the latter, all experiences as an empirical product of the understanding. (CPR, p. 228)

According to Kant, cognition is possible when an intuition given to the senses is organized through the categories of understanding. Apprehension, reproduction and recognition are the threefold subjective source of cognition: apprehension as the capability to distinguish the representations given to our senses, reproduction as the capability to reproduce these representations in our imagination even when these representations are no longer present to our senses, and recognition as the transcendental process that subsumes these representations to a concept of the understanding.

Nevertheless, in 1787, Kant publishes a second edition of the *Critique of Pure Reason* in which he completely rethinks his approach, removing the faculty of imagination from his transcendental system and subsuming the act of synthesis within the faculty of understanding. In the second edition, transcendental schematism is placed under the legislation of the faculty of understanding, while the faculty of imagination, with its three syntheses, is completely discarded.

The phenomenological tradition, first with Husserl and later with Heidegger, interprets the movement from the first edition to the second edition as a regressive recoiling in Kant’s philosophy.<sup>18</sup> Both Husserl (2001) and Heidegger (1965; 1997) agree that in the first edition of the *Critique* the faculty of imagination encompasses a temporal character that is removed in the second edition. In his *Lectures on the Passive and Active Syntheses*, Husserl states that the first edition of Kant’s *Critique* constitutes the very first work of phenomenological thought in the sense that the three syntheses of the imagination are in fact three passive syntheses that precede the agency of the subject (2001, p. 410). Heidegger, likewise, argues that Kant’s first edition of the *Critique* is much closer to the phenomenological understanding

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<sup>18</sup> Contrary to the phenomenological interpretation, Beatrice Longuenesse (1998) explains the passage from the first to the second edition in positive terms, as a progress in Kant’s transcendental project. For Longuenesse (1998, p. 9), the first edition represents a negative moment necessary to engage directly with and ultimately criticize Hume’s psychological theory of knowledge; and the second edition constitutes the positive and definitive Kantian system of transcendental knowledge. According to this interpretation, Kant’s movement is to be understood as a passage from a psychological deduction which criticizes Hume’s theory of knowledge, to a logical, transcendental deduction.



of time than the second.<sup>19</sup> Following Husserl's insight, Heidegger explores step by step the temporal dimension of the three syntheses of the imagination from the first edition. For Heidegger, the three modes of synthesis (apprehension, reproduction and recognition) are not "in time" but are "time-forming", i.e. they "constitute the temporalization of time itself" (KPM, p. 201). In this sense, the syntheses of apprehension, reproduction and recognition ground the conceptual formation of the present, the past, and the future, correspondingly. In other words, temporality itself presupposes synthesis.

It was mentioned above that in order to define the temporality of the attention economy Berardi (2011) opposes human-time to cyber-time. By opposing a "human capacity to temporalize" to the inhuman temporality of the info-sphere, Berardi reproduces the phenomenological standpoint according to which temporality is the result of a pre-subjective process of synthesis carried out by the faculty of imagination. In doing so, he poses a normative judgement that denounces the asymmetric relation between human and cyber times. Alternatively, Stiegler's reinterpretation of Kant's threefold synthesis of the imagination makes it possible to challenge the opposition between human (living) time and technical (dead) time. This entails important consequences for a definition of the temporality of the attention economy. To acknowledge these consequences, however, it is necessary to examine Stiegler's reading of Kant in light of Heidegger's interpretation of the temporality of the syntheses of imagination.

For Kant, the first synthesis (apprehension) is what allows distinguishing differences in the manifold (CPR, p. 228). When we perceive something, we perceive it as a succession of different parts; this is rendered possible thanks to the synthesis of apprehension, which allows perceiving the multiple as multiple. Kant writes: "In order for unity of intuition to come from this manifold, it is necessary first to run through and then to take together this manifoldness,

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<sup>19</sup> Heidegger's reading of Kant is built on the idea that the passage from the first edition to the second edition of the *Critique of Pure Reason* represents a "recoiling" from an "unknown root" that Kant discovered in the first edition (KPM, p. 167). This unknown root is the temporal structure of the faculty of imagination. For Heidegger, Kant's overall project is an ethical project. In this regard, Kant needed to ensure the autonomy of reason in order to provide a solid ground for both his practical philosophy as well as his epistemology. Heidegger contends that Kant's treatment of the faculty of imagination in the first edition of the *Critique* identifies a temporal grounding of subjectivity which weakens the autonomy of reason, hence the need to recoil from the faculty of imagination and to subsume schematism under the faculty of understanding in the second edition of the *Critique*. In this way, Kant reinforces the autonomy of subjectivity, moving away from the analysis of temporality that would bring him closer to a phenomenological understanding of consciousness. It is important to note, however, that in the third *Critique*, Kant returns to the problem of the synthesis of imagination precisely when analysing the experience of the sublime (2007, pp. 81-87). In this sense, it could be argued that through the treatment of the sublime in his *Critique of Judgement*, Kant is returning to that "unknown root" he had "recoiled" from in the passage from the first to the second edition of the *Critique of Pure Reason*.

which action I call the synthesis of apprehension” (CPR, p. 229). For Heidegger, the first synthesis is what constitutes our most basic experience of the present (KPM, p. 185). By being able to perceive the difference between the manifold, we can distinguish every instant from each other. Heidegger says:

In distinguishing time, the mind must constantly and in advance say ‘now and now and now’ in order to be able to encounter ‘now this’ and ‘now that’ and ‘now all this at once’. Only by distinguishing the nows in this way is it possible to ‘run through’ the impressions and hold them together. (KPM, pp. 184-5)

As mentioned above, Heidegger interprets the three syntheses of the imagination as time-forming. This means that the syntheses do not just take place in a temporal horizon, but they themselves form the temporality of consciousness. In the specific case of apprehension, the synthesis constitutes our basic experience of the present as a series of nows that can in turn be distinguished from each other: “this pure synthesis of apprehension does not first take place within the horizon of time; rather, it is this synthesis itself which first forms the now and the now-sequence” (KPM, p. 185). The same applies to the second synthesis. For Kant, the second synthesis is the synthesis of reproduction, which refers to the capacity of the faculty of imagination to retain in each new present the representations that are no longer present (CPR, p. 230). If I were not able to retain in my imagination the previous apprehended representations, it would be impossible for consciousness to grasp an object as a whole (CPR, p. 230). For Heidegger, the second synthesis of reproduction forms the basic experience of the past:

Pure synthesis in the mode of reproduction forms the past as such. This signifies, however, that pure imagination, relative to this mode of synthesis, is time-forming. It can be termed ‘reproduction’ not because it looks back to an essent which has disappeared or which has been previously experienced but because, in general, it discloses the horizon of a possible looking-back-to, i.e. the past, and thus ‘forms’ ‘posteriority’ and the [movement] ‘back-to’ that which was. (KPM, p. 187)

The first synthesis forms the present as the basic experience of a series of on-going nows that can be distinguished from each other. The second synthesis forms the past as the basic experience of the reproduction of what is no longer present. According to Kant, the synthesis of apprehension is “inseparably combined with the synthesis of reproduction” (CPR, p. 230). This means that no representation of an object would be possible if I were not able to reproduce in my imagination the different apprehended parts of the perceived object. Accordingly, for Heidegger, the synthesis of reproduction that forms the past and the synthesis of apprehension that forms the present are indivisible from each other (KPM, p.

188). Heidegger adds that if the first two syntheses refer to the present and the past respectively, the third synthesis must be formative of the temporal experience of the future:

if time is the tri-unitary totality of present, past, and future, and if Kant adds a third mode to the two modes of synthesis which we have just shown to be time-forming, and finally, if all representation, including thought itself, must be subject to time, then this third mode of synthesis must be that which ‘forms’ the future. (KPM, p. 188)

Kant defines the third synthesis as the synthesis of recognition under a concept (CPR, p. 231). For Kant, in order to achieve knowledge, it is necessary that the manifold apprehended by the first synthesis and retained by the second synthesis becomes unified by a concept of understanding. When I state the judgement ‘this is x’, I am reducing the manifold given to my perception under the unity of the concept ‘x’. This unity provides the transcendental ground for all empirical experience. Kant refers to the transcendental principle that assures this unity with the term of transcendental apperception.<sup>20</sup>

In order to argue that the third synthesis is time-forming, Heidegger draws upon the notion of identification which constitutes the principle of transcendental apperception (1997, pp. 243-8).<sup>21</sup> For Kant, when a given intuition is subsumed under the unity of a concept, that intuition (apprehended and reproduced by the first and second syntheses) is in fact being identified with a concept of the understanding. According to Heidegger, every time the first and the second syntheses apprehend and reproduce the manifold, these two syntheses are already being guided by the third synthesis. In this regard, the synthesis of recognition is a synthesis of “pre-cognition”: “in identifying – and that means apprehending and reproducing – we are always already awaiting a unity of beings” (1997, p. 246). Because of this guiding function of the third synthesis over the other two, Heidegger claims that “the synthesis which, according to the description of the empirical genesis of concepts, is the third, is precisely the first, i.e. the one which governs the other two described above” (KPM, p. 191). For Heidegger, recognition under a concept of understanding is always already present when we apprehend and reproduce any representation. This third synthesis is, thus, the first: “just as pure

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<sup>20</sup> Kant writes: “No cognitions can occur in us, no connection and unity among them, without that unity of consciousness that precedes all data of the intuitions, and in relation to which all representations of objects is alone possible. This pure, original, unchanging consciousness I will now name transcendental apperception” (CPR, p. 232).

<sup>21</sup> The third synthesis takes place in the faculty of understanding, which Kant explicitly claims that is not subject to the passage of time nor to the conditions of temporal sequence (CPR, p. 542). For this reason, Heidegger is forced to take a longer path in order to show (against Kant) how this third synthesis is formative of the future. To do so, he focuses on the intrinsic temporality of transcendental apperception (Heidegger 1997, p. 248). It has to be noted, however, that the time-forming character of the third synthesis constitutes one of the most problematic aspects of Heidegger’s interpretation of Kant’s *Critique of Pure Reason*. For David Couzens (2009), for example, Heidegger “forces a temporal dimension” which is not present in Kant’s text (p. 18). See also Longuenesse (1998, pp. 204-205).

reproduction constitutes the possibility of a bringing-back-again, so, correlatively, must pure recognition provide the possibility for all identification” (KPM, p. 191).

It is important to note that Heidegger’s overall aim is to show that, like apprehension and reproduction, the synthesis of recognition is constitutive of time (KPM, p. 191). He argues that if the third synthesis is in fact the first synthesis, then the first two syntheses have to be thought of as always already subsumed under a concept of the understanding. What makes this subsumption possible is the experience of the future in general. In this sense, “the third mode of synthesis also proves to be essentially time-forming” (KPM, p. 191). The third synthesis forms the experience of the future in general as the opening of the present to the unity of being-to-come. Heidegger concludes that “the synthesis of apprehension is related to the present, the synthesis of reproduction is related to the past, and the synthesis of recognition is related to the future” (Heidegger 1997, p. 246).<sup>22</sup>

## 2.2. STIEGLER’S REINTERPRETATION OF THE TEMPORALITY OF IMAGINATION

Stiegler’s reading of the three syntheses of imagination continues in the line of Husserl and Heidegger. This means that, for Stiegler, the threefold synthesis of the faculty of imagination from the first edition of the *Critique* has an inherently temporal structure: “what is at issue in this triple synthesis [...] is the question of time” (TT3, p. 42). However, unlike Husserl and Heidegger, Stiegler is interested in showing the central role that technics (i.e. external memory) plays for the production of time that takes place through the threefold synthesis. In this sense, Stiegler’s interpretation of the temporality of the three syntheses is developed through the prism of his novel theory of originary technicity. This entails connecting the three syntheses of imagination together with the three forms of memory identified by Husserl (pre-conscious retention, active recalling, and external memory support). As Stiegler puts it, “the three syntheses that Kant distinguishes in the first version of the ‘Transcendental Deduction’, apprehension, reproduction and recognition, are in effect narrowly interdependent on primary, secondary, and tertiary retentions” (TT3, p. 41).<sup>23</sup>

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<sup>22</sup> With this conclusion, Heidegger tries to reinforce his hypothesis from *Being and Time* according to which the future constitutes *Dasein*’s decisive dimension of time (KPM, p. 208).

<sup>23</sup> Stiegler writes: “the synthesis of apprehension is that of primary retention of the present, the synthesis of reproduction is that of secondary retention of the past, and the synthesis of recognition is that of protention uniting the totality of the flow of consciousness, as the projection of its future and its end. But it is also what

It has been shown that, for Kant, the first synthesis constitutes the *a priori* condition that makes it possible to apprehend the manifold given to perception under a unity of representations. For Heidegger, this first synthesis grounds our experience of the present since it allows distinguishing each passing now within the flow of time. According to Stiegler, this synthesis is a first attempt (in Kant's own terms) to define what later Husserl called primary retention (TT3, p. 42). Apprehension and primary retention operate in the same way: they constitute the *a priori* condition for us to experience the passage of time. By allowing perception to grasp each now, apprehension is, at the same time, establishing the *a priori* possibility for the basic experience of each just-past-now. In other words, just like primary retention, apprehension forms the most basic experience of the present as the fading away of each now into a just-past-now.

Accordingly, Stiegler claims that the second synthesis (reproduction) refers to what Husserl defined as secondary retention, or active recalling. For Kant, the synthesis of reproduction is the *a priori* capacity of the faculty of imagination to recall a representation, even when the object of that representation is absent. For Stiegler, this describes "the phenomenon of secondary retention as Husserl will analyse it" (TT3, p. 42). It has been shown that for Husserl, secondary retention defines the active recalling of a past representation and should, by no means, be confused with primary retention. The problem, Stiegler claims, is that Kant confuses the "capacity for reproduction with that of primary retention" (TT3, p. 42-3). When describing reproduction, Kant argues that this second synthesis is inseparable from the synthesis of apprehension (CPR, p. 230). Kant explains this interdependence between the first and the second synthesis in the following manner:

It is obvious that if I draw a line in thought, or think of the time from one noon to the next, or even want to represent a certain number to myself, I must necessarily first grasp one of these manifold representations after another in my thoughts. But if I were always to lose the preceding representations (the first part of the line, the preceding parts of time, or the successively represented units) from my thoughts and not reproduce them when I proceed to the following ones, then no whole representations and none of the previously mentioned thoughts, not even the purest and most fundamental representations of space and time, could even arise. (CPR, p. 230)

For Stiegler, by arguing that the syntheses of apprehension and reproduction are inseparable, Kant is committing "the same error" that Husserl accused Brentano of doing, i.e. confusing perception with imagination (and primary retention with secondary memory) (TT3, p. 43). In other words, the understanding of apprehension as primary retention and of reproduction as

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presupposes that the very material projection (images) as the memory of synthesis that I have called tertiary retention" (TT3, p. 56).

secondary retention (and their interdependence) refers back to Husserl's critique of Brentano and his confusion between perception and imagination. As argued above, Stiegler's hypothesis is (against Husserl's phenomenological purity) that perception and imagination are indeed interconnected. Moreover, this interconnection is determined by external (or tertiary) memory. Likewise, when reading Kant's syntheses of the imagination, Stiegler argues that "Kant's confusion of the two forms of retention is also a confusion of two syntheses and will thus obviously weigh on any definition of the third synthesis" (TT3, p. 43).

Kant defines the third synthesis as a synthesis of recognition in which the sensible data apprehended by perception and reproduced by imagination is subsumed under a concept of understanding. Kant argues that there must be an *a priori* principle capable of granting the unity of perception, i.e. capable of securing the unity of the three syntheses. This principle is that of transcendental apperception, an *a priori* condition of the unity of consciousness. This principle belongs to the third synthesis (recognition). As Stiegler puts it,

The synthesis of recognition assures the coherence of consciousness with itself, given that it is a flux, and a flux whose unity must be guaranteed: it *cannot* be self-contradictory. This unification of flux, as synthesis of recognition, overdetermines the unification of the syntheses of apprehension and reproduction through which an object presents itself to a consciousness that has itself been unified by the simple fact of the recognitive unification of the stream of consciousness. (TT3, p. 44)

It has been noted that Stiegler reads the three syntheses of imagination through the concepts of primary, secondary and tertiary memory. In this respect, Stiegler interprets apprehension as retention (primary memory) and reproduction as active recalling (secondary memory). Moreover, he argues that Kant, by linking together apprehension and reproduction, confuses perception with imagination. At the same time, Stiegler reads the third synthesis of recognition under the light cast by his own analysis of tertiary memory. This means that the unity of consciousness provided by the third synthesis is in fact a unity granted exclusively by external memory. Transcendental apperception is not an *a priori* principle of consciousness. Instead, transcendental apperception, as the condition of unity of consciousness, is the result of an ongoing process of externalisation. In other terms, it is only through the constant inscription on an external memory support that consciousness can experience its unity.<sup>24</sup>

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<sup>24</sup> For this reason, Stiegler defines external memory as "apperception's crutches" (TT3, p. 69). In Kant's view, Reason is not subject to time, which means that transcendental apperception is not subject to historical transformation. For Heidegger, *Dasein's* existence is essentially temporal, hence the permanent openness of

Stiegler's reading of the three syntheses implies the "need for tertiary retention as the *possibility of inscription* of a permanent representation in something permanent and as synchronization of the internal and external senses guaranteed by [their] identification [with] the [temporal] flux" (TT3, p. 72). In this sense, the internal process that allows consciousness to experience the world as a temporal flux (i.e. the three passive syntheses) is determined by a process of exteriorisation that is constantly reconfiguring the relation between the perception and the imagination of time. The technical character of the three syntheses means that schematism is in itself always already technical. From this perspective, Adorno and Horkheimer's condemnation of modern industry reproduces an obsolete opposition between a non-technical human schematism and an industrialised one; an opposition that mimics that between living psychic time and dead technical memory (Stiegler 2006, p. 23). On the contrary, Stiegler's reinterpretation of the three passive syntheses claims that, although it is true that modern industry completely transforms our temporal experience, this is possible only because schematism comprises an originary technicity that makes its very structure "industrializable" (TT3, p. 41). In this sense, Stiegler breaks with the dichotomy between living and dead memory, showing that grammatisation constitutes their shared ground. In doing so, Stiegler provides a novel framework from where to interrogate Marx's understanding of the relation between labour and technology which in turn affects any interpretation of the way in which the attention economy turns human attention and human desire into a new source of surplus value.

### 3. CINEMATIC TIME AND THE ATTENTION ECONOMY

It has been mentioned above that Stielger's theory of originary technicity attempts to rethink the opposition between dead technical memory and living psychic memory (2006, p. 23). In this sense, Stiegler's theory of time can be used to challenge the basic presupposition of Marx's labour theory of value. For Marx, only living labour is productive of value. Machines, on the contrary, produce value only to the extent that they reduce the amount of necessary labour time and hence increase the amount of surplus value produced by labour and appropriated by capital. For Stiegler, the distinction between living labour and machinery reproduces a metaphysical definition of technology that opposes living time to dead technical

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apperception to an always *still-to-come* process of recognition. For Stiegler, the unity of consciousness can only be provided by an external memory support. Therefore, transcendental apperception should not be conceived as an ahistorical and *a priori* principle of reason, but as the result of an external surface of inscription. This means that transcendental apperception is, like all surfaces of inscription, subject to historical and social change.

memory. By analysing the industrial character of the three syntheses, Stiegler challenges this opposition, arguing that living time is the result of an ongoing process of exteriorisation. This means that technology constantly shapes living time. In Marxist terms, it can be said that the technical development of the productive powers of a given society operate as a surface of inscription which constantly shapes the living time of labour. Hence Stiegler's critique of the separation between living time and dead memory contributes to a reinterpretation of Marx's organic composition of capital more suitable to the specific context of post-Fordism. At the same time, Stiegler's concept of cinematic time makes it possible to unveil the obsolescence of labour time as the only source and measure of value in a post-industrial context.

In this sense, Stiegler's notion of cinematic time allows us to reinterpret the temporality of the attention economy beyond the opposition between human- and cyber-time. For Stiegler, there is no essential distinction between human living time and technical dead memory. This means that the attention economy does not entail a clash between a human and a technical time. By contrast, the technical character of schematism discussed above implies the interdependence between the temporality of the flows of information that compose the digital economy and the constant transformations of the temporal experience of its users. The attention economy not only accelerates temporal experience but replaces the linear temporality of abstract labour that characterised industrial production with a permanent experience of "real-time". The passage from industrial to post-industrial capitalism can be read as the shift from one form of violence (the appropriation of a portion of individual time) to another (the normalisation of cyber- or real-time). This means that in the attention economy, subjects are not only disjointed from their labour time and the products of their labour, but also exposed to a continuous experience of simultaneity. This shift renders individual time as the measure of the value of social relations obsolete, and replaces it with an "industrialisation of temporality" characterised by "real-time" temporal objects (TT3, p. 4).

Furthermore, the phenomenon of real-time characteristic of the attention economy directly affects the constitution of individual desire that regulates capitalist consumption (Stiegler 2006, p. 39). According to Stiegler, the process of individuation that desire consists of is equally dependent on tertiary memory as the production of time is (2006, p. 39). For this reason, a homogenisation of the surfaces of exteriorisation generates a normalisation of the processes of individuation of desire. Following Simondon, Stiegler claims that during the nineteenth century, the massification of industrial production created a proletarianisation of the



worker, that is, his or her systematic loss of individuation (2011c, p. 62).<sup>25</sup> During the twentieth century, however, the cognitive turn of the productive process, the expansion of the culture industry, and the massification of industrial temporal objects, generated a “new stage of grammatization”. In this new stage, not only the worker experiences a process of proletarianisation but also the consumer (Stiegler 2011c, p. 62). Just as modern industry did with workers, so in post-Fordism consumers lose their “singular way of being in the world” (Stiegler 2011c, p. 62). This leads to a “planetary loss of individuation, a generalization of the process of proletarianisation to all modes of existence and subsistence” (Stiegler 2011c, p. 63). From this perspective, the more the industrialisation of temporal objects advances, the more normalised individual desire becomes. This implies a self-destructive tendency characteristic of capitalism, a limit towards which capitalism necessarily tends (Stiegler 2006, p. 40). To explain this, Stiegler bridges the loss of individuation with Marx’s account of the tendency of the rate of profit to fall (2011c, p. 63).

According to Marx, the “tendency of the rate of profit to fall” is an internal law of the capitalist mode of production which signals its immanent barrier and its own tendency towards crises (1991, p. 328).<sup>26</sup> For Marx, the rate of profit is the result of the ratio between fixed capital (means of production) and variable capital (wages). When more capital is invested in machinery (with the aim of reducing production costs and hence increasing relative surplus value), less living labour is required for the productive process, creating a decrease in the ratio between the amounts of living labour and fixed capital that enter the valorisation cycle. This tendency is based on the distinction between living labour and fixed capital.<sup>27</sup> As mentioned above, in Marx’s account, only living labour has the potential to generate new value. This means that when a portion of the productive process is replaced by

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<sup>25</sup> Stiegler writes: “Simondon analyses the proletarianisation of work as a loss of individuation, where the worker, who was once the technical individual, becomes the servant of the tool-bearing machine, which becomes the new technical individual” (2011c, p. 62). This entails a normalization of the labour process in which each individual worker loses the singular knowledge that defined his or her activity, leading to a systematic “loss of individuation” (TT3, p. 4).

<sup>26</sup> Michael Heinrich (2012) suggests that the idea that the average rate of profit has a tendency to fall was quite common in nineteenth-century political economy (p. 149). What is unique about Marx’s treatment of the problem, however, is the fact that for him this tendency is not the result of external causes, but that it derives from the very nature of the capitalist mode of production (Heinrich 2012, p. 149).

<sup>27</sup> It is useful to remember that in Marx’s understanding of the reproductive cycle of capital, the actual source of the valorisation process of capital is the exploitation of living labour (Heinrich 2012, p. 150). For Marx, there are two forms of increasing this exploitation: extending the working day or reducing labour time by increasing productivity. In this regard, the tendency to the falling rate of profit is the direct consequence of the constant search for an increased productivity: “as a result of the ceaseless drive for extra profit, not only should there be a decreased value (or production price) of the commodity as a result of the generalisation of the new conditions of production, but also (behind the backs and against the wills of the individual capitalists) a decline in the average rate of profit” (Heinrich 2012, p. 150).

machinery, although the immediate result may be an increase in the amount of surplus value, the long term consequence is a decrease in the rate of profit (since less and less living labour enters the productive process). As Marx explains, “the rate of profit does not fall because the worker is less exploited, but rather because less labour is generally applied in relation to the capital invested” (Marx 1991, p. 354). This “tendential fall” in the ratio between fixed and variable capital is inherent to the “development of productivity” set forth by capital’s own search for larger portions of surplus value (Marx 1991, p. 349). The analysis of this tendency led Marx to conclude that “the true barrier to capitalist production is capital itself” (Marx 1991, p. 358). This immanent barrier would entail “the rapid breakdown of capitalist production, if counteracting tendencies were not constantly at work” (Marx 1991, p. 355). The problem, however, is that these counteracting tendencies can only overcome the immanent barriers of capital “by means that set up the barriers afresh and on a more powerful scale” (Marx 1991, p. 358).

For Stiegler, the proletarianisation of consumption put forth by post-industrial societies “is the response of the capitalist process to the tendency, induced by productivity gains, for the rate of profit to decline: capital henceforth increases its profit margins mainly by extending its markets” (Stiegler 2011c, p. 63). The difference, however, is that whereas Marx understands this limit based on the distinction between living labour and fixed capital, Stiegler overcomes this distinction by arguing that all living labour is the result of a technical process of grammatization. This means that the tendency of the falling rate of profit is not determined by the decrease of the amount of living labour that enters the productive process, but by a decline in the amount of libidinal energy generated by the proletarianisation of the consumer (2011c, p. 63). This “tendency for libidinal energy to decline” constitutes a “liquidation of singularity [...] that contradicts the constitution of desire” (Stiegler 2011c, p. 63). Moreover, this loss of individuality implies an internal contradiction which turns post-industrial capitalism into a self-destructive mode of production (Stiegler 2011c, p. 64). On the one hand, the culture and marketing industries attempt to accelerate the process of consumption by stimulating individual desire. On the other hand, however, the normalisation of the consumer weakens the very process of individuation that makes desire (and hence consumption) possible.<sup>28</sup> Likewise, the attention economy tries to accelerate the production

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<sup>28</sup> Stiegler contends that, although the world of marketing tries to develop the desire to consume, it instead normalizes the processes of consumption and destroys the very singularity that motivates desire (2011c, p. 127). This is so because, according to Stiegler, “I can only desire the singularity of something to the extent that this thing is the mirror of a singularity that I am, of what I do not yet know, and that this thing reveals to me”

and realisation of surplus value not only via the circulation of advertisement (which channels consumers' desires from one commodity to another), but also by turning the attention of each consumer into a source of information about his or her desires (which is then fed back into the productive sphere). As shown in chapter two, the attention economy transforms individual desire into a source of valorising information (and thus a source of surplus value), challenging Marx's distinction between labour and machines. At the same time, however, the homogenization of real-time that characterises the attention economy creates a normalisation of the processes of individuation which destroys the temporal gap between desire and its satisfaction (Stiegler 2011a, p. 59). In this regard, the attention economy destroys the capacity to desire as reflexive individuals, undermining the core force that moves the reproductive cycle of capitalism. For Stiegler, this constitutes the paradox of contemporary "libidinal economy", a tendency which leads towards its "collapse and self-destruction" (2006, p. 40). With this last point, Stiegler offers an alternative interpretation of Marx's "law of the tendential fall in the rate of profit" which introduces the problem of desire as an active element of capitalism's internal limits. For this reason, Stiegler concludes, the most pressing political question today is that of a "politics of desire, that is to say, of a political economy of the unconscious" (2006, p. 40).

In chapter one, it was shown how some authors (Jhally and Livant 1986, Beller 2006) use Marxist terminology in order to develop a critique of the attention economy as a new form of labour. Chapter one also argued that the main shortcoming of these approaches is the fact that they deploy a transhistorical concept of labour as an external standpoint from where to examine the exploitative character of the attention economy. In similar fashion, some authors (Marazzi 2008, Crary 2013, and Berardi 2009 and 2011) define the temporality of the attention economy as an asymmetric opposition between human-time and cyber-time. In doing so, these authors reproduce a transhistorical approach that universalises a given definition of human time and oppose it to the technical time of the flows of information. This chapter has argued that Stiegler's concept of cinematic time offers an immanent theory of time that allows challenging the metaphysical distinction between human (living) time and technical (dead) time. From Stiegler's perspective, temporality is the result of an on-going process of externalisation in which dead technical memory shapes the internal organization of living time. This makes it possible to offer a new understanding of the way in which the

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(2011c, p. 127). For this reason, "to the extent that capital must hyper-massify behaviour, it must also hyper-massify desire and herd individuals together" (2011c, p. 127).

attention economy transforms temporal experience, accelerating the production and realisation of surplus value while simultaneously threatening the very moving force that drives it. In this regard, the concept of cinematic time introduces a new interpretation of capitalism's tendency of the rate of profit to fall that overcomes the basic categories of Marx's organic composition of capital and his labour theory of value.

Nevertheless, Stiegler's "political economy of the unconscious" falls short as a satisfactory framework to examine the specific object of the attention economy. This is so mainly because of his focus on the processes of individuation and the narcissistic notion of desire that informs his critique of contemporary capitalism. Put differently, Stiegler's critique of the loss of individuation of the consumer is insufficient when looking at the specific social and historical context of the attention economy. Stiegler's notions of "industrialisation of temporality" and "loss of individuation" are too closely tied to industrial capitalism, whereas (as shown in chapter two) the attention economy is a phenomenon that responds to the profound transformations generated by post-Fordism. While Stiegler's conceptual apparatus is based on a disciplinary framework, the attention economy demands acknowledging the profound transformation from discipline to control.

According to Gilles Deleuze, disciplinary societies are being replaced by control societies (N, p. 178). One of the most important characteristics of this transformation in the logic of power is the dissolution of the individual/mass dyad and the emergence of "dividuals" and "markets" as a new object of power (N, pp. 180). While Stiegler's theory of time represents an important contribution for rethinking the relation between labour, value and technology in post-industrial capitalism, his critique of digital technologies from the standpoint of the loss of individuation appears too closely tied to the context of industrial capitalism (and to the disciplinary framework that shapes it). An immanent critique of the attention economy demands taking Stiegler's framework one step further. This entails constructing a conceptual paradigm capable of addressing the problem of power from a post-industrial and post-disciplinary perspective. This will be the task of chapters four and five.

## CHAPTER FOUR

### HUMAN ATTENTION AS MACHINIC SURPLUS LABOUR

The previous chapter used Stiegler's concept of cinematic time in order to unveil some of the temporal transformations characteristic of the attention economy. More specifically, it examined the political consequences of the industrialisation of temporality through Stiegler's interpretation of the three syntheses of the imagination. Chapter three concluded that the merit of Stiegler's framework is to show how the production of temporality is always already a technical phenomenon, challenging the opposition between living labour time and dead technical time, and hence demanding a reconceptualization of the organic composition of capital. Nevertheless, chapter three also raised the issue that Stiegler's account of the political consequences of post-industrialism falls short for a critique of the attention economy in at least one crucial aspect. By interpreting the internal contradiction of capitalism from the perspective of individuation, Stiegler universalises a historically specific notion of desire and uses it as an external standpoint from where to develop a critical examination of contemporary capitalism. In doing so, Stiegler offers an obsolete framework, suitable perhaps for an account of industrialism, but insufficient to explain the transformations of labour, time, and power carried out by post-industrial capitalism.

The aim of this chapter is to use Deleuze and Guattari's book *Anti-Oedipus* in order to advance the critique of the attention economy. From the perspective of this book, it could be argued that the main shortcoming of Stiegler's "political economy of the unconscious" is the category of desire that informs it. In short, Stiegler reproduces a Freudian definition of desire based on lack and representation and in which the process of individuation is inseparable from the constitution of subjective desire. This chapter is an attempt to overcome the limits of Stiegler's concept of desire with regard to its usefulness for an examination of the attention economy. In *Anti-Oedipus*, Deleuze and Guattari construct an analysis of capitalism based on

the notions of deterritorialization and reterritorialization of flows of desire. To do so, Deleuze and Guattari contest the representational understanding of desire. This means that desire is not understood from the sphere of acquisition (and hence as lack) but as desiring-production, that is, as the moving force that animates production in general. With this concept, *Anti-Oedipus* breaks with the opposition between individual desire and the social field, which in turn makes it possible to question Stiegler's critique of the political economy of desire.

Furthermore, *Anti-Oedipus* introduces a novel concept of machine. Using the concept of desiring-machines, Deleuze and Guattari attempt to break with the technical definition of machines. In doing so, these authors offer an alternative to both the mechanist and the vitalist conceptions of machines.<sup>1</sup> Deleuze and Guattari suggest that the concept of desiring-machines constitutes "the fundamental category of the political economy of desire" (AO, p. 35). This has important consequences for an understanding of the relation between labour, value and technology. For Deleuze and Guattari, there is no difference in nature between social and technical machines. From a conceptual point of view, both social and technical machines respond to the same molecular structure of desiring-machines. In this sense, the concept of desiring-machines allows for an overcoming of the Marxist opposition between living labour and technical machines, challenging Marx's labour theory of value. From the perspective of *Anti-Oedipus*, it could be argued that political economy is informed by a contradictory twofold movement: on the one hand, it poses abstract labour time as the subjective essence of value; on the other, it reterritorializes this empty form of time in the figure of the private, individual producer. In this way, political economy justifies the production and realisation of surplus value. Put differently, political economy grounds its labour theory of value on an abstract (homogeneous and quantifiable) and individual (private) notion of labour time, thus reterritorializing the productive powers unleashed by technological development. The problem with Marx's labour theory of value is that, despite challenging (and actually inverting) the main principles of political economy, it could not overcome the reterritorialized notion of labour time that informs political economy.

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<sup>1</sup> For Deleuze and Guattari, from the perspectives of both mechanism and vitalism the notion of machine appears as a metaphor to "account for the workings of the organism" but is incapable of accounting for its own formation (AO, p. 312). Put differently, Deleuze and Guattari (AO, p. 312) contend that mechanism (which explains the functioning of an organism as a machine, a "structural unity") and vitalism (which "invokes an individual and specific unity to the living") reproduce an extrinsic relationship between machines and desire. This is so "either because desire appears as an effect determined by a system of mechanical causes, or because the machine is itself a system of means in terms of the aims of desire. The link between the two remains secondary and indirect, both in the new means appropriated by desire and in the derived desires produced by the machine" (AO, p. 312). In short, with the concept of desiring-machines, Deleuze and Guattari attempt to overcome the extrinsic relation between desire and machine that characterises both mechanism and vitalism.

It has been shown in chapter two how some Italian post-Marxist authors suggest that in his *Grundrisse* Marx acknowledged the historical limits of his own labour theory of value. Accordingly, chapter three used Stiegler's concept of cinematic time in order to challenge the opposition between living labour time and dead (technical) time that informs Marx's labour theory of value and his analysis of the organic composition of capital. Following this, the current chapter offers a new interpretation of the relationship between value, labour time and machines which, at the same time, advances the critique of the attention economy. The overall aim of the chapter is to show that the attention economy operates as a concrete power mechanism which reterritorializes the productive forces unleashed by post-Fordism in order to prevent the deterritorialized flows of desire from upsetting the ruling social order.

The chapter begins with an introduction to *Anti-Oedipus*' social theory as a theory of flows of desire. Based on the concepts of deterritorialization and reterritorialization, the first section poses the general hypothesis of this chapter, that is, that the attention economy is a power apparatus that reterritorializes the flows of desire in order to reproduce capitalist social relations. To develop this hypothesis, the second section focuses on *Anti-Oedipus*' novel interpretation of the relation between labour, value, and technology, and in turn highlights its similarities with the Italian post-Marxist reading of Marx presented in chapter two. Despite these similarities, this chapter contends that *Anti-Oedipus* goes beyond the interpretation of Italian post-Marxism thanks to its novel concept of desiring-machines. The third section examines the category of desiring-machines from the immanent standpoint of the three passive syntheses of the unconscious. In doing so, this final section addresses the major differences between Stiegler's political economy of desire and that of *Anti-Oedipus*, and concludes that an immanent critique of the attention economy must consider an analysis of the diagrams of power that characterise post-Fordist capitalism.

## 1. A SOCIAL THEORY OF FLOWS

*Anti-Oedipus* is commonly read as a reaction against psychoanalysis and the imperialism of the oedipal subject. However, *Anti-Oedipus* is foremost a social theory constructed with the aim of understanding society as a specific organisation of flows of desire. It is important to note that Deleuze and Guattari challenge the traditional concept of desire based on both

representation and lack (AO, p. 26).<sup>2</sup> This means that desire should not be reduced to the sphere of acquisition (as if desire meant only desire for consumption) but should be understood as the moving force that animates production in general (AO, p. 27). To define this new concept of desire, Deleuze and Guattari forge the notion of desiring-production, which connects the Marxist analysis of labour (the abstract category that explains the subjective origin of value) with the Freudian concept of libido (the abstract force that explains the subjective origin of desire) (AO, p. 292).<sup>3</sup>

*Anti-Oedipus*' main social principle is that, in order to reproduce itself, every society needs to "codify the flows of desire, to inscribe them, to record them, to see to it that no flow exists that is not properly damned up, channelled, regulated" (AO, p. 35). Each society, depending on its specific relations of production, inscribes, organizes and administrates these flows differently.<sup>4</sup> In this sense, *Anti-Oedipus*' social theory challenges the notion of ideology as a suitable framework to explain the reproduction of a given social order (AO, p. 114). For Deleuze and Guattari, ideology is "an execrable concept that hides the real problems, which

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<sup>2</sup> Deleuze and Guattari argue that "the traditional logic of desire is all wrong from the very outset: from the very step that the Platonic logic of desire forces us to take, making us choose between production and acquisition. From the moment that we place desire on the side of acquisition, we make desire an idealistic conception, which causes us to look upon it as primarily a lack: a lack of an object, a lack of the real object" (AO, p. 26). *Anti-Oedipus* challenges both the psychoanalytical definition of desire (limited to the sphere of representation) and the Marxist view according to which desire belongs strictly to the ideological superstructure. Furthermore, it contends that desire belongs to the infrastructure of society (AO, p. 114). Deleuze and Guattari write that "There is no such thing as the social production of reality on the one hand, and a desiring-production that is mere fantasy on the other [...] The truth of the matter is that *social production is purely and simply desiring-production itself under determinate conditions*. We maintain that the social field is immediately invested by desire, that it is the historically determined product of desire, and that libido has no need of any mediation or sublimation [...] in order to invade and invest the productive forces and the relations of production. *There is only desire and the social, and nothing else*" (AO, pp. 30-1).

<sup>3</sup> Eugene Holland suggests that the concept of desiring-production is "intended and deployed so as to link together libido and labour power and thereby close the gap between psychoanalysis and Marxism" (1999, p. 8). In this regard, there is an analogy between *Anti-Oedipus*' critique of psychoanalysis and Marx's critique of political economy. This means that both political economy and psychoanalysis achieve a significant "scientific discovery" through the concepts of abstract labour and libido, respectively. At the same time, however, these two modes of representation fall back into their own private, individuated metaphysics, splitting their "subjective essence into two functions, that of abstract labour alienated in private property [...] and that of abstract desire alienated in the privatized family" (AO, p. 370). The critique put forth by *Anti-Oedipus* is therefore a critique of the metaphysical representations of the subject that sustains both political economy and psychoanalysis.

<sup>4</sup> According to Ronald Bogue (1989), "what is most important in *Anti-Oedipus*, I believe, is not its critique of psychoanalysis or its conception of revolutionary politics, but its [...] social history of the interrelationship of desire and power" (p. 105). In *Anti-Oedipus*, Deleuze and Guattari identify at least three forms of organizing the flows of desire depending on the surface on which these flows are recorded: primitive or savage societies (based on the territorial machine that inscribes the flows on the earth); despotic or barbaric societies (characterized by an over-coding of flows on the surface of the despot); and capitalist or civilized societies (radically different to the other two because, instead of coding the flows, it deterritorializes them). Ronald Bogue (1989) also suggests that "the designations 'savage', 'barbaric' and 'civilized', by which Deleuze and Guattari refer to the three forms of desiring-production, are taken from Engels' tripartite periodization of history in *The Origin of the Family, Private Property, and the State*" (p. 173, n. 11).



are always of an organizational nature” (AO, p. 378).<sup>5</sup> For this reason, they argue, the task of any social critique must begin by analysing “the specific nature of the libidinal investments in the economic and political spheres, and thereby to show how, in the subject who desires, desire can be made to desire its own repression [...] All this happens, not in ideology, but well beneath it” (AO, p. 115).

What differentiates capitalist society from other forms of social organization is that instead of coding and territorializing the flows of desire, capitalism “is faced with the task of decoding and deterritorializing flows” (AO, p. 35). Deleuze and Guattari write:

Capitalism is in fact born of the encounter of two sorts of flows: the decoded flows of production in the form of money-capital, and the decoded flows of labour in the form of the free worker. Hence, unlike previous social machines, the capitalist machine is incapable of providing a code that will apply to the whole of the social field. By substituting money for the very notion of a code, it has created an axiomatic of abstract quantities that keeps moving further and further in the direction of the deterritorialization of the *socius*. (AO, p. 36)

Non-capitalist social orders are defined by the way in which they code and territorialise the flows of desire. This means that non-capitalist societies reproduce themselves by establishing fixed codes, norms, and values that determine the specific relations between its constitutive elements. Capitalism, by contrast “is the only social machine that is constructed on the basis of decoded flows, substituting for intrinsic codes an axiomatic of abstract quantities in the form of money” (AO, p. 153). In other words, the abstract (quantitative) character of capital challenges the fixed codes, norms and values that secure and regulate social order in non-capitalist societies. These fixed codes are thus replaced by decoded flows that measure everything according to a single abstract quantity. According to Eugene Holland (1999), every society comprises “a specific form of organizing flows of matter and energy” (p. 64). The difference between non-capitalist and capitalist societies is that the former organizes these flows in qualitative (symbolical) terms whereas the latter does so quantitatively, i.e. economically (Holland 1999, p. 64). In other words, while non-capitalist social orders are organized symbolically “via codes and over-codes” that fix the flows of desire to stable norms and values, capitalism is organized economically “via axioms” that replace each fixed code with an abstract quantity (Holland 1999, p. 64).<sup>6</sup>

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<sup>5</sup> Deleuze and Guattari write: “when subjects, individuals, or groups act manifestly counter to their class interest [...] it is not enough to say: they were fooled, the masses have been fooled. It is not an ideological problem, a problem of failing to recognize, or of being subject to, an illusion. It is a problem of desire, *and desire is part of the infrastructure*” (AO, p. 114).

<sup>6</sup> In *Anti-Oedipus*, Deleuze and Guattari distinguish between the fixed codes of non-capitalist societies and the decoded capitalist axiomatic (AO, p. 153). This distinction is based on Marx’s own analysis of the versatility of

Deleuze and Guattari's definition of capitalism repeats that of Marx and Engels in the *Communist Manifesto*. In the 1848 text, Marx and Engels claim that "the first condition of existence" of pre-capitalist societies was "the conservation of the old modes of production in unaltered form" (1978, p. 476). This tendency towards "conservation" is analogous to what Deleuze and Guattari define as the coding task of non-capitalist societies. At the same time, Marx and Engels suggest that capitalism "cannot exist without constantly revolutionising the instruments of production, and thereby the relations of production, and with them the whole relations of society" (p. 476). Marx and Engels describe this in the following manner:

Constant revolutionising of production, uninterrupted disturbance of all social conditions, everlasting uncertainty and agitation distinguish the bourgeois epoch from all earlier ones. All fixed, fast-frozen relations, with the train of ancient and venerable prejudices and opinions, are swept away, all new-formed ones become antiquated before they can ossify. All that is solid melts into air, all that is holy is profaned, and man is at last compelled to face with sober senses his real conditions of life, and his relations with his kind. (1978, p. 476)

For Marx and Engels, capitalism imposes a homogeneous abstract quantity as the measure of all things, challenging all previous social orders based on fixed, unaltered systems of production. This understanding of the revolutionary drive of the capitalist mode of production informs Deleuze and Guattari's concept of deterritorialization.<sup>7</sup> At the same time, however, Marx and Engels argue that despite its revolutionary role, capitalism turns the unleashed social powers into a new mechanism of exploitation, substituting "naked, shameless, direct, brutal exploitation" for exploitation "veiled by religious and political illusions" (1978, p. 475). This is so because capitalism considers capital an end in itself: in capitalism, living

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capital. In an unpublished chapter of *Capital* Marx refers to the versatility and fluidity of labour under capitalist conditions as the "axiomatic" that governs political economy (C, p. 1014). According to Marx, the more capitalism develops, "the greater the demand will be for versatility in labour power, the more indifferent the worker will be towards the specific content of his work and the more fluid will be the movements of capital from one sphere of production to the next. Classical economics regards the versatility of labour power and the fluidity of capital as axiomatic, and it is right to do so, since this is the tendency of capitalist production which ruthlessly enforces its will despite obstacles which are in any case largely of its own making" (C, p. 1014). As Holland notes, the main difference between codes and axioms is that the first one relies on qualitative and symbolic values, while the second one relies on merely abstract and quantitative processes (1999, p. 64). Holland writes: "what sets capitalism apart from other modes of social-production, which code and over-code value, is that its social organization is based on the process of *axiomatization*" (1999, p. 66). Axioms, Holland explains, "directly join together heterogeneous flows of matter or energy that have been quantified. Axiomatization not only does not depend on meaning, belief, and custom, but actively defies and subvert them, giving capitalism its distinctive dynamism and modernism" (1999, p. 66).

<sup>7</sup> Holland (1999) suggests that the concept of territorialisation is taken from Lacan's analysis of the development of sexuality: "territorialisation programs desire to valorise certain organs and objects at the expense of others, and at the expense of what Freud called polymorphous perversity: the free flowing relatively unfixed form of desire that Deleuze and Guattari call schizophrenia" (p. 19). In this sense, the term deterritorialization would be a response to Lacan's concept of territorialisation, a critique of the territorialising understanding of desire characteristic of psychoanalysis. However, its connection to the *Communist Manifesto* suggests that the concept of deterritorialization must be read not merely as a response to psychoanalysis, but as a broader analysis of capitalism in Marxist terms. Furthermore, this twofold origin of the notion of deterritorialization in *Anti-Oedipus* highlights its overall aim: to bridge the critique of political economy to that of psychoanalysis.

labour appears merely as a means “to increase capital” (Marx and Engels 1978, p. 485). Accordingly, Deleuze and Guattari claim that capitalism requires certain mechanisms to prevent these decoded flows from eroding its own foundations, thus allowing the reproduction of its relations of production. In this sense, what capitalism deterritorializes “with one hand”, it must “reterritorialize with the other” (AO, p. 279). According to Deleuze and Guattari:

If it is true that the function of the modern State is the regulation of the decoded, deterritorialized flows, one of the principal aspects of this function consists in reterritorializing, so as to prevent the decoded flows from breaking loose at all the edges of the social axiomatic. (AO, p. 280)

As mentioned above, these mechanisms of reterritorialization differ from the traditional notion of ideology. This means that the reproduction of the relations of production is not a problem of “false consciousness” (AO, p. 114). What capitalism does is to reterritorialize the productive flows of desire (i.e. libido and abstract labour as deterritorialized flows); privatize them (AO, p. 281); reduce them to the spheres of representation, lack and narcissism (AO, p. 29-30); reintroduce lack where there is abundance (AO, p. 256); and thus make the productive flows desire their own repression (AO, p. 281). According to Deleuze and Guattari, the deterritorializing force of capitalism (the subjective essence of wealth and desire) is discovered “only in the forms of property that objectifies it all over again, that alienates it by reterritorializing it” (AO, p. 281).<sup>8</sup> From the perspective of *Anti-Oedipus*, private property and private desire appear not as the origin of society and value (as political economy and psychoanalysis believe), but rather as concrete mechanisms of reterritorialization through which capitalism prevents its own flows from “breaking loose” (AO, p. 281).

This chapter argues that the attention economy constitutes a specific mechanism of capitalist reterritorialization. In other words, the attention economy should be understood as a power apparatus that reterritorializes the enormous post-industrial productive powers unleashed by information technologies and automation. This interpretation demands overcoming the common understanding according to which the productive role of the attention economy is

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<sup>8</sup> Deleuze and Guattari write: “On the one hand, capitalism can proceed only by continually developing the subjective essence of abstract wealth or production for the sake of production [...]; but on the other hand and at the same time, it can do so only in the framework of its own limited purpose, as a determinate mode of production, ‘production of capital’, ‘the self-expansion of existing capital’. Under the first aspect capitalism is continually surpassing its own limits, always deterritorializing further [...]; but under the second aspect, capitalism is continually confronting limits and barriers that are interior and immanent to itself [thus demanding] always more reterritorialization (AO, p. 281).

merely the intensification of consumption (and thus the acceleration of the process of realisation of surplus value in the market). From this point of view, the attention economy is seen as a productive mechanism only to the extent that it captures individual desire, channelling it in order to make us want things we essentially do not need. The problem with this understanding of the attention economy, however, is that it limits the problem of desire to the sphere of consumption (or acquisition). For Deleuze and Guattari, desire should not be reduced to the sphere of consumption (acquisition) but should be conceived of as the force that animates production in general (AO, p. 27). From this perspective, it could be argued that the productive function of the attention economy is to transform desire into a source of valorising information (or surplus value of code) and to feed this information back into the productive sphere in order to generate profit (or surplus value of flux). Hence the attention economy reproduces the valorisation process of capital and prevents the deterritorialized productive powers from “breaking loose” and undermining the ruling social relations. Two steps are necessary in order to develop this hypothesis: first, to examine Deleuze and Guattari’s interpretation of the relation between labour, value and technology; second, to address the specific threefold synthesis that comprises *Anti-Oedipus*’ novel concept of desiring-machines.

## 2. LABOUR, VALUE, AND TECHNOLOGY IN *ANTI-OEDIPUS*

Together with its social theory and novel definition of capitalism, *Anti-Oedipus* offers a reinterpretation of the Marxist understanding of the relation between labour, value and technology. First, Deleuze and Guattari use the notions of deterritorialization and reterritorialization to explain Marx’s analysis of the tendency of the rate of profit to fall (AO, p. 37). In other words, Deleuze and Guattari reinterpret what Marx saw as capitalism’s core contradiction through the twofold movement of deterritorialization and reterritorialization of flows of desire. Second, *Anti-Oedipus* introduces the notions of surplus value of code and surplus value of flux in order to explain the relationship between deterritorialization and surplus value that characterises the capitalist mode of production. Using this distinction, Deleuze and Guattari suggest that in post-Fordism machinery begins to incorporate more and more elements of living labour, thus blurring the limits between fixed and variable capital. Third, Deleuze and Guattari forge the concept of machinic labour in order to explain the production of surplus value in a post-Fordist context in which the deterritorialization of the surplus value of code has been absorbed by cybernetic machines. These three points that

define *Anti-Oedipus*' reinterpretation of the relation between labour, value and technology establish a close resemblance with the Italian post-Marxist reading of Marx. In both cases, there is an attempt to show how the productive transformations put forth by post-Fordism challenge the opposition between living labour and machinery that defines Marx's account of the organic composition of capital. The next section analyses these three points and paves the way for developing an immanent critique of the attention economy and its role as an apparatus of reterritorialization.

## 2.1. THE TENDENCY OF THE RATE OF PROFIT TO FALL

Deleuze and Guattari contend that the twofold movement of deterritorialization and reterritorialization informs Marx's analysis of the tendency of the rate of profit to fall: "as a corollary of this law [the tendency of the rate of profit to fall]", the authors write, "there is the twofold movement of decoding or deterritorializing flows on the one hand, and their violent and artificial reterritorialization on the other" (AO, p. 37). In the previous chapter, Marx's analysis of the tendency of the falling rate of profit was explained in the following terms: with the development of the productive forces, more and more of the living labour that comprises the production of commodities is replaced by technical machines (or fixed capital); and since only living labour can create value, its gradual substitution with machines creates an overall decrease in the ratio of profit (Marx 1991, p. 317). Therefore, even though the application of new machinery may cause a relative increase in the amount of surplus value produced, the generalisation of this new technology creates an overall fall in the rate between variable and fixed capital (Marx 1991, p. 319). In this regard, the opposition between living labour and machinery constitutes a key element in Marx's understanding of the tendency of the rate of profit to fall.

In *Anti-Oedipus*, Deleuze and Guattari follow Marx's thesis according to which the tendency of the falling rate of profit constitutes capital's immanent limit (AO, p. 251). Given this internal limit, they argue, capitalism is forced to constantly widen its external limits "on an always vaster scale" (AO, p. 271). In other words, capitalism counteracts its internal contradiction by expanding the production and realisation of surplus value further and further:

the more the capitalist machine deterritorializes, decoding and axiomatizing flows in order to extract surplus value from them, the more its ancillary apparatuses [...] do their utmost to reterritorialize, absorbing in the process a larger and larger share of surplus value (AO, p. 37).

Unlike Marx, however, Deleuze and Guattari contend that the tendency of the rate of profit to fall does not rest upon the opposition between living labour and machinery, but upon the twofold movement of deterritorialization and reterritorialization (AO, p. 271). For Deleuze and Guattari, Marx's distinction between variable and fixed capital is grounded on an industrial (thus obsolete) definition of both labour and machinery.<sup>9</sup> As argued in chapter two, authors belonging to Italian post-Marxism contend that post-industrial capitalism drastically modifies the notions of variable and fixed capital, hence altering the definition of the organic composition of capital. In similar fashion, Deleuze and Guattari contend that the core contradiction of capitalism should not be explained through the opposition between living labour and machinery but rather with the twofold movement of deterritorialization and reterritorialization. In this regard, *Anti-Oedipus* suggests that Marx's treatment of the tendency of the falling rate of profit can only account for the internal contradiction of capitalism from a historical perspective. Alternatively, the notions of deterritorialization and reterritorialization make it possible to conceptualize capitalism's core contradiction in immanent terms.<sup>10</sup> This means that it is not necessary to ground capitalism's contradiction on a transhistorical definition of living labour (as opposed to fixed capital) but on the analysis of a twofold movement immanent to the capitalist mode of production. For Deleuze and Guattari, the rate of profit tends to fall not simply because of the replacement of fixed capital for living labour, but because of the constant need to reterritorialize the unleashed productive powers as individual labour and individual desire.

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<sup>9</sup> *Anti-Oedipus*' non-representational theory of society demands a non-representational theory of value in which value is not conceived of as the abstract representation of labour (not even the representation of the social relations that govern production), but rather as the differential outcome from a relation of flows. As Lazzarato (2014, p. 43) puts it, Marx's law of value belongs to an "anthropocentric view of production" that measures surplus value based on human time. By contrast, Deleuze and Guattari offer an alternative understanding of machines that overcomes the representational (and anthropocentric) opposition between labour and technology.

<sup>10</sup> Nevertheless, it is important to point out that Deleuze and Guattari acknowledge that the immanent critique of capitalism based on the twofold movement of deterritorialization and reterritorialization is already present in Marx's analysis of capitalism. When explaining the contradiction between the development of the productive forces and the process of valorisation of capital (and how this contradiction defines the tendency of the falling rate of profit), Marx writes: "To express this contradiction in the most general terms, it consists in the fact that the capitalist mode of production tends towards an absolute development of the productive forces irrespective of value and the surplus-value this contains, and even irrespective of the social relations within which capitalist production takes place; while on the other hand its purpose is to maintain the existing capital value and to valorise it to the utmost extent possible" (Marx 1991, pp. 357-8). In this passage, the twofold movement of deterritorialization and reterritorialization is explained as the tendency "towards an absolute development of the productive forces" on the one hand, while maintaining the purpose of valorising capital for capital's sake on the other. At the same time, this internal contradiction is posed as capital's internal limit, and the source of the tendency of the falling rate of profit (Marx 1991, p. 358).

It could be said that the attention economy works as a concrete mechanism for counteracting the tendency of the rate of profit to fall. However, Deleuze and Guattari's unique approach to this tendency marks an important difference with the Marxist accounts of the attention economy examined in chapter one. Jhally and Livant (1986), for example, define watching as living labour and strictly distinguish it from the fixed capital of media networks. What produces surplus value, they argue, is the act of watching. The technical machines that constitute the whole productive process, on the contrary, are seen as mere accumulated surplus labour. The productive role of watching is limited to the consumption of advertisement which in turn accelerates and expands the consumption of commodities. In short, the surplus value appropriated by media networks is produced by the living labour of the workers who produced those commodities in the first place. Jhally and Livant's account of the attention economy repeats Marx's distinction between living labour and machinery. From the perspective of *Anti-Oedipus*, however, it can be argued that the attention economy counteracts the tendency of the falling rate of profit by reterritorializing the enormous productive powers unleashed by post-Fordism in the form of automation and information technologies. This means that the attention economy uses the most advanced cybernetic machines as a way of turning flows of desire into a new source of valorisation. In other words, the attention economy uses the deterritorialized productive powers to appropriate the deterritorialized flows of desire and, in this way, to reterritorialize them as a new source of profit. The decrease in the rate of profit is therefore counteracted by reterritorializing an increasing number of deterritorialized flows of desire through increasingly more complex algorithms that turn these flows into active elements in the self-valorisation process of capital. Nevertheless, Deleuze and Guattari add that in order to understand the capitalist relation between machines and surplus value that grounds the tendency of the falling rate of profit, a second conceptual distinction is necessary, that between surplus value of code and surplus value of flux.<sup>11</sup>

## 2.2. SURPLUS VALUE OF CODE, SURPLUS VALUE OF FLUX

It has been mentioned above that according to *Anti-Oedipus* every society comprises a specific form of organizing flows of desire and that, ultimately, there are two ways in which

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<sup>11</sup> Deleuze and Guattari write: "The celebrated problem of the tendency to a falling rate of profit, that is, of surplus value in relation to total capital, can be understood only from the viewpoint of capitalism's entire field of immanence, and by taking into account the conditions under which a surplus value of code is transformed into a surplus value of flux" (AO, p. 248).

such organization can occur, i.e. qualitatively or quantitatively (Holland 1999, p. 64). Based on the distinction between a qualitative (symbolical) and quantitative (economic) organization of codes, Deleuze and Guattari distinguish between surplus value of code and surplus value of flux (AO, p. 248). Non-capitalist societies, they argue, organize flows of desire by coding them, that is, by fixing them to stable surfaces of inscription. In this regard, non-capitalist societies produce surplus value of code, which means that “social codes determine what is of value and therefore worth accumulating” (Holland 1999, p. 64). On the contrary, capitalism produces surplus value of flux. In capitalist societies, the category of value does not refer to fixed codes but to an abstract, deterritorialized measure. Therefore, capitalist surplus value is not produced by accumulating meaningful objects, but depends on a strictly quantitative operation that creates a difference between the quantity of capital invested and the quantity of capital that returns (AO, p. 248). In capitalism, the production of surplus value does not depend on the qualitative character of what is produced, but on the quantitative difference between the money invested in the production of a commodity and the money that returns as profit.<sup>12</sup>

Nevertheless, Deleuze and Guattari acknowledge that the distinction between surplus value of code and surplus value of flux is merely analytical. In reality, these two flows operate as complementary aspects of capitalist production of surplus value:

In defining precapitalist regimes by a surplus of code, and capitalism by a generalized decoding that converted this surplus of code into a surplus of flux, we were presenting things in a summary fashion, we were still acting as though the matter were settled once and for all, at the dawn of a capitalism that had lost all code value. This is not the case however (AO, p. 253).

This means that, despite substituting surplus value of flux for surplus value of code as the general aim of the production process, capitalism still requires the latter in order to ensure the production of the former. In order to explain this (i.e. how a surplus value of code complements the production of a surplus value of flux in contemporary capitalism), Deleuze and Guattari use the example of technology. Technical machines, they argue, presuppose

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<sup>12</sup> According to Deleuze and Guattari, the production of surplus value in capitalism depends on the asymmetric relation between two flows of money. On the one hand, a “flow of the means of payment” which “goes into the pocket of the wage earner”; on the other, “flows of financing” entered “on the balance sheet of a commercial enterprise” (AO, pp. 248-9). The problem is that money functions as a surface of inscription that imposes a common analytical unit to both flows and that conceals the asymmetrical power relations which ground the dualism between the purchase of labour power and the realisation of surplus value. It is important to note that conceptually this distinction between two flows of money derives from Marx’s distinction between labour power and labour process. On the one hand, the flow of money that works as means of payment corresponds to the buying and selling of labour power in the job market. On the other, the flow of money produced by the selling of commodities corresponds to the value produced by the actualisation of the labour power in the labour process and its later realisation in the market.



specific flows of code which “are both interior and exterior to the machine, forming the elements of a technology and even a science” (AO, p. 253). With the progressive development of technical machines, the flows of codes necessary to operate them become more and more complex. Whereas a simple machine or tool depended almost completely on the virtuosity of the worker, a cybernetic machine operates through an extremely complex flow of code that is completely alien to the user.<sup>13</sup> For Deleuze and Guattari, capitalism has deterritorialized the flows of code to such a degree that the cybernetic machine has been able to absorb them “in its body or its structure as a field of forces, while depending on a science and a technology, on a so-called intellectual labour distinct from the manual labour of the worker” (AO, p. 253). In a way that resonates with Alquati’s (1962; 1963) account of the organic composition of capital at the Olivetti factory, Deleuze and Guattari argue that cybernetic machines absorb deterritorialized flows of intellectual labour to the same extent that industrial machines absorbed deterritorialized manual labour. Moreover, the resemblance to Italian post-Marxism is reinforced by Deleuze and Guattari’s statement according to which in post-Fordism “knowledge, information, and specialised education are just as much parts of capital (‘knowledge capital’) as is the most elementary labour of the worker” (AO, p. 255). Deleuze and Guattari question the traditional opposition between living labour and machines by introducing the concepts of surplus value of code and surplus value of flux.

Furthermore, the authors argue that in post-industrial societies, technical machines absorb the decoded flows of code and put them at the service of a new axiomatic: the world capitalist market. This axiomatic, which subsumes all the technical and scientific flows of code that organize the productive process, is “much severer than all the scientific axiomatics, much severer too than all the old codes and overcodes that have disappeared” (AO, p. 254). The attention economy has to be understood as a result of the encounter between the development of technology in the form of cybernetic machines and the new axiomatic that subsumes these machines to the world capitalist market. In this sense, the prime functions of the attention economy are to harvest information about the processes that regulate the production and consumption of commodities, and to turn this information into a new form of generating capital. The productive powers unleashed by the development of science and technology are hence reterritorialized for the sake of capital. In brief, Deleuze and Guattari explain, what happens is that

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<sup>13</sup> According to Carlo Vercellone (2007, p. 19), the age of real subsumption of labour under capital is characterised by the “parcelling out and disqualification” of the labour process and by the increasing complexity of the knowledge accumulated as fixed capital.

the flows of code that are ‘liberated’ in science and technics by the capitalist regime engender a machinic surplus value that does not directly depend on science and technics themselves, but on capital – a surplus value that is added to human surplus value and that comes to correct the relative diminution of the latter, *both of them constituting the whole of the surplus value of flux that characterises the system.* (AO, P. 255)

As it can be seen, Deleuze and Guattari introduce the concept of machinic surplus value as a way of “correcting” Marx’s theory of surplus value and hence offering a more suitable explanation of the role of cybernetic machines in post-industrial capitalism. It could be added that the concept of machinic surplus value reinforces the similarities between *Anti-Oedipus* and Italian post-Marxism in the sense that it attempts to explain the productive role of technology in a post-industrial context.

### 2.3. MACHINIC SURPLUS VALUE

In order to understand the concept of machinic surplus value (and the notions of machinic labour and machinic time that underlie it), it is useful to refer to Deleuze and Guattari’s *A Thousand Plateaus*. In chapter fourteen of this book, Deleuze and Guattari oppose the notions of the smooth and the striated to explain two forms in which desire can be spatially organized.<sup>14</sup> In general terms, these concepts refer to two forms of distributing movement within a given space: smooth (or nomad) space defines movement freed from any fixed or hierarchic trajectory, whereas striated (or sedentary) space structures and organizes movement according to stable points which delimit its range and extension. Put differently, smooth space tends to absolute movement in which variation is intensive, while striated space organizes movement in a way that variation can only manifest itself extensively (Roffe 2005, p. 296). To a certain extent, it could be said that smooth space tends towards the deterritorialization of movement and striated space towards its reterritorialization (Conley 2005, p. 213).

In order to illustrate the difference between smooth and striated spaces, Deleuze and Guattari distinguish labour from free action: while the latter belongs to the domain of smooth space, the former can be seen as a result of striated space (ATP, p. 541). More specifically, Deleuze

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<sup>14</sup> Deleuze and Guattari write, “smooth space and striated space – nomad space and sedentary space – the space in which the war machine develops and the space instituted by the State apparatus – are not of the same nature” (ATP, p. 524). However, the authors note, “the two spaces exist only in mixture: smooth space is constantly being translated, transversed into a striated space; striated space is constantly being reversed, returned to a smooth space” (ATP, p. 524). At the same time, this “de facto mixes do not preclude a de jure, or abstract distinction between the two spaces” (ATP, p. 524).

and Guattari contend that it is only with the emergence of the State apparatus (that is, the institutional organization of striated space) that free action is systematically transformed into labour (ATP, p. 541). This is so mainly for two reasons:

first, because labour appears only with the constitution of a *surplus*, there is no labour that is not devoted to *stockpiling*; in fact, labour (in the strict sense) begins only with what is called *surplus labour*. Second, labour performs a generalized operation of striation of space-time, a subjection of free action, a nullification of smooth spaces. (ATP, p. 541)

In chapter one it was argued that labour should not be understood as a human essence, but as a strictly capitalist category according to which human activity is subsumed under the logic of value (which entails both abstraction and measurability). In this sense, it can be said that labour constitutes a reterritorialization of human activity: labour demands a striated space-time that functions as its abstract measure. Furthermore, by subsuming labour to the striated category of value, the State apparatus measures labour in relation to the amount of surplus that it does or does not produce.<sup>15</sup> In other words, the State is constantly measuring the value of living labour against that of dead, accumulated labour.

With the development of technology, however, labour becomes “less and less distinguishable” from its surplus (ATP, p. 542). This is so because technology (which is itself surplus labour accumulated as fixed capital) begins to gradually replace portions of labour within the valorisation process of capital. In a similar account to that of Antonio Negri’s deconstruction of Marx’s law of value examined in chapter two, Deleuze and Guattari ask, “how could one possibly distinguish between the time necessary for reproduction and ‘extorted’ time, when they are no longer separated in time?” (ATP, p. 542). For Deleuze and Guattari, the merging of labour and surplus labour put forth by the development of the productive forces does not “contradict the Marxist theory of surplus value” (ATP, p. 542). On the contrary, the authors contend, Marx was the first one to acknowledge that with the development of the productive powers, “surplus value *ceases to be localizable*” (ATP, p. 542). In this sense, Marx’s “fundamental contribution” was to suggest that with the development of capitalism, “machines would themselves become productive of surplus value” and that this would in turn “challenge the distinction between variable and constant

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<sup>15</sup> Marx’s distinction between productive and unproductive labour is a good example of this relation between labour and surplus. According to Marx “since the immediate purpose and the *authentic product* of capitalist production is *surplus-value*, *labour is only productive* [...] if it creates *surplus-value* directly, i.e. the only productive labour is that which is directly *consumed* in the course of production for the valorisation of capital. Looked at from the simple standpoint of the *labour process*, labour seemed *productive* if it realised itself in a *product*, or rather a commodity. From the standpoint of capitalist production we may add the qualification that labour is productive if it directly valorises capital, or creates surplus-value” (C, p. 1038).

capital” (ATP, p. 542). Once again there is a close similarity between Deleuze and Guattari’s argument and the Italian post-Marxist reinterpretation of Marx. Pushing this resemblance further, Deleuze and Guattari contend that in post-industrial capitalism “it remains true that all labour involves surplus labour; but surplus labour no longer requires labour” (ATP, p. 542). This means that post-industrial capitalism

operates less and less by the striation of space-time corresponding to the physicosocial concept of work. Rather, it is as though human alienation through surplus labour were replaced by a generalized ‘machinic enslavement’, such that one may furnish surplus value without doing any work. (ATP, p. 542-543)

The physicosocial notion of labour consists of the reterritorialization of human activity under a striated space-time (abstract labour time). This notion of labour informed classical political economy as well as Marx’s labour theory of value.<sup>16</sup> It also informed Marx’s treatment of the tendency of the rate of profit to fall. In post-industrial societies, however, the application of information technologies in the productive process unveils a cognitive and immaterial dimension of human activity which demands a new conceptualisation of labour, time and surplus value.<sup>17</sup> In this new productive context, surplus value is no longer produced only by reterritorializing human activity under a striated space-time, but by integrating cybernetic machines together with the cognitive dimension of labour. This integration produces what Deleuze and Guattari call machinic surplus labour, that is, a specific surplus of productive energy that does not necessarily involve labour (understood as the striated expenditure of human energy measured in terms of abstract time) or labour time, but which nonetheless produces machinic surplus value.

To illustrate this, Deleuze and Guattari refer to the act of watching television (ATP, p. 543). Television viewers, they argue, can generate machinic surplus labour (which can then be monetized by television networks) without having to perform any work in the physicosocial

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<sup>16</sup> Deleuze and Guattari suggest that during the nineteenth century, “a twofold elaboration was undertaken: of a physicoscientific concept of work (weight-height, force-displacement), and of a socioeconomic concept of labour power or abstract labour (a homogeneous abstract quantity applicable to all work, and susceptible to multiplication and division” (ATP, p. 540). In this sense, “there was a profound link between physics and sociology: society furnished an economic standard of measure for work, and physics a ‘mechanical currency’ for it. The wage regime had as its correlate a mechanics of force” (ATP, p. 540-1).

<sup>17</sup> According to Guattari, in post-industrial societies “human time is increasingly replaced by machinic time” (SS, p. 249). It is worth noting that with the term human time, Guattari is not trying to naturalise a specific form of time which becomes alienated by technology in the form of machinic time. As mentioned above, labour constitutes a reterritorialization of human activity, subsumed under a striated space-time. Accordingly, human time corresponds to the abstract measure that regulates human labour. Following this, it can be said that human and machinic times refer to two dispositions of labour under capitalist conditions of production. In other words, human and machinic time define two mechanisms through which capitalism produces and accumulates surplus value.

sense of the term (i.e. as the physical expenditure of human energy measured in terms of an abstract space-time striation).<sup>18</sup> Accordingly, it can be said that the attention economy is a mechanism that transforms human attention into a source of machinic surplus labour. This means that the attention economy does not subsume human activity under abstract-time, but it integrates the cognitive dimension of labour together with the productive forces unleashed by technological transformation. In this sense, the traditional categories of labour and labour time appear as insufficient to understand the production of surplus value in the attention economy. Furthermore, the concept of machinic labour challenges the traditional understanding of the organic composition of capital that places living labour on the one side and machines on the other.<sup>19</sup> Put differently, in post-industrial capitalism the concepts of constant and variable capital become an obsolete framework to explain the relation between labour, value and technology. For Deleuze and Guattari, these notions need to be replaced by an understanding of capitalism that takes into account the distinction between smooth and striated spaces:

The present-day accelerated forms of the circulation of capital are making the distinctions between constant and variable capital, and even fixed and circulating capital, increasingly relative; the essential thing is instead the distinction between striated capital and smooth capital, and the way in which the former gives rise to the latter through complexes that cut across territories and States. (ATP, p. 543)

However, Deleuze and Guattari note that contemporary capitalism does not simply replace labour as reterritorialized human activity with deterritorialized machinic surplus value.<sup>20</sup> Instead, post-industrial capitalism articulates machinic and human labour as two aspects of contemporary power formations: on the one hand, the striated space-time definition of labour “relates primarily to the state pole of capitalism, in other words, to the role of the modern State apparatuses in the organization of capital” (ATP, p. 543); on the other hand, “a new

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<sup>18</sup> In an argument similar to that of Lazzarato (1996), Deleuze and Guattari suggest that in post-industrial economies “not only does the user as such tend to become an employee, but capitalism operates less on a quantity of labour than by a complex qualitative process bringing into play modes of transportation, urban models, the media, the entertainment industries, ways of perceiving and feeling – every semiotic system” (ATP, p. 543).

<sup>19</sup> In *Anti-Oedipus*, Deleuze and Guattari contend that the organic composition of capital “must be modified in terms of the machinic surplus of constant capital, which distinguishes itself from the human surplus value of variable capital” (AO, p. 258).

<sup>20</sup> For Deleuze and Guattari, human labour and human surplus value “remain decisive, even [...] in highly industrialized sectors” (AO, p. 254). In fact, Deleuze and Guattari argue that contemporary capitalism integrates human and machinic labour as two poles of the reproduction of its social relations. On the one hand, it “extracts human surplus value on the basis of the differential relation between decoded flows of labour and production” (AO, p. 257); on the other, it “extracts machinic surplus value, on the basis of an axiomatic of the flows of scientific and technical code” (AO, p. 257). Furthermore, capitalism “absorbs or realises these two forms of surplus value of flux by guaranteeing the emission of both, and by constantly injecting anti-production into the producing apparatus” (AO, p. 257-8).

smooth space is produced in which capital reaches its ‘absolute’ speed, based on machinic components rather than the human component of labour” (ATP, p. 543).

With the concept of machinic surplus value, Deleuze and Guattari offer a reinterpretation of the relationship between labour and machines that overcomes the opposition between fixed and variable capital. This concept allows Deleuze and Guattari to unveil the historical limits of the physicosocial definition of labour that informs Marx’s analysis of the organic composition of capital and which lies at the heart of his definition of the core contradiction of capital (i.e. the tendency of the rate of profit to fall). What becomes clear is that the traditional notion of labour on its own can no longer sustain an adequate explanation of the way in which surplus value is produced in contemporary capitalism. Furthermore, the concept of machinic surplus value makes it possible to interpret the transformations of production put forth by post-industrial capitalism from the immanent standpoint of the twofold movement of deterritorialization and reterritorialization. All of this reinforces the similarity between *Anti-Oedipus* and the Italian post-Marxist reading of Marx. Nevertheless, Deleuze and Guattari’s reinterpretation of the organic composition of capital goes further than that of Italian post-Marxism insofar as *Anti-Oedipus*’ novel definition of machines attempts to break with the common understanding of machines as technical machines. The next section presents this new concept of machine by examining the threefold passive synthesis that constitutes the core of this notion.

### 3. DESIRING-MACHINES AND THE ILLEGITIMATE USE OF SYNTHESSES

It was mentioned at the beginning of this chapter that Deleuze and Guattari offer a new definition of machines. With the concept of desiring-machines (which is based on their understanding of desire as the moving force that animates production in general), Deleuze and Guattari attempt a more profound understanding of machines that is not limited to technical machines. From the conceptual point of view of *Anti-Oedipus*, there is no difference between man and nature; there is only “a process that produces the one within the other and couples the machines together” (AO, p. 2). Accordingly, there is no distinction “in nature” between desiring-machines and technical-machines, only a difference of the social regimes that govern them (AO, p. 35). In principle, all machines respond to the same basic structure. This shared ground between them is what the concept of desiring-machines tries to grasp. At the same time, the real difference is not between technical, social and organic machines, or

between man and nature, but “between on the one hand molar machines – whether social, technical, or organic – and on the other the desiring-machines, which are of a molecular order” (AO, p. 315).<sup>21</sup> This means that technical, social and organic machines are the same machines but under different conditions (AO, p. 316). In other words, technical, social and organic machines are molar aggregates of desiring-machines. At the molecular, submicroscopic level, all desiring-machines function through the same machinic processes of “breaks and flows” (AO, p. 315). At the molar, structural level, however, “machines become unified [through] techniques and institutions that make them visible” and organic beings “become structured by the statistical unities of their persons and their species, varieties, and locales” (AO, p. 315). When this occurs, technical machines begin to appear as individual objects, and living organisms as single subjects (AO, p. 316). In other words, it is only with the transition from a molecular level to a molar (representational) level that the distinction between living beings and technical machines (between man and nature) becomes discernible.

Deleuze and Guattari’s conception of machines has important consequences for an analysis of the relation between value, labour and technology under post-Fordist conditions of production and for a critique of the attention economy. The concept of desiring-machines allows Deleuze and Guattari to go beyond Italian post-Marxism in their reinterpretation of Marx. Instead of focusing on the representational framework of molar aggregates in which living-labour and technical machines appear as two separated elements, the concept of desiring-machines calls for an examination of the passive processes that take place at the molecular level. This means that instead of imposing an external standpoint from where to evaluate the deficiencies of the capitalist mode of production, *Anti-Oedipus* develops an analysis of the syntheses of desire based on immanent criteria. For Deleuze and Guattari, “desiring-machines work according to regimes of syntheses that have no equivalent in the large [molar] aggregates” (AO, p. 317). These syntheses constitute a threefold molecular process of desire that underlies all desiring-machines and which is absorbed by the molar aggregates.

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<sup>21</sup> Deleuze and Guattari use the distinction between a molecular and a molar level to differentiate between desiring-machines on the one hand, and technical, social, and organic machines on the other (AO, p. 315). The molecular level examines the passive syntheses that constitutes the desiring-machines and which go beyond the framework of representation of molar aggregates (AO, p. 200). As molar aggregates, by contrast, desiring-machines become unified and structured as technical, organic or social machines that respond to the logic of representation. In principle, however, technical, organic, and social machines “are the same machines under determinate conditions”, that is, under the conditions of the molar aggregate which itself is determined by the “laws of large numbers” (AO, p. 316).

Conceptually, a machine should be understood as a system of “interruptions or breaks” (AO, p. 38). A machine cuts a flow of desire and connects it to another flow of desire that has been cut by another machine (AO, p. 39).<sup>22</sup> Furthermore, the way in which each desiring-machine connects or cuts a flow of desire is determined by the surface of inscription “over which the forces and agents of production are distributed” (AO, p. 11). In this sense, it could be argued that there is an analogy between the notion of desiring-machines from *Anti-Oedipus* and Stiegler’s concept of cinematic time analysed in the previous chapter. In both cases, there is an attempt to break with the traditional opposition between living labour and technical machines. In both cases, moreover, there is a primacy of the surface of inscription which stands against any metaphysical account of living presence. In a manner that prefigures Stiegler’s hypothesis, the concept of desiring-machine breaks with the traditional opposition between living labour and machinery, that is, between living human time and dead machinic memory. In this sense, *Anti-Oedipus* offers a reinterpretation of Marx’s organic composition of capital which, at the same time, unveils the historical limitations of his labour theory of value.

In addition to this, the conceptual framework that sustains both the concept of desiring-machine and that of cinematic time is based on a novel interpretation of Kant’s theory of the threefold synthesis of imagination. In the previous chapter it was shown that Stiegler grounds his theory of time on a rereading of the temporality of the threefold synthesis of imagination which challenges the basic presupposition of phenomenology (i.e. the primacy of the living present over any form of external memory). Likewise, Deleuze and Guattari suggest that desire should be understood as a set of three passive syntheses that “engineer partial objects, flows, and bodies, and [...] function as units of production” (AO, p. 28). Similarly to Stiegler’s interpretation, the three syntheses in *Anti-Oedipus* are both passive (they precede the subject’s constitution) and quasi-transcendental (they challenge the opposition between a living temporality of the subject and the empirical experience of historical movement).

Despite these resemblances, there is an essential difference between Stiegler and Deleuze and Guattari’s treatment of the three syntheses. While Stiegler explains the three syntheses by connecting them to Husserl’s primary, secondary and tertiary memory, Deleuze and Guattari connect the three syntheses to Marx’s critique of political economy, specifically to his

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<sup>22</sup> This is so, Deleuze and Guattari argue, because “every machine is a machine of a machine. The machine produces an interruption of the flow only insofar as it is connected to another machine that supposedly produces this flow” (AO, p. 39).



analysis of the three branches that constitute production in general (i.e. production, distribution, and consumption). This main difference generates a series of discrepancies between Stiegler's and Deleuze and Guattari's reinterpretations of the threefold synthesis which at the same time entails significant theoretical consequences for the analysis of the attention economy. Most significantly, it could be argued that from the perspective of Deleuze and Guattari's immanent critique of the syntheses of desire, Stiegler's condemnation of the industrialisation of temporality seems to reintroduce an external standpoint from where the critique of contemporary capitalism is then developed. Unlike Stiegler, Deleuze and Guattari attempt a strictly immanent analysis of capitalism based on the legitimate and illegitimate uses of synthesis.

### 3.1. LEGITIMATE AND ILLEGITIMATE USES OF SYNTHESSES

One of the striking aspects of *Anti-Oedipus* is its attempt to develop an immanent critique of capitalism. This means a critique that is not based on any external standpoint (e.g. labour, desire, history, humanity, etc.) that works as a transcendent criterion. Instead, Deleuze and Guattari focus on capitalism's internal contradictions, measured against the conceptual apparatus that it has made possible. To do this, Deleuze and Guattari examine the core contradiction of capitalism by focusing on the legitimate and illegitimate uses of the syntheses of the unconscious. Deleuze and Guattari borrow this distinction from Kant's *Critique of Pure Reason*.<sup>23</sup> In this treatise, Kant attempts a justification of knowledge grounded strictly in the laws of reason itself.<sup>24</sup> In order to achieve this, Kant distinguishes between the immanent, legitimate use of judgement and the illegitimate, dogmatic use. What defines the legitimate use is that it is grounded strictly in the transcendental categories of understanding, whereas the illegitimate use relies either on empirical data or on dogmatic beliefs.<sup>25</sup> Accordingly, Deleuze and Guattari suggest that, given the syntheses of the

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<sup>23</sup> In the *Preface* to the Italian edition of *A Thousand Plateaus*, Deleuze and Guattari write: "*Anti-Oedipus* had a Kantian aspiration: it was necessary to attempt a kind of *Critique of Pure Reason* of the unconscious. How are the syntheses of the unconscious determined? How is historical movement the result of these syntheses? How does Oedipus become the unavoidable illusion of historical movement?" (Deleuze and Guattari, 1996, p. 10).

<sup>24</sup> Kant explicitly refers to the main task of his transcendental philosophy as the "institution of a court of justice, by which reason may secure its groundless pretensions, and this is not by mere decrees but according to its own eternal and unchangeable laws; and this court is none other than the *critique of pure reason* itself" (CPR, p. 101).

<sup>25</sup> Kant claims that the "real problem of pure reason is contained in the question: how are synthetic judgements a priori possible?" (CPR, p. 146). A synthetic judgement, unlike the analytic one, adds something from the predicate to the subject. This is evident for all empirical judgements. However, in order to prove the possibility of a universal science based strictly on the laws of reason, Kant must prove how *a priori* synthetic judgments

unconscious, “the practical problem is that of their use, legitimate or not, and of the conditions that define a use of synthesis as legitimate or not” (AO, p. 76). The reason why Deleuze and Guattari refer to the Kantian distinction between legitimate and illegitimate uses of synthesis is the immanent aspiration of their own materialist project. They explain it in the following manner:

For a simple reason, we again make use of Kantian terminology. In what he termed the critical revolution, Kant intended to discover criteria immanent to understanding so as to distinguish the legitimate and the illegitimate uses of the syntheses of consciousness. In the name of transcendental philosophy (immanence of criteria), he therefore denounced the transcendent use of syntheses such as appeared in metaphysics. (AO, p. 83)

The task of *Anti-Oedipus* is to examine the legitimate and illegitimate uses of the syntheses of the unconscious in capitalist societies.<sup>26</sup> To do so, Deleuze and Guattari identify a twofold movement of deterritorialization and reterritorialization which defines the basic contradiction of the capitalist mode of production: on the one hand, it puts forward an enormous deterritorializing force which undermines every previous fixed code norming society, while on the other it reterritorializes all these decoded flows as private property and private desire in order to reproduce the uneven social relations that ground the production of surplus value (AO, p. 281).

A critical account of the attention economy that follows Deleuze and Guattari’s methodological lesson cannot hence focus on the external standpoints of the alienation of labour (Beller 2006) or the industrialisation of desire (Stiegler 2011a), but must rather concentrate on the immanent contradictions of the capitalist mode of production. It is from this immanent perspective that the attention economy appears as a power apparatus aimed at reterritorializing the productive powers unleashed by the post-industrial transformations of the productive process. To develop this immanent analysis and to unveil its main differences with Stiegler’s interpretation of the attention economy, it is necessary to engage in a critical

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are possible. In order to do so, he must challenge both the empiricist tradition as well as all forms of metaphysical dogmatism (CPR, pp. 146-8). This defines Kant’s distinction between legitimate use of synthesis (based strictly on immanent laws of reason) and the illegitimate use (which is grounded either in empirical data or in dogmatic belief).

<sup>26</sup> Likewise, the critique of psychoanalysis developed in *Anti-Oedipus* has to be read as an analysis of the illegitimate use of desire that the oedipal complex represents. Against this illegitimate use, they argue, a truly materialist psychiatry must be able to offer an immanent understanding of desire based on the legitimate use of the passive syntheses of the unconscious. Deleuze and Guattari write: “In like fashion we are compelled to say that psychoanalysis has its metaphysics – its name is Oedipus. And that a revolution – this time materialist – can proceed only by way of a critique of Oedipus, by denouncing the illegitimate use of the syntheses of the unconscious as found in Oedipal psychoanalysis, so as to rediscover a transcendental unconscious defined by the immanence of its criteria, and a corresponding practice that we shall call schizoanalysis” (AO, p. 83).

examination of the three passive syntheses of the unconscious that constitute the category of desiring-machines.

### 3.2. THE THREE PASSIVE SYNTHESSES OF THE UNCONSCIOUS

For Deleuze and Guattari, desiring-machines work according to a threefold process of connection, disjunction and conjunction (AO, p. 45). In general terms, the structure of the three passive syntheses of *Anti-Oedipus* mimics that of the threefold synthesis of imagination from the first edition of Kant's *Critique of Pure Reason* analysed in the previous chapter.<sup>27</sup> For Kant, the three syntheses are apprehension, reproduction and recognition. The first one apprehends the sensible manifold given to perception. In this sense, the first synthesis is an *a priori* principle capable of identifying the manifold as manifold (CPR, p. 229). As shown in the previous chapter, Heidegger interprets the synthesis of apprehension as a synthesis that introduces discontinuity in the flow of time, hence making it possible to experience each now as a separate instant (KPM, pp. 184-5). In similar fashion, Deleuze and Guattari argue that the first synthesis of the unconscious apprehends the flows of desire by introducing cuts in an immanent field of intensities (libido) (AO, p. 6). Deleuze and Guattari call this first synthesis 'connective synthesis'. At the same time, they acknowledge the fact that in order to connect the flows of desire, the first synthesis must introduce discontinuity between them. In other words, only partial-objects that are discontinuous can be subject to a connective synthesis.

The previous chapter also showed that for Kant the first synthesis can only apprehend a particular sensible data as long as a second synthesis ensures its basic condition of possibility, i.e. a second synthesis that reproduces the apprehended sensible data, even when this data has vanished from perception (CPR, p. 230). Similarly, the second synthesis of the unconscious in *Anti-Oedipus* records the apprehended flows of desire onto a surface of inscription. To do so, it takes some of the energy of production (libido) and turns it into energy of recording (AO, p. 14). What is essential in the second synthesis, Deleuze and Guattari contend, "is the establishment of an enchanted recording or inscribing surface that arrogates to itself all the productive forces and all the organs of production, and that acts as a quasi-cause by

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<sup>27</sup> The general structure of the three passive syntheses of the unconscious in *Anti-Oedipus* can be traced back to Deleuze's earlier book *Difference and Repetition*. In chapter two of this book, Deleuze constructs a threefold synthesis of repetition aimed at challenging the two major metaphysical concepts of difference (based on identity and opposition, respectively). Furthermore, it could be argued that the overall structure of the three syntheses of *Difference and Repetition* is taken from Kant's account of the syntheses of imagination in the first edition of the *Critique of Pure Reason* (Hughes 2009, p. 99).

communicating the apparent movement (the fetish) to them” (AO, p. 13). This means that the recorded energy (precisely for being recorded) falls back on the flows of desire (libido), attracting them, appropriating them, creating the impression that the flows of desire miraculously emanate from the surface of inscription (AO, p. 12). In the case of capitalism, for example, capital functions as the surface of inscription on which the abstract flows of labour are recorded. In capitalism, capital appears as the driving force behind labour. This is what Marx calls the subsumption of living labour to capital. Nevertheless, from the perspective of *Anti-Oedipus*’ second synthesis this subsumption should not be understood in terms of false consciousness or ideology, but rather as “true consciousness of a false movement, a true perception of an apparent objective movement, a true perception of the movement that is produced on the recording surface” (AO, p. 11).

For Kant, the third synthesis is the synthesis of recognition, in which a concept of understanding subsumes the sensible data apprehended by perception and reproduced by imagination. The condition of possibility of the third synthesis is the *a priori* principle of transcendental apperception, which grants the unity of the subject (CPR, p. 232). In *Anti-Oedipus*, the third synthesis of the unconscious takes a portion of the energy of recording and transforms it into energy of consumption [*consommation*] (AO, p. 18). Unlike Kant, however, Deleuze and Guattari contend that only when the recorded flows are consumed “something of the order of a subject” emerges (AO, p. 17). In this regard, the subject is not a transcendental unity but “an appendix, or a spare part”, adjacent to the threefold process of production that constitutes a desiring-machine (AO, p. 21).<sup>28</sup>

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<sup>28</sup> Hughes (2009) suggests that, “in contrast to Kantian recognition”, in Deleuze “we encounter the impossibility of recognition in the third moment of synthesis. This is because in Kant recognition and the unity of the synthesis depended entirely on the categories of the understanding [...] In Deleuze, however, there are no such categories and there is no transcendental ground of the I” (p. 115). In the *Preface* to his book on Kant, Deleuze writes: “Kant explains that the Ego itself is in time, and thus constantly changing: it is a passive Ego, which experiences changes in time. But, on the other hand, the I is an act which constantly carries out a synthesis of time, and of that which happens in time, by dividing up the present, the past and the future at every instant. The I and the Ego are thus separated by the line of time which relates them to each other, but under the conditions of a fundamental difference. [...] I cannot therefore constitute myself as a unique active subject, but as a passive Ego [...] That is to say, the I, as an Other which affects it” (1984, p. viii-ix). In *Difference and Repetition*, Deleuze contends that Kant was the first one to pose the problem of time as an empty form which splits the subject from inside. Nevertheless, although Kant discovered this empty form of time, he immediately subordinated it to the figure of the transcendental subject. By doing so, Kant “resuscitated” the fixed Ego (Deleuze 2005, p. 109). Accordingly, in *Anti-Oedipus*, Deleuze and Guattari suggest that in capitalism the threefold synthesis triggers a process of deterritorialization of flows of desire that fractures the anthropological understanding of the subject. From this perspective, the subject appears as the residuum of a machinic process of production. However, this process is immediately reterritorialized through the privatization of labour and desire, which prevent the flows of desire from fracturing the social relations that characterise capitalism.

The Kantian problematic of the three syntheses constitutes a shared ground between *Anti-Oedipus*' definition of desiring-machines and Stiegler's treatment of the notion of cinematic time. In chapter three it was shown how Stiegler employs Husserl's notions of primary, secondary and tertiary memory in order to explain the temporal character of the three syntheses of imagination (TT3, p. 41). In doing so, Stiegler attempts to show the primacy of tertiary memory (external surface of inscription) in the process of production of temporality. In *Anti-Oedipus*, the three syntheses of the unconscious respond to a similar logic: the surface of inscription determines the way in which desiring-machines connect to each other, taking over the process of production as if the flows of desire emanated from the surfaces of recording (AO, p. 12). Nevertheless, despite this shared ground between Stiegler and *Anti-Oedipus*, the singularity of the latter stems from the fact that it links the three passive syntheses of the unconscious to Marx's treatment of the three branches of the productive process as understood by political economy: production, distribution and consumption (AO, p. 45). In order to understand how this defines *Anti-Oedipus*' treatment of the three syntheses and to outline its main differences with Stiegler's account, it is necessary to briefly refer to Marx's critique of political economy's 'trite notion' of the economic space.

### 3.3. PRODUCTION, DISTRIBUTION, AND CONSUMPTION

In the *1857 Introduction*, Marx engages in a critical account of the conceptual distinction between production, distribution and consumption used by political economy to define the economic process (G, p. 89). According to Marx, political economy defines this "trite notion" in the following way:

In production, the members of society appropriate (create, shape) the products of nature in accord to human needs; distribution determines the proportion in which the individual shares in the product [...]; and finally, in consumption, the products become objects of gratification, of individual appropriation. (G, p. 89)

From this perspective, Marx adds, production appears as the result of "general natural laws", distribution as a "social accident", and consumption as an "end-in-itself" (G. p. 89). Moreover, the act of consumption is thought of as belonging outside of the economic process, "except in so far as it reacts in turn upon the point of departure and initiates the whole process anew" (G, p. 89). For Marx, this is a coherent, thus shallow understanding of the productive process since it conceives the spheres of production, distribution and consumption as independent from each other, failing to grasp the unity among them and their relations to the

social whole (G, p. 90). According to Marx, political economy's account of consumption and distribution naturalizes a specific idea of human needs and desires. By contrast, Marx shows that production, distribution and consumption are not independent spheres regulated by the rational exchange between individuals (motivated by "natural" needs and desires), but rather that these spheres are determined by the relations of production governing the social whole. This means that the desire that supposedly regulates the consumption of goods and which channels their distribution is itself the result of the specific relations of production that govern a given society. This requires reconceptualising the notions of consumption and distribution.

On the one hand, Marx argues, there is individual consumption of goods. This defines political economy's basic understanding of consumption. On the other hand, however, there is "productive consumption", that is, consumption of raw materials and of the instruments of production within the productive process (G, p. 90). From this perspective,

production does not only create an object for the subject, but also a subject for the object. Thus production produces consumption (1) by creating the material for it; (2) by determining the manner of consumption; and (3) by creating the products, initially posited by it as objects, in the form of a need felt by the consumer. It thus produces the object of consumption, the manner of consumption and the motive of consumption. (G, p. 92)

Following the notion of productive consumption, Marx contends that human needs and desires appear as neither eternal nor natural, but as the result of the specific technical conditions of production of a given society (and the social relations governing those conditions).<sup>29</sup> As Louis Althusser (2009) puts it, "individual consumption itself, which interconnects use-values and needs in an apparently immediate fashion [...], refers us to the technical capacities of production on the one hand, and on the other to the social relations of production" (p. 184). The same happens at the level of distribution. For political economy, distribution refers to the distribution of commodities; hence distribution appears as the natural result of the demands imposed by the sphere of consumption. For Marx, distribution contains a twofold definition: on the one hand, it can refer to the distribution of goods; on the other, to the distribution of the means of production, of income, and of men into social classes:

In the shallowest conception, distribution appears as the distribution of products, and hence as further removed from and quasi-independent of production. But before distribution can be the distribution of products, it is: 1) the distribution of the instruments of production, and 2)

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<sup>29</sup> An object for consumption, Marx writes, "is not an object in general, but a specific object which must be consumed in a specific manner. Hunger is hunger, but the hunger gratified by cooked meat eaten with a knife and fork is a different hunger from that which bolts down raw meat with the aid of hand, nail and tooth. Production thus produces not only the object but also the manner of consumption, not only objectively, but also subjectively" (G, p. 92).

which is a further specification of the same relation, the distribution of the members of the society among the different kinds of production [...] The distribution of products is evidently only a result of this distribution, which is comprised within the process of production itself and determines the structure of production. (G, p. 96)

Once again, Marx distinguishes between the productive forces and their relations of production. The common understanding of distribution as distribution of goods should be seen “only as the result” of a different notion of distribution: “distribution of the members of society among the different kinds of production” (G, p. 96). By proceeding in this way, Marx shows that there can be no anthropological definition of the economic subject beyond the historical specificities of each mode of production. At the same time, Marx’s analysis of the economic space demonstrates that both distribution and consumption are subordinated to the social relations that define the sphere of production. Furthermore, Marx distinguishes between the labour process and the relations of production that determine this process (G, p. 96). As Althusser puts it

According to Marx, all production is characterized by two indissociable elements: the labour process, which deals with the transformation man inflicts on natural materials in order to make use-values out of them, and the social relations of production beneath whose determination this labour process is executed. (2009, p. 188)

In conclusion, Marx criticises political economy for failing to grasp how the relations of production of a given society affect each and every level of the economic process:

The conclusion we reach is not that production, distribution, exchange and consumption are identical, but that they all form the members of a totality, distinctions within a unity. Production predominates not only over itself [...] but over the other moments as well [...] A definite production thus determines a definite consumption, distribution and exchange as well as definite relations between these different moments. Admittedly, however, in its one-sided form, production is itself determined by the other moments [...] Mutual interaction takes place between the different moments. This is the case with every organic whole. (G, pp. 99-100)<sup>30</sup>

*Anti-Oedipus* connects the three passive syntheses with the Marxist analysis of production, distribution and consumption. According to Deleuze and Guattari, the three passive syntheses of the unconscious “make the process of desiring-production at once the production of production, the production of recording, and the production of consumption” (AO, p. 45). In

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<sup>30</sup> According to Althusser (2009), this marks Marx’s “immense theoretical revolution” (p. 201). More specifically, Althusser argues that unlike political economy, Marx was capable of grasping the theoretical concept that defines economic phenomena as a whole. This means that Marx’s method was able to grasp economic phenomena “by the concept of the (global) structure of the mode of production, insofar as it determines the (regional) structure which constitutes as economic objects and determines the phenomena of this defined region, located in a defined site in the structure of the whole” (Althusser 2009, p. 202). This, Althusser claims, implies a new understanding of causality (differential causality) which breaks with the traditional concepts of causality that define Western metaphysics (2009, p. 206).

this sense, it could be argued that *Anti-Oedipus* sets forth a critique of the anthropological understanding of desire in a manner that mimics Marx's criticism of the anthropological understanding of the economic process. For Deleuze and Guattari, desire is not limited to the sphere of consumption (and hence independent from the sphere of production). In fact, with the notion of desiring-production, these authors define desire as a threefold passive process which includes production, distribution and consumption. Explicitly referring to Marx, Deleuze and Guattari contend that each aspect of this threefold process does not represent an independent sphere, but rather that they are all subsumed under the given relations of production that govern the social whole:

The real truth of the matter [...] is that there is no such thing as relatively independent spheres or circuits: production is immediately consumption and a recording process, without any sort of mediation, and the recording process and consumption directly determine production, though they do so within the production process itself. Hence everything is production: production of productions, of actions and of passions; production of recording process, of distributions and of co-ordinates that serve as points of reference; productions of consumptions, of sensual pleasures, of anxieties and of pain. Everything is production, since the recording processes are immediately consumed, immediately consummated, and these consumptions directly reproduced. (AO, p. 4)

This interpretation of the three passive syntheses (which challenges the conceptual distinction between the spheres of production, distribution and consumption) has important consequences for a critique of the attention economy. By refuting the economic separation between production and consumption, *Anti-Oedipus* makes it possible to question the traditional understanding of the attention economy. As shown in the previous chapters, the attention economy is commonly seen from the perspective of consumption. This means that the attention economy's main aim is to capture human attention in order to distribute advertising messages and hence to accelerate the consumption of commodities (and with it the realisation of surplus value). This reproduces political economy's understanding of the economic process according to which consumption is the moving force of any economy, presupposing a given definition of consumption as the "natural" expression of human needs and desires. Furthermore, it naturalises a given idea of the subject: for political economy, the desire that moves consumption is inherent to subjectivity. Therefore, the role of the attention economy is merely to channel human desire toward one commodity or another (which in turn does not change the subject's constitution).

By contrast, Deleuze and Guattari's interpretation of Marx provides a theoretical framework from where to critique the anthropocentric definitions of desire and subjectivity that ground the attention economy. For Deleuze and Guattari, production, distribution and consumption



belong to one general process of production (AO, p. 4). This means that the attention economy should be analysed not from the standpoint of consumption, but from that of production. From this perspective, the attention economy appears as a large machine aimed at the production of valorising information. According to Jhally and Livant's (1986) interpretation presented in chapter one, the attention economy is capable of generating surplus value because it produces an audience. More specifically, it produces the attention time of an audience. This attention time is then sold to advertisers, hence creating profit. In the age of the internet and Big Data, besides producing an audience, the attention economy produces meta-information which allows segmenting that audience into a series of "blocs of attention" (Beller 2006, p. 234). Furthermore, the attention economy uses this meta-information to merge the spheres of production, distribution and consumption and to regulate the production of commodities. In this way, the attention economy makes it possible to turn information into a source of what Deleuze and Guattari have defined as machinic surplus value. In chapter two it was shown that with the development of technology, information becomes central to capital's self-valorising process. In this regard, it was argued that the attention economy generates surplus value by turning human micro-decisions into an endless source of information that is then used to unify consumption and production into one large process of capitalist valorisation (blurring the distinction between labour time and leisure time as well as drastically changing the mechanisms of capitalist exploitation). *Anti-Oedipus* allows us to take this hypothesis further and to argue that the attention economy turns the meta-information it produces into an active source of machinic surplus value. This means that individuals produce surplus value not because they work (in the physicosocial sense of the word), but because the attention economy transforms subjectivity itself into a territory of capitalist valorisation.<sup>31</sup> In doing so, the attention economy reterritorializes the productive powers unleashed by technological development under a privatised conception of desire and labour. Therefore, the attention economy carries out a twofold objective: on the one hand, it achieves an economic function by transforming subjectivity into a new source of surplus value, thus expanding the cycle of capitalist valorisation and counteracting the tendency of the falling rate of profit; on the other hand, the attention economy plays an important role as a power apparatus, reterritorializing a private notion of desire and then turning it into a source of information used to organize society.

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<sup>31</sup> According to Lazzarato (2014, p. 24), the transformations put forth by post-Fordism demand the analysis of contemporary capitalism to shift from the pure territory of political economy towards "the field of subjective economy". See also Lazzarato (1996, p. 136).

Chapter five will examine this last claim extensively, arguing that the attention economy must be analysed from the standpoint of the mutation in the diagram of power that characterises the passage from Fordism to post-Fordism. Before moving to chapter five, however, it is useful to briefly address the differences between Deleuze and Guattari's interpretation of the three syntheses of the unconscious and Stiegler's critique of the industrialisation of consciousness examined in the previous chapter. The next section will examine these differences and outline their significance for an immanent critique of the attention economy.

#### 4. TOWARDS AN IMMANENT CRITIQUE OF THE ATTENTION ECONOMY

In *Anti-Oedipus*, the three passive syntheses constitute the basic structure of desiring-machines, the central category for a critique of the political economy of the unconscious. As mentioned above, whereas Stiegler explains these three syntheses based on his interpretation of the three forms of memory in Husserl's phenomenology of time, Deleuze and Guattari connect the three syntheses to the three levels of the economic cycle as they appear in Marx's critique of political economy. This difference entails important consequences for a critique of the political economy of desire and hence for a critical account of the attention economy.

First, it could be argued that *Anti-Oedipus* achieves a historization of the theory of the three syntheses that is absent in Stiegler's account. This does not imply merely acknowledging that the threefold synthesis is itself a historical phenomenon, but that its conceptualization is historically possible only thanks to the deterritorializing tendency of capitalism. In the phenomenological tradition (Kant, Husserl, and Heidegger), the theory of the three passive syntheses constitutes an abstract framework which explains the constitution of time as a subjective essence. Following Marx's methodological lesson, however, it is possible to argue that the theory of the three syntheses can only be conceptualized under given historical conditions. Put differently, an abstract framework that explains abstract time as a transcendental character of subjectivity (free from empirical, objective, determination) can only be the result of a specific social context in which human activity has been simplified and subsumed under the category of abstract labour.

In chapter one, it was shown that according to Marx, the merit of political economy was to discover labour as the subjective essence of all wealth (Marx 1977, p. 89). This simple abstraction, "labour as such", appears as a general category that explains production in all

forms of society. However, Marx suggests that this general category can only be formulated under certain conditions of production which universalize an abstract understanding of productive activity. In other words, despite the fact that Marx claims that political economy is correct in this particular respect (the discovery of the subjective essence of wealth), he quickly notes the methodological problem at stake: labour as a general abstraction is not a universal and eternal category, but the result of very specific conditions of production under which such an abstraction can be thought of (G, p. 104). Political economy “discovers” the subjective essence of wealth, and then quickly tries to apply it to all forms of pre-capitalist modes of production, to “smuggle in” the bourgeois relations of production as “eternal natural laws independent of history” (G, p. 87). According to Marx, the category of labour in its abstract form is thus best interpreted as the result of a highly developed mode of production (G, p. 104). This means that only under capitalist conditions of production (which subsume labour to the wage system and thus turn it into an abstract commodity which can be valued and exchanged) can labour be conceived of as a general abstraction. Therefore, Marx concludes, despite its universality (and precisely because of its “abstractness”) the specific category of labour possesses its “full validity” only for and within the historical relations that made its abstraction possible, i.e. capitalism (G, p. 105).

The same methodological concern underlies the account offered in *Anti-Oedipus* of the three passive syntheses of the unconscious. For Deleuze and Guattari, these syntheses appear as the transcendental structure of desiring-machines but also as a historically specific framework valid only for an analysis of the capitalist mode of production. On the one hand, Deleuze and Guattari contend that the three syntheses can be used to “retrospectively understand all history” (AO, p. 153). In this sense, the three syntheses constitute an abstract category that explains the most basic mechanisms of social constitution at a molecular level. On the other hand, however, Deleuze and Guattari add that this is possible only “provided that the rules formulated by Marx are followed exactly” (AO, p. 153). This means that, despite its universality (and precisely because of its deterritorialized character), the threefold synthesis of the unconscious as a framework for social analysis possesses full validity only for and within the historical context of capitalism.<sup>32</sup>

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<sup>32</sup> Following Marx’s lesson on the historicity of the category of labour, Deleuze and Guattari argue that only when desire becomes a fully subjective essence (and hence detached from any object) can it be conceived of as the moving force that animates production in general (AO, p. 370). Put differently, the subjective essence of desire can only be “discovered” under “specific historical conditions” (Holland 1999, p. 18). In the *1857 Introduction*, Marx shows how, under capitalist conditions of production, the individual appears as something

From this perspective, it could be said that Stiegler's interpretation of the three passive syntheses lacks historical self-awareness, i.e. it overlooks the historical specificity that ties his concept of cinematic time to an immanent critique of capitalism. On the one hand, Stiegler's theory of originary technicity challenges the phenomenological opposition between living time and dead technical memory. On the other hand, however, Stiegler's concept of cinematic time can be said to be grounded on an ahistorical interpretation of the threefold synthesis. Stiegler attempts a quasi-transcendental interpretation of the threefold synthesis, according to which the production of temporality rests upon an ongoing process of technical exteriorisation. From a Marxist perspective, it could be said that Stiegler "discovers" a subjective essence that places technical exteriorisation at the very core of the human constitution. At the same time, however, Stiegler deploys a quasi-empirical framework in which he uses the work of anthropologist Leroi-Gourhan in order to show how his quasi-transcendental theory can be traced back to the origin of humanity.<sup>33</sup> In doing so, Stiegler tries to "smuggle in" a universal, transhistorical concept of technology, thus neglecting the fact that only in an age of industrial machinery (in which humans have become an appendage to the machine) can an abstract definition of technology be "discovered" and posed as the subjective essence of human constitution.

By contrast, *Anti-Oedipus*' concept of desiring-machines constitutes a quasi-transcendental theory which is immanent to capitalism. By connecting the three syntheses to the three levels of the economic process, Deleuze and Guattari emphasize the direct relation between their novel concept of machine and the movement of deterritorialization that made this concept possible (AO, p. 35). This means that the theory of the three syntheses in *Anti-Oedipus*

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independent from the social whole (G, p. 83). However, Marx quickly adds that this is only the result of the most developed social relations (G, p. 84). Accordingly, Deleuze and Guattari argue that in capitalism, private desire appears as independent, and differentiated from, social production (AO, p. 370). This is so precisely because of the deterritorializing tendency of capitalism that frees desire from any external (social) determination. At the same time, the deterritorialization of desire makes it possible to conceptualize its "subjective essence" and its "identity in nature" with social production (AO, p. 370). As Holland (1999) suggests, "the identity in nature of desiring-production and social-production is revealed in the same mode of production where the difference in regime between the two is the greatest" (p. 92). This means that in non-capitalist societies, desire and labour were so invested in external objects that "the abstract subjective essence of labour and desire remains hidden due to their objectification in and by codes, yet they both belongs to the same overall regime of coding" (Holland 1999, p. 92). By contrast, in capitalism labour and desire are deterritorialized, becoming free from objective determination and leaving no overall code to bring them together. Thus, each one appears as "completely separate from the other: desire and labour henceforth apparently belong to entirely different regimes of production: desiring-production and social-production" (Holland 1999, pp. 92-3).

<sup>33</sup> According to Bradley (2011), Andre Leroi-Gourhan is Stiegler's "closest philosophical predecessor" (p. 122). In particular, Bradley argues, Stiegler repeats Leroi-Gourhan's "theory of human history as a process of exteriorisation", according to which human constitutes themselves by "putting their experiences outside of themselves" (2011, p. 122).

cannot be disentangled from the relations of production that govern capitalist society and which grant the reproductive cycle of capital. This introduces a second difference between *Anti-Oedipus* and Stiegler's interpretation of the three syntheses: their social character.

For Deleuze and Guattari, there is no distinction between desiring- and social-machines (AO, p. 35). This means that desiring-machines are always socially inscribed. This is sustained by the fact that Deleuze and Guattari connect the three passive syntheses of the unconscious to the three levels of the economic cycle. In Marx's critique of political economy, production, distribution, and consumption appear as three regional manifestations of a global structure governed by the specific relations of production of a given society (Althusser 2009, p. 202). This implies a critique of the anthropological understanding of production, distribution, and consumption that characterises political economy. Most significantly, Marx contends that the individual producer is always the result of highly developed social relations (G, pp. 83-4).<sup>34</sup> In similar fashion, Deleuze and Guattari challenge the anthropological, individual account of desire. For these authors, there is no separation between social production on the one hand, and individual desire on the other:

The truth of the matter is that social production is purely and simply desiring-production itself under determinate conditions. We maintain that the social field is immediately invested by desire, that it is the historically determined product of desire, and that libido has no need of any mediation or sublimation [...] in order to invade and invest the productive forces and the relations of production. There is only desire and the social, and nothing else. (AO, p. 31)

This implies an important difference with Stiegler's critique of the political economy of the unconscious (2006, p. 40). As shown in chapter three, for Stiegler, desire cannot be disjointed from the processes of individuation (2011c, p. 127). In order to develop his critique of contemporary capitalism, Stiegler opposes individual, singular desire (as the essential element of the process of individuation) to its systematic proletarianisation (which consequently implies a process of disindividuation). In other words, Stiegler develops his critique of post-industrial capitalism from the external standpoint of individual desire, arguing that individual desire is corroded by the massification of industrial temporal objects (2012, p. 10). Chapter three also indicated that for Stiegler this process of proletarianisation creates a "tendency for libidinal energy to decline", whereby capitalism undermines its own moving force (2011c, p.

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<sup>34</sup> According to Marx, "the human being is in the most literal sense a *zoon politikon* (political animal), not merely a gregarious animal, but an animal which can individuate itself only in the midst of society" (G, p. 84). This implies that "production by an isolated individual outside society is as much of an absurdity as is the development of language without individuals living together and talking to each other [...] Whenever we speak of production, then, what is meant is always production at a definite stage of social development – production by social individuals" (G, p. 84).

63). With this formula, Stiegler attempts to overcome Marx's analysis of the internal limit of capitalism based on the opposition between living labour and machines. The problem, however, is that Stiegler restores a new metaphysical opposition between individual desire and its proletarianisation.

By contrast, Deleuze and Guattari contend that there is no difference between desiring- and social-machines. That is, there is no opposition between individual desire and social production. In *Anti-Oedipus*, the critique of capitalism is developed through the immanent criteria of the legitimate and illegitimate uses of syntheses, that is, from the standpoint of capitalism's internal contradictions (without recourse to any external point of view). From this perspective, the tendency of the rate of profit to fall (i.e. capitalism's internal limit) is grounded on neither the opposition between living labour and machines nor the opposition between individual desire and its proletarianisation. From the perspective of *Anti-Oedipus*, capitalism's internal barrier is the twofold movement of deterritorialization and reterritorialization immanent to capital itself. Furthermore, by connecting the immanent structure of desiring-machines (i.e. the threefold synthesis of the unconscious) to the three levels of the economic cycle, Deleuze and Guattari highlight the immanent relation between individual desire and the relations of production governing each mode of production.

These differences between Stiegler's and *Anti-Oedipus*' "political economy of desire" manifest themselves in the critical approach to the attention economy. For Stiegler, the problem with the attention economy is that it normalizes a given temporal experience ("real-time") and hence destroys the temporal gap between desire and its satisfaction. Since this gap is necessary for the processes of individuation, Stiegler contends that its corruption implies a systematic disindividuation which leads to "political and economic disarray" (2011a, p. 58). In this regard, Stiegler restores a universal criterion through which he is able to identify the negative effects that the attention economy carries for the "natural" processes of individuation. From the perspective of *Anti-Oedipus*, however, the attention economy has to be examined using strictly immanent criteria. This means, to understand the attention economy as a concrete power apparatus aimed at the reterritorialisation of the flows of desire and labour unleashed by post-industrial capitalism: the attention economy uses cybernetic technologies in order to capture the molecular level of desiring-machines and translate it into molar aggregates (e.g. it uses the most advanced algorithms in order to turn human attention into a source of statistical and demographic data about a given population).

As mentioned above, for Deleuze and Guattari there is no difference between technical and social machines, only a difference between the molecular and the molar regimes that govern them (AO, p. 35). The same machines, therefore, “can be both technical and social”, depending on the perspective they are analysed from (AO, p. 155). Deleuze and Guattari illustrate this using Lewis Mumford’s example of the clock: as a technical machine, the clock measures time in uniform units; as a social machine, however, it “reproduces canonic hours and assures order in the city” (AO, p. 155). In the same way, the cybernetic machines that characterise post-Fordism are technical machines that make it possible to automatize the production of commodities, to appropriate science and technology as active elements of the direct production process, and hence to unleash an enormous productive power. But these cybernetic machines are also social machines that operate as a concrete power apparatus aimed at reterritorializing the unleashed productive powers under the axiomatic of the world capitalist market, thus preventing the decoded flows of desire and labour from undermining the foundations of capitalist society. This twofold perspective of technical and social machines ultimately entails that the analysis of technical machines alone explains nothing (N, p. 175). What is necessary is an analysis of the social forms capable of producing and making use of these technical machines, that is, a critical examination of “the collective apparatuses of which the machines are just one component” (N, p. 175). This means that a critique of the attention economy cannot remain at the level of the examination of the cybernetic machines that transform the productive process (even if this makes it possible to reconceptualise the relation between labour, technology and value), but must move towards the analysis of the power diagram that produces and makes use of these new technologies. This will be the task of the following chapter.

## CHAPTER FIVE

### FROM THE PANOPTICON TO THE ATTENTION ECONOMY

Chapter four introduced *Anti-Oedipus*' social theory according to which every society is a specific organization of flows of desire. In particular, it focused on *Anti-Oedipus*' definition of capitalism from the standpoint of the twofold movement of deterritorialization and reterritorialization of the flows of desire. Furthermore, chapter four argued that *Anti-Oedipus* could be read as a novel interpretation of the relation between labour, value and technology that resembles that of Italian post-Marxism (examined in chapter two). Most significantly, *Anti-Oedipus* sets forth an immanent analysis of post-industrial capitalism which puts into question the distinction between living labour and machines. At the same time, *Anti-Oedipus* goes beyond Italian post-Marxism by introducing a radical notion of machines (desiring-machines). For Deleuze and Guattari, there is no difference "in nature" between social and technical machines, only a difference in the "regimes" that govern them (AO, p. 35). This means that the real difference is not between technical, organic, and social machines, but rather between the molecular level of desiring-machines and the molar level where technical, social and organic machines appear as separate entities. For this reason, chapter four concluded that the metaphysical opposition between living labour and technical machines must be replaced with an immanent critique of the legitimate and illegitimate uses of the syntheses of desiring-machines. From this perspective, the attention economy appears as a mechanism of reterritorialization aimed at the reproduction of an illegitimate use of the syntheses of desiring-machines. In other words, the attention economy reterritorializes post-Fordism's deterritorialized flows of desire and labour.

The analysis of social and technical machines thus becomes an analysis of the specific social arrangements in which molecular desiring-machines are assembled as molar unities. This means that the question of the uses of machines is inseparable from the question of power.



Each social machine responds to a specific diagram of power and each technical machine operates as a concrete power apparatus that in turn reproduces a given molar organization of desiring-machines. For Deleuze, this entails the possibility of setting up a “correspondence” between each social machine and a specific form of technical machines (N, p. 180). This does not mean, however, that technical machines define society in a mere deterministic fashion, but rather they “express the social forms capable of producing them and making use of them” (N, p. 180). For example, Deleuze writes:

The old sovereign societies worked with simple machines, levers, pulleys, clocks; but recent disciplinary societies were equipped with thermodynamic machines presenting the passive danger of entropy and the active danger of sabotage; control societies function with a third generation of machines, with information technology and computers, where the passive danger is noise and the active, piracy and viral contamination. (N, p. 180)

In relation to this correspondence between a type of technical machine and a given social machine, Deleuze makes two observations. First, he argues that the development of technical machines “is more deeply rooted in a mutation of capitalism” (N, p. 180). In this sense, each stage of development of capitalist society is grounded on a specific type of technical machines, or “machinic phylum”.<sup>1</sup> Roughly, simple machines, thermodynamic machines and cybernetic machines correspond respectively to the first stage of capitalist society (what Marx called formal subsumption), to industrial capitalism (or real subsumption), and to post-industrial (or cognitive) capitalism. As analysed in chapter two, post-industrialism can be characterised as having introduced new mechanisms for the production of relative surplus value based on the cognitive dimension of labour. Hence, post-industrial capitalism demands the application of cybernetic machines (capable of appropriating the cognitive dimension of labour) in the direct production process. Accordingly, the passage from industrial to post-industrial capitalism calls for an adjustment in the diagram of power more suitable for the new productive scenario. Second, Deleuze suggests that the analysis of a technical machine in itself “does not explain anything” (N, p. 175). What is necessary is a critical examination of “the collective apparatuses of which the machines are just one component” (N, p. 175).

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<sup>1</sup> In *A Thousand Plateaus*, Deleuze and Guattari introduce the notion of “machinic phylum” to define the singularity of a given “technical lineage” (ATP, p. 448). Each phylum, they write, “has its own singularities and operations, its own qualities and traits, which determine the relation of desire to the technical elements” (ATP, p. 448). By combining the term machinic with the biological notion of phylum, Deleuze and Guattari attempt to break with the definition of a machine as a tool, i.e. as something external to human (organic) constitution. As shown in chapter four, for Deleuze and Guattari there is no distinction between organic, technical, and social machines, only a difference between the molecular regime of desiring-machines and the molar regime in which desiring-machines become unified as large aggregates. Each machinic phylum or technical lineage refers to a specific relation between organic, technical and social machines. Therefore, the analysis of any technical machine must be the analysis of the social assemblage that gives this machine a specific use.

The aim of this chapter is to develop the analysis of the attention economy from the standpoint of these two methodological observations. First, it suggests that the attention economy is a specific economic phenomenon that responds to the mutations of the labour-value relationship characteristic of post-industrial production. In particular, the attention economy uses advanced cybernetic technologies to appropriate the general intellect and hence reterritorialize the productivity unleashed by post-Fordism. Second, this chapter claims that the cybernetic technologies which comprise the attention economy can only be understood in the light of the new power diagram that defines this post-industrial context and which Deleuze (N, p. 178) has identified with the notion of control societies. From this perspective, the attention economy deploys cybernetic technology in order to construct a new object of power, the population. This means that the attention economy does not attempt to normalize individual attention, but uses attention as a source of information that transforms the population into an economically manageable body. It hence substitutes governmentality for normalization as the dominant political rationality.

#### 1. ATTENTION AND POWER: FROM DISCIPLINARY TO CONTROL SOCIETIES

From the perspective of the economies of power, there is a historical correspondence between the emergence of capitalism and the constitution of what Foucault (1995) has called a disciplinary society. In *Discipline and Punish*, Foucault describes the central characteristics of a disciplinary society. Discipline, he argues, is the dominant economy of power in Western states from the end of the eighteenth century to the beginning of the twentieth century.<sup>2</sup> More specifically, Foucault hints that the spread and establishment of disciplinary institutions correspond to a broader historical, social and economic phenomenon, namely, the encounter

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<sup>2</sup> For Foucault, discipline “may be identified neither with an institution nor with an apparatus; it is a type of power, a modality for its exercise, comprising a whole set of instruments, techniques, procedures, levels of application, targets; it is a ‘physics’ or an ‘anatomy’ of power, a technology” (DP, p. 215). On the whole, he adds, “one can speak of the formation of a disciplinary society [...] not because the disciplinary modality has replaced all the others, but because it has infiltrated the others, sometimes undermining them, but serving as an intermediary between them, linking them together [...] It assures an infinitesimal distribution of the power relations” (DP, p. 216). Accordingly, in his course in the *Collège de France* in 1978, Foucault mentions that the historical transformation of the forms of power should not be understood as a linear succession of different apparatuses, but as a history having its own internal logic. In Foucault’s words, “there is not a series of successive elements, the appearance of the new causing the earlier ones to disappear. There is not the legal age, the disciplinary age, and then the age of security. Mechanisms of security do not replace disciplinary mechanisms, which would have replaced juridico-legal mechanisms. In reality you have a series of complex edifices in which, of course, the techniques themselves change and are perfected, or anyway become more complicated, but in which what above all changes is the dominant characteristic, or more exactly, the system of correlation between juridico-legal mechanisms, disciplinary mechanisms, and mechanisms of security. In other words, there is a history of the actual techniques themselves” (STP, p. 22).

between the accumulation of men and the growth of the apparatus of production during the eighteenth century (DP, p. 218). It would be a mistake to interpret Foucault's statement as a sign of an orthodox historical materialism according to which the emergence of disciplinary institutions is merely the effect of a deeper economic change.<sup>3</sup> As noted above, what matters is not to establish a causal relation between technical and social machines, but rather to examine the interdependence between a given mode of production and a dominant economy of power. In others words, it is necessary to interpret technical and economic transformations from the standpoint of the historical mutation of the diagram of power (or political rationality).

In relation to the specific relation between technics, time and power, several authors have highlighted the significant role that the emergence of a time-discipline based on clock-time played for the hegemonic spread of the capitalist mode of production (Mumford 1955, Thompson 1967, Thrift 1981, Postone 1993, Adam 1995, Greenspan 2000). Foucault himself sheds some light on this issue in *Discipline and Punish*, when he examines the formation of modern disciplinary institutions from the perspective of the emergence of a new 'time-discipline' (DP, p. 152). Foucault compares the uses of a timetable in certain pre-disciplinary institutions with modern mechanisms that aim at regulating and controlling the spatial and temporal coordinates of the body's activity.<sup>4</sup> While the time-table imposes a regular order to the day by dictating the time for different activities, Foucault suggests, modern disciplinary methods aim at the analysis and regulation of the activity itself, its internal time, its duration (DP, p. 152). Nevertheless, Foucault claims that the advent of this disciplinary time – although it was made possible by the emergence of more precise mechanisms to measure time (DP, p. 151) – responded mainly to a broader socio-historical transformation: the encounter between an accumulation of men and a growth of the productive forces (DP, p.

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<sup>3</sup> Both Poster (1984) and Greenspan (2000) argue that the main difference between Marx's historical materialism and Foucault's historical method is that the former presupposes the idea of a social totality, while for the latter both history and society are defined by the concept of discontinuity. To exemplify this, Greenspan uses Foucault's claim according to which the emergence of modern disciplines implied a new concept of time (disciplinary-time). For Greenspan, a new concept of time necessarily implies a historical discontinuity between disciplinary and non-disciplinary societies (2000, p. 133). Put differently, there can be no historical continuity between regimes that transform the nature of temporal experience. This discontinuity, which renders it impossible to propose a universal theory of history according to which economic determination operates as the immutable source of social and historical change, marks for Poster and Greenspan the central difference between Marx's and Foucault's historical methods.

<sup>4</sup> This time-discipline and its relation to industrial capitalism is well exemplified by Frederick Taylor's *Time and Motion Studies*, introduced at the end of the nineteenth century in order to set the basis for his scientific organisation of mass production. See Taylor (1972) and Barkley (1969). See also Thompson's essay *Time, work-discipline and industrial capitalism* (1967) and Postone's book *Time, Labour and Social Domination* (1993) for a critical account of the relationship between time-discipline and the emergence of industrial capitalism.

218). As part of this broader context, there is a correspondence between the industrialisation of the apparatus of production, the spread of disciplinary institutions, and the homogenisation of a time-discipline based on clock-time.

Accordingly, the crises of industrial labour and labour time that characterise post-Fordism go hand in hand with the dissolution of disciplinary institutions identified by both Foucault (2009) and Deleuze (1995).<sup>5</sup> In other words, the transformations engendered by post-Fordism demand a theoretical response capable of analysing the changes in the dominant economy of power. In his 1978 course at the *Collège de France*, Foucault suggests that it may be possible that a new dominant economy of power has taken over disciplinary societies. He uses the term ‘security’ in order to define this apparently new economy of power. In the first lecture, Foucault states that the main question he will be pursuing in that year’s course is “can we say that the general economy of power in our societies is becoming a domain of security?” (STP, p. 25). According to Foucault, there are three main characteristics that differentiate this new economy of power from the disciplinary one: i) population replaces individual body as the object of power; ii) more flexible processes of normalisation replace the rigid imposition of the norm characteristic of disciplinary institutions; and iii) governmentality replaces the Panopticon as the general logic of power.

A decade later, Gilles Deleuze published *Postscript on control societies*, a brief essay which engages with the same question on the dissolution of disciplinary societies and the emergence of a new economy of power. Deleuze writes that “control societies are taking over from disciplinary societies. ‘Control’ is the name proposed by Burroughs to characterise this new monster, and Foucault sees it fast approaching” (N, p. 178). In Deleuze’s view, we are witnessing a general dissolution of institutions of confinement while at the same time new, more flexible and yet continuous forms of power take over: “control is short-term and rapidly shifting, but at the same time continuous and unbounded, whereas discipline was long-term, infinite, and discontinuous. A man is no longer a man confined but a man in debt” (N, p. 181).

Michael Hardt suggests that Deleuze’s articulation of control societies “is itself very meager” (1998, p. 139). In fact, he claims, Deleuze “tells us very little about the society of control” (p. 139). What Deleuze’s essay provides is “a simple image of this passage, certainly a beautiful

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<sup>5</sup> Similarly, Antonio Negri writes that “the transition from discipline to control” can be represented “by the transition from Fordism to post-Fordism” (2008, p. 71). “In Foucauldian terms”, he explains, “we can say that in the post-Fordist phase control passes more through television than through the discipline of the factory, the imaginary and the mind rather than through direct discipline exercised over bodies” (2008, p. 71).

and poetic image, but one that is not articulated enough to allow us to grasp this new form of society” (p. 140). For this reason, Hardt continues, “the task of articulating this image remains a task for us to accomplish” (p. 140).<sup>6</sup> The identification of the historical shift in the dominant economy of power from disciplinary to control societies is a key conceptual distinction when focusing on the concrete case of the attention economy from the perspective of power. Put differently, the analysis of the attention economy as a concrete power apparatus must be carried out from the specificity of the mutations in the nature of power generated by post-Fordism. This entails establishing a distinction between the role of attention within disciplinary institutions and attention as a specific element of security and control apparatuses. By doing so, this chapter attempts not only to offer a new interpretation of the attention economy from the perspective of control societies, but also to contribute to the fuller articulation of the incomplete image of control societies provided by Deleuze.

In the pursuit of this articulation, one particular distinction offered by Deleuze becomes highly significant: the passage from the individual/mass dyad which is central to the functioning of disciplinary institutions towards what Deleuze calls ‘dividuals’ and ‘markets’.

In the essay on control, Deleuze writes:

Disciplinary societies have two poles: signatures standing for *individuals*, and numbers or places in a register standing for their position in a *mass*. Disciplines see no incompatibility at all between these two aspects, and their power both amasses and individuates, that is, it fashions those over whom it is exerted into a body of people and molds the individuality of each member of that body. (N, pp. 179-180)

In control societies this duality of mass and individual loses its centrality for the organization of society. Instead, Deleuze suggests, “individuals become dividuals, and masses become samples, data, markets, or *banks*” (N, p. 180). Although Deleuze does not develop this point any further, a comparison of the role of attention in disciplinary and control societies would provide important insight on these passages from individuals to dividuals and from masses to markets. Put differently, seen from the perspective of this particular shift, the specific role of the attention economy within control societies becomes visible. Whereas in the Panopticon Foucault analyses attention as a power mechanism through which the subject internalises the norm and hence becomes individuated, in the attention economy the subject’s attention itself

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<sup>6</sup> In the essay *The Global Society of Control* (1998), Michael Hardt attempts to “elaborate the nature of this passage [between discipline and control]” by means of contextualising it within a series of other passages, mainly the one from Fordism to post-Fordism, from Imperialism to Empire and from the zenith of social institutions to what he calls the withering of civil society (p. 140).

becomes both the source and object of a new knowledge, i.e. the statistical data about a population or market, with its tendencies, patterns and curves of normality.

The next sections briefly present Foucault's account of the individual/mass dyad in *Discipline and Punish* and the specific function of attention (or gaze) for the normalising task of the Panopticon. These arguments will prove to be a useful step before turning towards the specific relation between attention economy and control societies.

### 1.1. THE MASS AND THE INDIVIDUAL

In a central section from *Discipline and Punish*, Foucault claims that discipline is a technology of power with a very concrete goal: "assuring the ordering of human multiplicities" (DP, p. 218). Disciplines, Foucault argues, emerge as the result of a "well-known historical conjuncture" between the large accumulation of men and the growth in the apparatus of production during the eighteenth century (DP, p. 218). For Foucault, "the development of the disciplinary methods corresponded to these two processes, or rather, no doubt, to the new need to adjust their correlation" (DP, p. 218). When analysing how this adjustment is carried out, Foucault focuses precisely on how disciplinary technologies manage the relationship between the mass and the individual.

The growth of a floating population and of the apparatuses of production, and the conjunction between them, brought forth an increase in the productive power of society. However, it also generated the problem of organizing these emerging masses in order to extract from them their productive force while decreasing the counter-productive elements characteristic of a large accumulation of men (agitations, riots, revolts, etc.). For Foucault, disciplines aim at reducing "the inefficiency of mass phenomena", i.e. reducing what, in a multiplicity, "makes it much less manageable than a unity" (DP, p. 219). At the same time, disciplines must "increase the effect of utility proper to the multiplicities, so that each is made more useful than the simple sum of its elements" (DP, p. 220). In short, "disciplines are the ensemble of minute technical inventions that made it possible to increase the useful size of multiplicities by decreasing the inconveniences of the power which, in order to make them useful, must control them" (DP, p. 220). This means that discipline is a "technique" aimed at reducing in the most efficient manner the political force of a body (i.e. its capacity to resist and revolt against power) while maximising its useful, productive force (DP, p. 221).

To achieve this organisation of the mass, disciplinary technologies operate through an inversion of the individualising pyramid, or axis of sovereign power (DP, p. 192). In sovereign societies, Foucault argues, individualisation is “ascending”, which means that “individualisation is greatest where sovereignty is exercised and in the higher echelons of power. The more one possesses power or privilege, the more one is marked as an individual, by rituals, written accounts or visual reproductions” (DP, p. 192). In disciplinary societies, on the contrary, individualisation is “descending”: “as power becomes more anonymous and more functional, those on whom it is exercised tend to be more strongly individualised” (DP, p. 193). In this respect, and unlike the traditional Marxist critique, Foucault conceives the modern individual not as a mere ideological phenomenon, but as a very concrete and real mechanism of power. The individual, Foucault writes, is not just “the fictitious atom of an ideological representation of society; but he is also a reality fabricated by this specific technology of power that I have called discipline” (DP, p. 194). The individual, for Foucault, is not an irreducible unit to which power is applied. The modern individual is an effect of disciplinary power, which allows “bodies, gestures, discourses, and desires to be identified and constituted as something individual” (Foucault 2003, p. 30). In other words, Foucault claims, the individual is not “power’s opposite number” but “one of power’s first effects” (Foucault 2003, p. 30).

For the articulation between the mass and the individual that Foucault lays down in *Discipline and Punish*, attention (in the form of the gaze of surveillance) occupies a crucial place. The gaze is one of the distinctive elements of the Panopticon, responsible for the descending nature of disciplinary individualisation, and hence for the constitution of a productive mass.

## 1.2. THE PANOPTICON, THE GAZE, AND THE INDIVIDUAL

It is well known that Foucault adopts Bentham’s architectural idea, the Panopticon, in order to develop his own reading of disciplinary societies. According to Foucault, Bentham’s Panopticon is “the architectural figure of this composition [disciplinary power]” (DP, p. 200). As such, it exemplifies the ideal functioning of disciplinary institutions. Furthermore, Foucault suggests that in a disciplinary society, the Panopticon becomes the generalised

“political anatomy” of power, spreading throughout the entire society in the form of disciplinary institutions: barracks, schools, hospitals, prisons, factories, etc. (DP, pp. 208-9).<sup>7</sup>

In Foucault’s reading of Bentham’s Panopticon, the gaze plays a specific, and crucial, function. The Panopticon, Foucault writes, is a machine that dissociates the “see/being seen dyad: in the peripheric ring, one is totally seen, without ever seeing; in the central tower, one sees everything without ever being seen” (DP, p. 202). By doing so, the Panopticon “automatizes and disindividualizes power” which means that “it does not matter who applies power nor to whom it is applied: discipline is a machine that understands power in terms of distributions of bodies, surfaces, lights, gazes” (DP, p. 202). The major effect of the Panopticon is “to induce the inmate in a state of conscious and permanent visibility that assures the automatic functioning of power” (DP, p. 201).

This permanent visibility is an essential device for the process of individualisation carried out by the Panopticon. This is how Foucault explains its functioning:

He who is subjected to a field of visibility, and who knows it, assumes responsibility for the constraints of power; he makes them play spontaneously upon himself; he inscribes in himself the power relation in which he simultaneously plays both roles; he becomes the principle of his own subjection. By this very fact, the external power may throw off its physical weight; it tends to the non-corporeal; and, the more it approaches this limit, the more constant, profound and permanent are its effects: it is a perpetual victory that avoids any physical confrontation and which is always decided in advance. (DP, pp. 202-3)<sup>8</sup>

The gaze operates in disciplinary societies by internalising a power relation in the body of an individual. An individual is that entity who has become individuated, which means, who has internalised a power relation and is therefore amenable to being held responsible for his own activity.<sup>9</sup> By doing so, disciplinary power aims at both organising the activity of each element

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<sup>7</sup> For Foucault, the Panopticon is a generalised economy of power. He writes, “whenever one is dealing with a multiplicity of individuals on whom a task or a particular form of behaviour must be imposed, the panoptic schema may be used” (DP, p. 205).

<sup>8</sup> In a conversation with Jean-Pierre Barou and Michelle Perrot in 1977, Foucault explains that the gaze plays a central role for the efficiency of the Panopticon. In disciplinary power, he says, “there is no need for arms, physical violence, material constraints. Just a gaze. An inspecting gaze, a gaze which each individual under its weight will end by interiorising to the point that he is his own overseer, each individual thus exercising this surveillance over, and against, himself” (Foucault 1980, p. 155). This is the overall relation between the gaze, interiorisation and individualisation.

<sup>9</sup> In the brief essay *What is an apparatus?* (2009), Giorgio Agamben contends that Foucault’s concept of apparatus [*dispositif*] is rooted in Hyppolite’s interpretation of Hegel’s concept of positivity (p. 3). According to Agamben’s reading, the concept of positivity in Hegel is found in his early texts on religion, and refers to the external laws that historically determine the limit between freedom and obligation (pp. 4-5). In this sense, Agamben concludes, Foucault borrows the concept of positivity in order to pose his own interpretation of the relation between “individuals as living beings and the historical element” (p. 6). In other words, Agamben claims that Foucault is interested in how historical, hence external, relations of power [*positivities*] become internalised through concrete mechanisms of power [*dispositifs* or *apparatuses*] (p. 6).



within a multiplicity to increase their productivity as well as reducing the inconveniences proper to the masses.

At the same time, Foucault identifies a second function of the gaze within disciplinary societies. For Foucault, the Panopticon operates as a laboratory: it allows examining the behaviour of the inmates, comparing the effects of different corrective techniques, punishments, drugs, etc. As Foucault puts it,

The Panopticon is a privileged place for experiments on men, and for analysing with complete certainty the transformations that may be obtained from them [...]. The Panopticon functions as a laboratory of power. Thanks to its mechanisms of observation, it gains in efficiency and in the ability to penetrate into men's behaviour; knowledge follows the advances of power, discovering new objects of knowledge over all the surfaces on which power is exercised. (DP, p. 204)

Observation becomes a source of new knowledge about the functioning of power and its effects on a given body. Concurrently, this new knowledge allows perfecting the functioning of power, extending its reach and intensity. Foucault calls this the “double process” between power and knowledge: “an epistemological ‘thaw’ through a refinement of power relations; a multiplication of the effects of power through the formation and accumulation of new forms of knowledge” (DP, p. 224). Foucault points out the fact that the emergence of a whole new range of “human sciences” took place thanks to the accumulation of knowledge made possible by the disciplinary apparatus (DP, p. 226). These new fields of study, in turn, made it possible to correct the application of disciplinary techniques, hence the twofold articulation between power and knowledge.

These are the two central roles of the gaze within the Panopticon: individuation through the internalisation of power relations, and examination for perfecting the exercise of power. The overall effect of these two functions is the enforcement of continuous processes of normalisation of subjectivity, which is permanently evaluated regarding its deviance from the norm. In short, in a disciplinary society, the gaze is a power mechanism that produces an internalisation of the norm in each individual and an accumulation of knowledge that perfects the exercise of power. Observation is a mechanism through which power is both exercised and improved. In order to achieve this, Bentham's Panopticon provides a model that dissociates seeing from being seen, constructing a dissymmetric relation between those who exercise and accumulate power and those on whom power is applied. The overall consequence is the automatization of power by means of the normalisation of individuals within a productive mass.

Jonathan Crary (1991), however, suggests that in spite of analysing the role of the gaze in Bentham's Panopticon, Foucault systematically neglects the role of the observer himself as an object of disciplinary power (p. 18). For this reason, Crary proposes a genealogy of the concrete mechanisms that have formed the modern observer (1991) and subsequently a genealogy of what he calls modern attention (2001). It is useful to look briefly at Crary's central hypotheses as a way to bridge Foucault's analysis of the Panopticon and the examination of the attention economy as a power apparatus specific to control societies.

### 1.3. JONATHAN CRARY'S GENEALOGY OF MODERN ATTENTION

Jonathan Crary has extensively looked at the relationship between disciplinary societies and modern attention. In his book *Techniques of the Observer* (1991) he attempts a genealogy of how the observer becomes, since the eighteenth century, a new object of investigation, and how this responds to the broader epistemological changes analysed by Foucault in *Discipline and Punish* (mainly, the birth of modern human sciences).

Crary's book begins with the assumption that the way in which we see and pay attention is the result of a "historical construction" (1991, p. 1). Because of this, Crary argues, it is possible to trace a history, a genealogy to be precise, of modern attention. This history, which begins in the eighteenth century and consolidates throughout the following century, entails a radical modernisation of the observer (p. 9). In other words, the formation of the modern observer is immanent to the general process of modernisation experienced by western societies during the eighteenth and nineteenth centuries (p. 10). His main hypothesis is that

a reorganisation of the observer occurs in the nineteenth century before the appearance of photography. What takes place from around 1810 to 1840 is an uprooting of vision from the stable and fixed relations incarnated in the camera obscura [...] what occurs is a new valuation of visual experience: it is given an unprecedented mobility and exchangeability, abstracted from any founding site or referent. (1991, p. 14)

For Crary, the formation of the modern observer is an important element of the emerging disciplinary subject. In Crary's words, the observer is "one effect of the construction of a new kind of subject or individual in the nineteenth century" (p.14).<sup>10</sup> Modern modes of seeing are

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<sup>10</sup> In this regard, Foucault's analysis of disciplinary societies is essential for Crary's genealogy of modern attention. As Crary puts it, the work of Michel Foucault is crucial for "its delineation of processes and institutions that rationalised and modernised the subject, in the context of social and economic transformations" (1991, pp. 14-15). However, Crary argues that despite the significance of Foucault's work, his analysis of disciplinary society limits the task of observing to those who exercise power (mainly the anonymous guard placed in the observation tower of the Panopticon, but also the doctor, teacher, inspector, watchman, etc.), neglecting the analysis of "the new forms by which vision itself became a kind of discipline or mode of work" (1991, p. 18). For Crary, the reason why Foucault avoided any analysis of the observer himself as an emerging object of power may reside in his clear rejection of the ideological critique of society based on representational

constructed in the nineteenth century through techniques “for the management of attention” which imposed “homogeneity, anti-nomadic procedures that fixed and isolated the observer” (1991, p. 18). This process “coincides with the collapse of classical models of vision and their stable space of representations. Instead, observation is increasingly a question of equivalent sensations and stimuli that have no reference to a spatial location” (1991, p. 24).

What is significant in Crary’s account is how the modern observer articulates the mass/individual dyad that characterises disciplinary power. For Crary, modern attention is a mechanism capable of individuating perception within a multiplicity of representations that have become loosened from the fixed, classical models of vision. Attention then becomes an important disciplinary mechanism not only from the perspective of the Panopticon, but also from the perspective of the observer who is taught how to pay attention and hence fix his vision within a mass or multiplicity of fluid representations. In this sense, Crary broadens Foucault’s examination of the Panopticon (expanding the analysis of how this technology of power relies on the gaze in order to individualise subjects within a multiplicity of men towards the examination of the individualising role of modern attention itself).

This development of Foucault’s theory into the work of paying attention becomes clearer in Crary’s second book, *Suspensions of Perception* (2001). Crary states that he is interested in

how Western modernity since the nineteenth century has demanded that individuals define and shape themselves in terms of a capacity for ‘paying attention’, that is, for a disengagement from a broader field of attraction, whether visual or auditory, for the sake of isolating or focusing on a reduced number of stimuli. That our lives are so thoroughly a patchwork of such disconnected states is not a ‘natural’ condition but rather the product of a dense and powerful remaking of human subjectivity in the West over the last 150 years. Nor is it insignificant now at the end of the twentieth century that one of the ways an immense social crisis of subjective dis-integration is metaphorically diagnosed is as a deficiency of ‘attention’. (2001, p. 1)

Crary develops his work on the modern observer by focusing on the specific concept of attention, analysing the apparently contradictory movement that defines modern perception,

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notions such as spectacle, false consciousness, etc. (1991, p. 18). In *Discipline and Punish*, Foucault writes that “Our society is one not of spectacle, but of surveillance; under the surface of images, one invests bodies in depth; behind the great abstractions of exchange, there continues the meticulous, concrete training of useful forces; the circuits of communication are the supports of an accumulation and a centralisation of knowledge; the play of signs defines the anchorages of power; it is not that the beautiful totality of the individual is amputated, repressed, altered by our social order, it is rather that the individual is carefully fabricated in it, according to a whole technique of forces and bodies. We are much less Greeks than we believe. We are neither in the amphitheatre, nor on the stage, but in the panoptic machine, invested by its effects of power, which we bring to ourselves since we are part of its mechanism” (DP, p. 217). According to Crary’s interpretation, this passage refers to Guy Debord’s concept of society of spectacle (1991, p. 18). Moreover, it may explain Foucault’s resistance to engage in the analysis of attention as a new mechanism of power and to examine the concrete *techniques of the observer* that throughout the nineteenth century helped to give form to the disciplinary subject. For Crary, however, the analysis of this process is essential for the understanding of modern societies.

i.e. that between a progressive acceleration of visual stimuli and the constitution of a disciplinary attentiveness. In other words, he argues that modern distraction has to be understood “through its reciprocal relation to the rise of attentive norms and practices” (2001, p. 1). This implies analysing the seemingly paradoxical intersection “between an imperative of a concentrated attentiveness within the disciplinary organization of labour, education, and mass consumption and an ideal of sustained attentiveness as a constitutive element of a creative and free subjectivity” (2001, pp. 1-2). However, just as Foucault’s concept of discipline questions the opposition between mass and individual, so Crary’s analysis reveals that attention and mass distraction are two poles of the same process of the modernisation of the observer. Crary takes the particular example of cinema in order to present the concept of “attentive mass audience” (2001, p.52). Briefly, Crary argues that cinema is capable of simultaneously offering mass distraction while individualising each spectator through a disciplined attentiveness.<sup>11</sup> This is important because it points out how attention itself becomes an apparatus of both individualisation and normalisation whose main function is to organise vision within a multiplicity of mass produced visual objects.

Yet, in neither of the two books referred above does Crary acknowledge the dissolution of disciplinary societies identified by both Foucault and Deleuze, nor the consequences of this dissolution for the relationship between attention and power.<sup>12</sup> Put differently, in his genealogy of modern attention, Crary never challenges the mass/individual dyad that lies at the heart of disciplinary institutions. As has been mentioned, one of the central characteristics of the dissolution of disciplinary power is the progressive weakening of this dyad and its gradual replacement with a new framework based on the interaction between individuals and markets (N, p. 180). The attention economy, as a form of immaterial labour proper to post-Fordism, has to be examined as a power apparatus specific to control societies. This entails

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<sup>11</sup> Crary’s argument can be connected back to Adorno and Horkheimer’s (2002) hypothesis regarding the industrialisation of schematism. According to Adorno and Horkheimer, the products of the culture industry create a systematic industrialisation of our faculty of imagination. This industrialisation makes it possible for individuals to consume cultural commodities alertly, “even in a state of distraction” (2002, p. 100). Similarly, Crary claims that the disciplinary normalisation of the modern observer makes it possible to unify a multiplicity of stimuli under a concentrated gaze.

<sup>12</sup> Only in one passage does Crary refer to Deleuze’s concept of control societies (2001, p. 76). He states, however, that regardless of this historical shift or social transformation, “attention has continued to be integral to the subjects produced for a wide range of socio-technical machines” (p. 76). Crary adds that “it is becoming clearer that a concurrence of panoptic techniques and attentive imperatives now functions reciprocally in many social locations” (p. 76). In particular, the video display terminal “can stand for the effective fusion of attention and spectacle, as the screen is both the object of attention and yet capable of monitoring, recording, and cross-referencing attentive behaviour for purposes of productivity or even, through the tracking of eye movement, for the accumulation of data on the specific paths, durations, and fixations of visual interest in relation to a flow of images and information” (p. 76). Crary’s insight is important, but it remains captured in the mass/individual dyad and hence cannot depart from the disciplinary conceptual framework.

moving beyond the mass/individual dyad characteristic of disciplines and posing the problem from the standpoint of the specific logic of control. The next section moves away from the analysis of disciplines towards the analysis of security and control apparatuses.

## 2. ATTENTION ECONOMY AND CONTROL SOCIETIES

In the opening lines of his essay on control societies, Deleuze claims that Foucault has not only “thoroughly analysed the ideal behind sites of confinement” and the general characteristics of disciplinary societies, but also identified “how short-lived this model was” (N, p. 177). Despite the fact that Deleuze does not specify where Foucault identifies the dissolution of disciplinary societies and the passage towards a new general economy of power, it could be argued that Foucault does so in the two courses he held in 1978 and 1979 at the *Collège de France*.<sup>13</sup> In these lectures, Foucault investigates to what degree we have moved away from disciplinary societies into a new economy of power that he refers to with the term “security” (STP, p. 25). For Foucault, the fact that we are entering a new economy of power does not mean that disciplinary institutions disappear, but that they become subsumed under a new dominant logic of power.<sup>14</sup> The analysis of certain traits of this new logic of power is an important step for the purposes of examining the attention economy as a power apparatus, due mainly to the fact that it casts new light over the dissolution of the mass/individual relation identified by Deleuze.

### 2.1. THE LOGIC OF SECURITY

In the first four lectures of the 1978 course, Foucault identifies the central characteristics of the logic of security by means of comparing it with the logic of disciplinary power. This comparison can be summed up in the way these two different logics attempt to exercise their power: disciplines try to control everything, down to the smallest detail, whereas the apparatus of security “lets things happen”; while the former defines an ideal behaviour and

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<sup>13</sup> These courses have been published in English under the titles *Security, Territory, Population* (2009), and *The Birth of Biopolitics* (2010), respectively. Raiford Guins (2009, pp. 1-3) highlights the need to understand Deleuze’s concept of control as a branch of so-called “governmentality studies” (which emerge as a consequence of Foucault’s lectures on security). Guins writes: “Although Deleuze does not acknowledge governmentality in his writings on control, his conceptualisation of control expresses a formation of power that is translucent enough to recognize what Foucault would call ‘governmental techniques’” (2009, p. 3).

<sup>14</sup> According to Foucault, “there is not a succession of law, then discipline, then security” (STP, p. 25). Instead, security subsumes disciplinary and legal institutions under a new logic of power. Security, he says, “is a way of making the old armatures of law and discipline function in addition to the specific mechanisms of security” (STP, p. 25).

tries to enforce it, the latter relies on a given behaviour and attempts to identify patterns in order to reach an ideal stage of equilibrium (STP, p. 68). In these lessons, Foucault presents three characteristics of the apparatus of security that are worth mentioning. Namely, the passage from normation to normalisation, the centrality of population as the new body on which power is exercised, and the shift from disciplinary techniques to what Foucault calls governmentality.

Regarding the concept of normalisation, Foucault compares the primacy of the norm in disciplinary societies with the processes of normalisation proper of security. Foucault says that although it is “hardly disputable” that discipline normalises, it is essential to “be clear about the specificity of disciplinary normalisation” (STP, pp. 84). Disciplines, he continues, operate by breaking down a specific action (e.g. the “loading of one’s rifle”) and by subsequently establishing the ideal set of operations to perform this action. Disciplinary mechanisms define a model (a norm that aims at the optimal organisation of activity) and based on this norm they then separate the normal from the abnormal. As Foucault puts it,

Disciplinary normalisation consists first of all in positing a model, an optimal model that is constructed in terms of a certain result, and the operation of disciplinary normalisation consists in trying to get people, movements, and actions to conform to this model, the normal being precisely that which can conform to this norm, and the abnormal that which is incapable of conforming to the norm. In other words, it is not the normal and the abnormal that is fundamental and primary in disciplinary normalisation, it is the norm. (STP, p. 85)

Given this primacy of the norm, Foucault claims that to be precise, disciplines should not be considered mechanisms of normalisation, but ‘normation’ (STP, p. 85).<sup>15</sup> In security, instead,

we have a plotting of the normal and the abnormal, of different curves of normality, and the operation of normalisation consists in establishing an interplay between these different distributions of normality and in acting to bring the most unfavourable in line with the more favourable [...] The norm is an interplay of differential normalities. (STP, p. 91)

This means that security apparatuses do not aim at producing a homogeneous control of the individual; rather, they focus on discovering the “level of the necessary and sufficient action of those who govern” (STP, p. 93). In short, the passage from a regime of normation to one of normalisation implies the dissolution of the individual as the central mechanism for the organisation of multiplicities. In security apparatuses, the norm is not the given ideal that

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<sup>15</sup> In *Discipline and Punish*, Foucault writes: “the power of the Norm appears through the disciplines [...] Like surveillance and with it, normalisation becomes one of the great instruments of power at the end of the classical age [...] In a sense, the power of normalisation imposes homogeneity; but it individualises by making it possible to measure gaps, to determine levels, to fix specialities and to render the differences useful by fitting them one to another [...] The norm introduces, as a useful imperative and as a result of measurement, all the shadings of individual differences” (DP, p. 184).

must be enforced; rather, multiplicities are analysed in order to identify patterns and curves of normality that define the degree to which those who enforce power must intervene or not to achieve the correct steering of the multiplicities. For Foucault, in this new logic of power, “the relation between the individual and the collective, between the totality of the social body and its elementary fragments, is made to function in a completely different way; it will function differently in what we call population” (STP, p. 94). In this regard, the concept of population substitutes that of the individual body as the object on which power is enforced, while governmentality emerges as the privileged logic of power for this new object.<sup>16</sup>

Although the term is extremely old, Foucault suggests that there is a modern use of the concept of population which represents the passage from a disciplinary to a security economy of power. In its modern use, Foucault identifies three characteristics of population as the new object of power. Firstly, it appears as a “natural” phenomenon (in contradistinction with the sovereign’s legalistic voluntarism). In this regard, the task of those who exercise power is not to attempt to change this “nature”, but to make it calculable, predictable, subject to norms (STP, p. 100). Secondly, this “natural” character unveils an internal relation between desire and population. In other words, a population is a conglomerate of individual desires, which express individual interests, and the sum of individual desires creates a general interest of the population (STP, p. 101). Hence the management of populations is no longer about how to “say no”, how to repress desire, and the “legitimacy” to do so. Instead, Foucault suggests, the problem is “how to say yes to this desire” (STP, p. 102).<sup>17</sup> Thirdly, the “naturalness of the population” reveals that underneath the apparently chaotic nature of the population as a sum of individual interests there are identifiable, regular patterns. The management of the population requires the identification of these curves of normality in order to make them

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<sup>16</sup> Antonio Negri (2008, p. 72) highlights the relationship between the shift in the technologies of power (from the individual body to populations) and the historical transformation of the mode of production (from Fordism to post-Fordism). From this perspective, the Fordist (Taylorist) factory appears as the zenith of disciplinary institutions. In Taylor’s “scientific management”, a clearly defined norm determines the action of each individual body, turning the mass of workers into a productive whole. Post-Fordism, instead, replaces the primacy of the norm with more flexible mechanisms aimed not necessarily at the individual body, but at the statistical management of populations.

<sup>17</sup> In *The Birth of Biopolitics* (2008), Foucault argues that modern political economy is grounded on the irreducible character of human decisions (p. 272). For Foucault, Smith’s theory of the “invisible hand” is based on the idea that human decisions can only contribute to a greater good as long as they remain ignorant of their effect in the social whole (2008, p. 279). In other words, the irreducibility of human decisions to any form of rational, logic, or causal explanation makes it impossible to imagine social totality. For this reason, the problem of the political administration of subjects cannot be conceived of as either the repression of their desires or as the transparent rationalisation of each individual desire. Instead, power must focus on the curves of normality of a given population. In doing so, power does not attempt to change or repress desire, but to limit its incalculability and hence to increase the capacity to predict and govern it.

predictable and to eventually design strategies for channelling them in a specific direction, i.e. profit. Foucault sums up the concept of population as follows:

The population is not, then, a collection of juridical subjects in an individual or collective relationship with a sovereign will. It is a set of elements in which we can note constants and regularities even in accidents, in which we can identify the universal of desire regularly producing the benefit of all, and with regard to which we can identify a number of modifiable variables on which it depends. (STP, p. 104)

On closer inspection, Foucault adds that this new object of power, population, raises the problem of the art of governing these emerging multiplicities. Put differently, when faced with the task of managing a population, neither sovereign nor disciplinary techniques seem adequate enough. Instead, a new art of government (“governmentality”) is required. While disciplinary techniques were the privileged power mechanism for articulating a productive relation between the mass and the individual, governmentality appears as the most suitable logic of power for the correct management of populations.<sup>18</sup>

In general terms, the art of government consists in introducing the method of political economy into the management of the state (Foucault 1991, p. 92). In its original meaning, the term economy (from the Greek *oikonomia*) referred to the “law of the household”, that is, the “meticulous attention of the father towards his family” in order to manage “individuals goods and wealth within the family” (Foucault 1991, p. 92). For Foucault, to govern a state is “to set up an economy at the level of the entire state, which means exercising towards its inhabitants, and the wealth and behaviour of each and all, a form of surveillance and control as attentive as that of the head of a family over his household and his goods” (1991, p. 92).

From this perspective, political economy appears as a modern form of knowledge that conceives society as a large “household” and politics as the correct management of its wealth.<sup>19</sup> Furthermore, Foucault suggests that the art of government should be understood using the metaphor of the ship.<sup>20</sup> Foucault writes,

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<sup>18</sup> Governmentality, Foucault writes, is “the tendency which, over a long period and throughout the West, has steadily led towards the pre-eminence over all other forms (sovereignty, discipline, etc.) of this type of power which may be termed government, resulting, on the one hand, in the formation of a whole series of specific governmental apparatuses, and, on the other, in the development of a whole complex of *savoirs*” (1991, pp. 102-3). It is important, however, not to see things “in terms of the replacement of a society of sovereignty by a disciplinary society and the subsequent replacement of a disciplinary society by a society of government” (1991, p. 102). In reality, Foucault says, “one has a triangle, sovereignty-discipline-government, which has as its primary target the population and as its essential mechanism the apparatuses of security” (1991, p. 102).

<sup>19</sup> For Foucault, “the new science called political economy arises out of the perception of new networks of continuous and multiple relations between population, territory and wealth” (1991, p. 101). In this sense, “it was through the development of the science of government that the notion of economy came to be recentred on to that different plane of reality which we characterise today as the ‘economic’, and it was also through this science that it became possible to identify problems specific to the population; but conversely we can say that it was



What does it mean to govern a ship? It means clearly to take charge of the sailors, but also of the boat and its cargo; to take care of a ship means also to reckon with winds, rocks and storms; and it consists in that activity of establishing a relation between the sailors who are to be taken care of and the ship which is to be taken care of, and the cargo which is to be brought safely to port, and all those eventualities like winds, rocks, storms and so on; this is what characterises the government of a ship. (1991, pp. 93-4)

In this sense, the art of government can be understood as the art of facilitating the right disposition of things, “arranged so as to lead to a convenient end” (Foucault 1991, p. 94). Therefore, the central task of governmentality is to define the best disposition for things for a given purpose. In Foucault’s words, the art of government “is a question not of imposing law on men, but of disposing things: that is to say, of employing tactics rather than laws, and even of using laws themselves as tactics – to arrange things in such a way that, through a certain number of means, such and such ends may be achieved” (1991, p. 95). Foucault sums up the concept of governmentality as

the ensemble formed by the institutions, procedures, analyses and reflections, the calculations and tactics that allow the exercise of this very specific albeit complex form of power, which has as its target population, as its principal form of knowledge political economy, and as its essential technical means apparatuses of security. (1991, p. 102)

In these lectures on security, Foucault is analysing a series of texts from the eighteenth century that account for a shift in the dominant economy of power. His overall objective, however, is to trace in these texts the origin of the modern notion of security that has progressively replaced the dominant economy of disciplinary power.<sup>21</sup> From this perspective, despite the fact that Foucault’s analysis focuses mainly on discourses belonging to the eighteenth century, the conceptual apparatus built by him can offer important insight for the analysis of the attention economy beyond the framework of disciplinary society.

## 2.2. THE ATTENTION ECONOMY AS AN APPARATUS OF SECURITY

Before moving to Deleuze’s analysis of control societies, it is useful to roughly sketch some connections between the attention economy and Foucault’s analysis of security as a new form of power. As presented above, Crary (1991; 2001) examines the formations of the modern

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thanks to the perception of the specific problems of the population, and thanks to the isolation of that area of reality that we call the economy, that the problem of government finally came to be thought, reflected and calculated outside of the juridical framework of sovereignty” (1991, p.99).

<sup>20</sup> Foucault notes that the metaphor of the ship is the metaphor “inevitable invoked in [most] treatises on government” (1991, p. 93). This comes as no surprise since the verb “to govern” comes precisely from the Greek “to navigate” and more precisely, “to steer a ship”.

<sup>21</sup> In the following year’s course (*The Birth of Biopolitics*) Foucault continues the analysis of this passage by focusing on German and American neo-liberalism.

observer and the modern mode of paying attention as important mechanisms of disciplinary society whose aim is to supplement the disciplinary function of the gaze within panoptic formations of power. The limit of Crary's analysis, however, is that it understands attention as a mechanism of individuation that aims at fixing the subject within a world determined by a multiplicity of perceptions. In other words, Crary's analysis cannot overcome the mass/individual dyad that defines disciplines. This impossibility marks the historical limits of Crary's analysis and its obsolescence for the examination of a contemporary phenomenon like the attention economy.<sup>22</sup> Foucault's analysis of security is a first attempt to overcome the disciplinary understanding of society. In this sense, it provides some important insights on the role that attention plays in this new economy of power.

In the first place, the passage from normation to normalisation identified by Foucault allows understanding the shift from attention as a mechanism of individuation to a method for the analysis of curves of normality. Crary's analysis of modern attention (2001) focuses on the mechanisms through which the observer is taught to "cancel or exclude from consciousness" a significant part of our immediate perception in order to pay attention (p. 1); that is, our perception is disciplined to disengage "from a broader field of attraction, whether visual or auditory, for the sake of isolating or focusing on a reduced number of stimuli" (p. 1). This corresponds to the process of normation proper to disciplinary societies (that first defines a norm which in turn shapes the individual subject). On the contrary, the logic of security does not aim at the construction of this norm, but at defining curves of normality, patterns and regularities within an already given field of multiplicities. The attention economy exemplifies this shift. Its goal is not to normalise a specific form of attention. Instead, the attention economy conceives attention as a "sign of intention" of individual interests and desires and

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<sup>22</sup> The same applies to so-called surveillance studies, which deploy Foucault's analysis of surveillance in *Discipline and Punish* in order to analyse the different apparatuses of surveillance in contemporary societies. In particular, surveillance studies focus on the role played by information technology in the reproduction of contemporary surveillance societies (Poster 1990, Gandy 1993, Lyon 1994). Most significantly, Mark Poster (1990) coins the concept of "super-panopticon" to refer to the way in which technology intensifies modern surveillance. The problem with this approach is that it ignores Foucault's own awareness regarding the historical limits of disciplinary society and the need for a new conceptual framework capable of analysing the new technologies of power behind governmentality, security, and population. In this regard, the publication of Foucault's lectures on security and the rising popularity of Deleuze's essay on societies of control have called for an interrogation within surveillance studies of the validity of their main presuppositions. This has led some authors to point out the limits of Foucault's theory of panopticism for an understanding of today's society of surveillance: Haggerty and Ericson (2000) have suggested the idea of a surveillance assemblage; Boyne (2000) and Haggerty (2006) speak of a post-panoptic society; Guins (2009) explores how visual and information technologies open up new possibilities of "securitization"; and Reighelugh (2014) focuses on Foucault's notion of governmentality in order to explain how modern algorithms may operate as a power apparatus.

uses it to identify patterns of consumer behaviours, preferences, etc.<sup>23</sup> The internet has become a privileged territory for the valorisation of the attention economy precisely because of its capacity to record, share and analyse these patterns of attention. In other words, the dominant logic behind the attention economy is not the normation of attention – as Stiegler (2012) claims – but turning attention into a new source of knowledge about the patterns of a specific multiplicity.

This introduces the second concept analysed by Foucault, that of population. As already mentioned, Foucault claims that the modern use of this concept entails a certain “naturalness” grounded on the individual interests and desires that compose it. In this respect, human attention becomes a privileged mechanism in order to access these interests and desires, to identify patterns and hence render them calculable. Furthermore, Foucault argues that the concept of population poses a new demand for power. It no longer functions by repressing and correcting these desires so they fit a given norm. Instead, power must learn how to encourage these desires and interests while at the same time predicting their movement and knowing when and how to intervene.

Thirdly, Foucault examines the art of government as the principal characteristic of this new economy of power. In general terms, governmentality refers to the introduction of the economy into the realm of power. This is an essential characteristic for the understanding of the attention economy from the perspective of Foucault’s analysis of the apparatuses of security. The central function of attention within this new logic of power is neither the symbolic representation of the sovereign nor the disciplinary normalisation of perception, but the economic organisation of a population. It has been stressed that the attention economy is a concept initially forged in the field of political economy as a way of explaining the valorisation of attention in strictly economic terms. In this respect, the attention economy works as a power apparatus because it turns individual attention into a specific device for the economic analysis of the desires and interests of a given population. In brief, the aim of the attention economy as a specific power apparatus is not to repress a given set of differences nor to normalise them under a given norm, but to dispose them in a certain way so as to achieve the most effective economic result.

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<sup>23</sup> In Seth Goldstein’s (2005) declaration for an Attention Trust he writes: “Attention is the substance of focus. It registers your interests by indicating choice for certain things and choice against other things [...] The establishment of value in the attention economy is a dual register of what one pays attention to and what one chooses to ignore”.

A good example of how Foucault's notion of governmentality can be applied to the attention economy can be found in Tyler Reigeluth's (2014) notion of "algorithmic governmentality". According to Reigeluth, contemporary information technologies use human attention as a source of big data that is then analysed through advanced algorithms in order to produce a "governable subject" (2014, p. 253).<sup>24</sup> The notion of algorithmic governmentality allows examining the attention economy from the standpoint of Foucault's security hypothesis: rather than employing digital technologies for the surveillance of individuals in order to enforce a given norm, digital technologies are deployed in accordance both with a new object of power (the population) and with a new political rationality (governmentality). From this perspective, in the attention economy the individual/mass dyad proper of disciplinary societies weakens, while populations and techniques of governmentality emerge as key concepts for understanding the new logic of power.

Foucault's account of the logic of security offers some initial ideas for a reinterpretation of the attention economy from the perspective of power. These ideas point towards the overcoming of the individual/mass dyad proper of disciplinary societies. Deleuze identifies this as one of the central characteristics of the passage from discipline to control. The next section turns to Deleuze's essay on control society (particularly to the concepts of individuals and markets) in order to continue the analysis of the attention economy.

### 2.3. THE LOGIC OF CONTROL AND THE ATTENTION ECONOMY

As Hardt (1998) puts it, Deleuze's essay on control gives us a poetic but meagre image of what control societies are (pp. 139-40). One of these images, used by Deleuze to compare the logics of discipline and control, goes as follows: "disciplinary man produced energy in discrete amounts, while control man undulates, moving among a continuous range of different orbits. *Surfing* has taken over from all the old *sports*" (N, p. 180). Despite being written before the appearance of the internet (and thus before the boom of the attention economy through the net), Deleuze's prescient reference to surfing seems to conform to the

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<sup>24</sup> Reigeluth writes: "Algorithmic governmentality moves us away from classical statistical populations towards the populations of relationships that inhabit an individual, a behaviour, an imminent deed. These relationships are reduced to computable units capable of being plugged into the algorithm's syntax. The individual's singularity is thus reduced to a particular syntactical arrangement of traces that can be represented and modulated accordingly. This is not to say that the individual can be equated to an algorithm, but that thinking, representing, intervening and governing algorithmically produces certain effects and transformations on what it means to be a 'subject'" (Reigeluth 2014, p. 253).

analysis of the attention economy as a power apparatus specific to control societies.<sup>25</sup> Put differently, in spite of the fact that they are not explicitly related, the analysis of the attention economy from the perspective of control may help us to articulate the “incomplete” image provided by Deleuze. In particular, this section focuses on the passage from the individual/mass dyad to that of individuals and markets characteristic of control societies, and on how the attention economy conforms to this passage.

It has already been shown how disciplines extract the productivity of the mass by means of individualising the subjects that compose it. To do so, disciplines rely on the primacy of the norm. In the essay on control, Deleuze writes that discipline operates through “molds” whereas control functions with “modulations” (N, pp. 178-9). This distinction repeats Foucault’s analysis of normalisation presented above. Discipline is based on the primacy of the norm (which Deleuze calls a mold) in order to produce a normalised individual. In contrast, control works by constructing a series of modulations, “self-transmuting moldings continually changing from one moment to the next [...] like a sieve whose mesh varies from one point to another” (N, p. 179). Most significant is the fact that Deleuze illustrates this difference with the passage from factory to businesses characteristic of post-Fordism. Deleuze writes:

The factory was a body of men whose internal forces reached an equilibrium between the highest possible production and the lowest possible wages; but in a control society businesses take over factories, and a business is a soul, a gas. There were of course bonus systems on factories, but businesses strive to introduce a deeper level of modulation into all wages, bringing them into a state of constant metastability punctuated by ludicrous challenges, competitions and seminars. (N, p. 179)

Deleuze’s example is significant for the analysis of the attention economy for at least two reasons. On the one hand, it contextualises the passage towards control within a broader transformation of labour. In this sense, there is a correspondence between the critique of attention economy as a form of immaterial labour specific to post-Fordism and the analysis of the attention economy as a power apparatus specific to control societies.<sup>26</sup> On the other hand, the example of wages provided by Deleuze reveals a shift from the fixed and stable structures of discipline based on the primacy of the norm (mould) to the flexible and adaptable nature of

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<sup>25</sup> Alexander Galloway (2004), for example, attempts to “flesh out” the specificity of control societies “by focusing on the controlling computer technologies native to it” (p. 3). In other words, Galloway argues that the internet operates as a new diagram of power that needs to be addressed through the conceptual framework of control societies.

<sup>26</sup> The historical correspondence between discipline and Fordism and between control and post-Fordism and the particular emphasis on the role of immaterial labour in this historical mutation have been extensively analysed by Michel Hardt and Antonio Negri in *Empire* (2000).

modulation proper of control. This means that the analysis of the attention economy as a control apparatus must overcome the belief that digital technologies merely produce a homogenization and proletarianisation of attention (e.g. Stiegler 2012). Instead, attention must be examined from the perspective of modulations, i.e. as a mechanism capable of articulating the “flexibilisation” of production characteristic of post-Fordism with the new mechanisms of “subjectification”.

Furthermore, the example provided by Deleuze leads to a central distinction between disciplinary and control societies. It was presented above how the individual and the mass function as the two poles of disciplinary power. The factory assembly line is a good example of this articulation. In a factory, each worker is individualised through a specific action, which follows a specific mould (which sets the time and place for each movement). This mechanism of individuation and normation aims at achieving the highest productivity (which should be higher than the sum of the labour of each individual), while decreasing all the inconveniences of managing a multiplicity of men.<sup>27</sup> According to Deleuze, in control societies this twofold articulation between mass and individual loses its central role and the assembly line as a space of confinement is replaced by marketing departments (N, p. 181). Moreover, the individual/mass relation is replaced by dividuals and markets (N, p. 180).

Deleuze explains the concept of dividual by comparing the “signature” (which differentiates the individual within the mass) with the “password” that, in the “digital language of control”, determines which information can be accessed and which cannot (N, p. 180). To exemplify this, Deleuze writes:

Félix Guattari has imagined a town where anyone can leave their flat, their street, their neighbourhood, using their (dividual) electronic card that opens this or that barrier; but the card may also be rejected on a particular day, or between certain times of the day; it does not depend on the barrier but on the computer that is making sure everyone is in a permissible place, and effecting a universal modulation. (N, pp. 181-2)

Again, Deleuze provides us an image of what a dividual is, but he does not develop it further. To do so, it is useful to examine Deleuze’s account of the individual in relation to Foucault’s description of the processes of disciplinary individuation. For Deleuze, the individual is never a fixed identity, but the effect of constant encounters (assemblages) between bodies within an immanent field of forces and affects (or plane of consistency). In Foucault’s *Discipline and*

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<sup>27</sup> The best example of the relation between discipline and industrial capitalism can be found in Taylor’s “scientific management”. This is particularly clear in his “time and motion studies” which attempted to increase the productivity of the workshop by defining the ideal movement and speed of every single activity that composes the production of a given commodity (Taylor 1972, p. 148).

*Punish*, the individual is seen as a concrete power mechanism through which a multiplicity of men is organised. In this sense, Foucault challenges both the liberal understanding of the individual (according to which the individual is the indivisible atom that composes a society), as well as the Marxist orthodox critique (that conceives the individual as a mere ideological representation aimed at concealing the social character of labour). For Foucault the individual is neither the irreducible atom of society nor an ideological representation, but a concrete power mechanism that is constructed through specific processes of individuation carried out by disciplinary institutions (DP, p. 194).

Deleuze's notion of individual must likewise be understood neither as an indivisible element of society nor as an ideological representation, but as a specific arrangement of bodies and forces produced by apparatuses of control in order to organize a multiplicity according to a specific goal. In a brief text, *Spinoza and Us* (1988), Deleuze examines the twofold definition of a body in Spinoza's work. For the analysis of the concept of individual, Deleuze's account of Spinoza may provide a useful perspective. Deleuze writes:

A body, of whatever kind, is defined by Spinoza in two simultaneous ways. In the first place, a body, however small it may be, is composed of an infinite number of particles; it is the relations of motion and rest, of speeds and slownesses between particles, that define a body, the individuality of a body. Secondly, a body affects other bodies, or is affected by other bodies; it is this capacity for affecting and being affected that also defines a body in its individuality. (1988, p. 123)

The first proposition refers to a kinetic understanding of a body. In other words, it refers to its speeds and rhythms as its constitutive element. In Deleuze's reading of Spinoza, an individual is not defined by a specific form or function. On the contrary, Deleuze suggests that "each living individuality" must be understood "not as a form, or a development of form, but as a complex relation between differential velocities, between deceleration and acceleration of particles" (1988, p. 123). In other words, according to this kinetic definition, an individual is "a composition of speeds and slownesses on a plane of immanence" (1988, p. 123). The second proposition refers to a dynamic conception of an individual according to which it is defined by its capacity "for affecting and being affected" (1988, p. 123). In this sense, no individual body, human, animal or thing, can be thought of without taking into consideration how it is affected and how it affects other bodies. Following these two propositions, Deleuze concludes that an individual "is never separable from its relation to the world [...] The speed or slowness of metabolisms, perceptions, actions, and reactions link together to constitute a particular individual in the world" (1988, p. 125). For Deleuze, an individual is always the aggregate of an infinity of parts which form a specific degree of

power, that is, a capacity to affect and to be affected (1987, p. 60). These parts, at the same time, relate to each other at different speeds and rhythms, determining the way they affect and are affected by others. Therefore, an individual is not the fixed and irreducible unity that composes the basis of society, but a highly unstable entity that is never detached from the social relations that constantly affect and are affected by it.

Deleuze's reading of Spinoza is useful to understand the notion of *dividual* introduced in the essay on control. For Deleuze, an individual is never a fixed identity, but rather an assemblage of speeds and affects between bodies. What differentiates discipline from control is the way in which these rhythms and affects are organised in order to produce a given subjectivity. While discipline defines an ideal norm that is then imposed on the subject by means of individualising and normalising, control mechanisms conceive the subject as a multiplicity of *dividuals*, each composed by an assemblage of bodies, affects and desires. Put differently, in control societies, each subject is managed at different levels, with different speeds and rhythms, according to the concrete encounters through which they affect and are affected by others. There is no given norm or mould that must be enforced on the subject in order to individualise and normalise him or her. Instead, each aspect of subjectivity is managed in its own plane of immanence, in accordance with its own field of action and to the bodies, affects, and forces that it enters in relation to. As Lazzarato (2014) puts it, in control societies,

the component parts of subjectivity (intelligence, affects, sensations, cognition, memory, physical force) are no longer unified by an 'I', they no longer have an individuated subject as referent. Intelligence, affects, sensations, cognition, memory, and physical force are now components whose synthesis no longer lies in the person but in the assemblage or process [of production]. (p. 27)

Lazzarato refers to the dissolution of subjectivity as a process of deterritorialization in which the parts that compose subjectivity lose their unified (molar) character and become articulated at a molecular level together with other productive processes. In the example provided by Guattari and referred to by Deleuze, the same subject may be allowed to access different parts of a town based not on the individual himself but on the information provided by a computer regarding the different *dividuals* that compose that given subjectivity. This may be difficult to imagine at the level of a town or city, but is a very concrete reality in digital environments, where each subject is nothing else than an ensemble of several *dividuals* that engage in different encounters depending on the "passwords" they provide.



It is important to remember that the concept of *dividual* must be understood in relation to its counterpart, the concepts of “sample, data, markets, or *banks*” (N, p. 180). Just like disciplines function by articulating the mass and the individual in order to manage a multiplicity of men, control produces a twofold articulation between *dividuals* and markets. Following Deleuze’s reading of Spinoza, it has been argued that a *dividual* is a body composed of particles with variable speeds and rhythms that affect and are affected by other bodies. As such, a *dividual* operates as a new object of power that replaces the central role of the individual. Accordingly, markets replace masses in control societies. This passage becomes clear with Foucault’s concepts of population and governmentality.

For Foucault, population is a new articulation between the subject and the collective. As such, it aims at organising a multiplicity of men. Unlike the role of discipline, however, a population is managed not through the normalisation and individualisation of the subject, but through a new art of government. This new form of governmentality does not attempt to modify the behaviour of a population. Instead, governmentality introduces an economic approach to the organisation of populations. This means that a population is seen as a field composed by a multiplicity of desires and interests, and the task of governing it is not achieved by repressing or modifying this multiplicity, but by knowing how to channel it, how to use it in order to generate an economic benefit.

The attention economy offers a good example of this shift. The attention economy does not focus on the individual, but rather on the statistical knowledge about a population. Although it uses individual human attention, it does so only to the extent that it functions as a concrete source of knowledge about a population, or ‘*databank*’:

With the rise of advertising in the 1920s and later the advent of television, an ever well-organized machine has developed of which Google and Facebook can be considered the crowning achievements. The latter make up immense ‘*databanks*’ which function as marketing apparatuses. They gather, select, and sell millions of data on our behaviour, purchases, reading habits, favourite films, tastes, clothes, and food preferences as well as the way we spend our ‘free time’. The information concerns ‘*dividuals*’, whose profiles composed of the convergence of data, are mere relays of inputs and outputs in production-consumption machines. (Lazzarato 2014, p. 37)

Lazzarato’s example shows how instead of using the gaze to normalise (like the Panopticon does), the attention economy concentrates on the attention of ‘*dividuals*’ and turns it into a source of knowledge for constructing ‘*databanks*’, samples, and markets. For the attention economy, each subject is composed of different levels of subjectivity, or *dividuals*, and each level is analysed according to the relations it establishes. There is no essence or truth about

the subject that control aims to discover. Instead, it assumes that each subject is the result of different speeds and rhythms that interact at different levels with different bodies and affects. At the same time, it analyses these different individuals in order to create a broader knowledge about a population, or market, and it assumes a certain degree of “naturalness” in the tendencies of this broader object. This means that the attention economy does not attempt to modify, correct or repress these “natural” tendencies, but rather to make them calculable, predictable, and hence monetisable.

Matteo Pasquinelli (2014) introduces the concept of “societies of metadata” in order to define the “current evolution of that society of control that was already pictured by Deleuze” (p. 3). These societies of metadata organize flows of information using algorithms and databases in order to accelerate the production and accumulation of machinic surplus value (Pasquinelli 2014, pp. 15-6). The concept of “societies of metadata” is significant for the analysis of the attention economy because it highlights the importance of Deleuze’s control hypothesis for understanding how contemporary information technologies operate as power apparatuses. Furthermore, Pasquinelli’s notion makes it possible to bridge the analysis of control societies to the concept of machinic surplus value analysed in chapter four and to the Italian reinterpretation of Marx’s theory of value presented in chapter two.

In the introduction to the thesis, it was mentioned that the development of advanced algorithms makes it possible to think of the attention economy in terms of what has been called “Big Data”. According to Pasquinelli (2014, pp. 14-15), the technical possibilities introduced by Big Data inaugurate a new stage of capitalist power formations in which “the governance of the means of production” is facilitated by the algorithmic analysis of metadata (i.e. “information about information”).<sup>28</sup> The metadata are produced by applying advance algorithms to the information harvested through the meticulous analysis of human attention. In this way, metadata provide a detailed account of the desires, interests, and consumption habits of the individuals comprised in a given market. Furthermore, metadata are used to adjust the processes of production, distribution and consumption of commodities, potentially turning every human act into a moment of capitalist valorisation.<sup>29</sup> The consequence is that the

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<sup>28</sup> According to Boyd and Crawford (2012), “Big Data not only refers to very large data sets and the tools and procedures used to manipulate and analyse them, but also to a computational turn in thought and research” (p. 665). In this regard, Big Data creates “a system of knowledge that is already changing the objects of knowledge, while also having the power to inform how we understand human networks and community” (2012, p. 665).

<sup>29</sup> The internet media content provider *Netflix* is a good illustration of how human attention can generate metadata that are then used in the valorisation process of capital. *Netflix* uses an algorithm capable of offering film suggestions to its users based not only on their consumption history, but also on film ratings and reviews. In this sense, *Netflix* generates profit not only from the subscription paid by each of its users, but also from the

reproduction of capital's command over human activity begins to operate through a different diagram of power than the disciplinary one that characterised industrial societies: in control societies, the attention economy operates as a concrete power mechanism which harvests the necessary information to facilitate the economic governance of a given population. As mentioned in the previous chapter, the attention economy fulfils a twofold objective: from an economic perspective, it turns subjectivity into a new territory for the extraction of machinic surplus value, thus expanding the valorisation cycle of capital beyond the physicosocial definition of labour; from the perspective of power, it turns human attention and human desire into a source of metadata aimed at the correct governability of populations.

This twofold function of the attention economy exemplifies how apparatuses of control are replacing disciplinary institutions as the main mechanisms of social organization in post-industrial capitalism. It is important to note, however, that societies of control do not completely get rid of disciplinary institutions, but rather subsume them under a new political rationality (STP, p. 25). This means that disciplinary apparatuses (aimed at articulating the mass/individual dyad) are not simply replaced by apparatuses of control. Instead, disciplinary institutions are integrated as a necessary aspect of a larger network of power aimed at governing populations and markets. For this reason, the attention economy cannot be thought of as fully excluding the individual as its object of power. On the one hand, it is correct to say that populations become the new object of power in the age of the attention economy. From this perspective, the articulation of the mass/individual dyad does no longer express the general aim of the attention economy as a power apparatus. On the other hand, however, it is also correct to say that the individual remains an important element for the harvesting of information about a given population. In other words, the attention economy maintains as one of its effects the production of individual subjectivities (e.g. the "user").

To illustrate how these two poles of contemporary power formations relate to each other, Deleuze and Guattari use the notions of social subjection and machinic enslavement (ATP, p. 504). Social subjection, on the one hand, places the subject at the centre of social constitution. Its main function is to organize a mass of individuals in order to extract from it

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analysis of the data that the watching activity of these users generates. As Hallinan and Striphas (2014, p. 12) suggest, when *Netflix* began producing television series in 2013, it used this algorithm to predict the economic success of its investments. In *House of Cards*, Netflix used its algorithm to "determine whether an audience might exist for some combination of "David Fincher", his "style", the collection of genres across which he has worked, "Kevin Spacey", the specific genre of political thriller, and so on" (Hallinan and Striphas 2014, p. 12). In doing so, *Netflix* moved away from "undifferentiated mass consumption" toward "an aggregation of highly differentiated micro-audiences" (2014, p. 12). For Hallinan and Striphas (2014), the case of *Netflix* illustrates the emergence of an "algorithmic culture" (p. 14).

the highest productivity while at the same time reducing the political disadvantages proper to the mass. It achieves so by means of individualizing each subject, normalizing him or her through mechanisms of discipline that internalize a given norm. In machinic enslavement, on the other hand, each subject becomes part of a larger unity, a mere cog in a machine. Here, the individual/mass dyad is replaced by a different conceptual framework that focuses on a larger object of power (e.g. population, market, samples, etc.). To a certain extent, it is true that the apparatuses of social subjection express the disciplinary diagram of power characteristic of industrial capitalism, whereas machinic enslavement appears as a more suitable framework to explain the new diagram of power that defines post-industrial (control) societies.<sup>30</sup> Nevertheless, as Deleuze and Guattari note, contemporary power formations do not simply replace one form of power with another, but integrate them both as two poles of the reterritorializing movement that reproduces the capitalist relations of production (ATP, p. 506). In other words, machinic enslavement and social subjection “constantly reinforce and nourish each other” (ATP, p. 506). The example they provide is television, where the spectator is simultaneously the subject of the message and a mere number in a larger machine of ratings and demographic data (ATP, p. 506). The same can be said of the attention economy: it works by addressing a personalised user, but it does so only in order to harvest his or her data and feed the data into a larger machine aimed at producing machinic surplus value.

### 3. MACHINIC ENSLAVEMENT AND SOCIAL SUBJECTION

According to Deleuze and Guattari, machinic enslavement and social subjection express two forms in which the state apparatus enforces a power relation (ATP, p. 504).<sup>31</sup> In machinic enslavement, humans become pieces of a larger machine “under the control of a higher unity” (ATP, p. 504). To illustrate this, Deleuze and Guattari refer to Lewis Mumford’s example of the mega-machine necessary to build the pyramids in ancient Egypt (ATP, p. 504). In this enterprise, each slave became a human machine that connected to a larger mechanism in

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<sup>30</sup> I borrow this interpretation from Eugene Holland (1998). Holland writes: “in control society, disciplinary subjection is losing ground and making way for a perverse return to servitude [enslavement] as the prevailing mode of domination” (1998, p. 72). See also Lazzarato (2014).

<sup>31</sup> In his book *Signs and Machines* (2014), Lazzarato pushes this argument further by claiming that in contemporary capitalism the entire production of wealth (and production in general) begins to operate “at the intersection of this two heterogeneous power apparatuses: social subjection and machinic enslavement” (2014, p. 24). According to Lazzarato, modern political thought has looked at the problem of social subjection in detail (2014, p. 36). The concept of machinic enslavement, however, is “Deleuze and Guattari’s original contribution to our understanding of how contemporary capitalism works” (2014, p. 36).

order to transmit energy from one to the other (ATP, p. 505). In opposition to machinic enslavement, social subjection operates by rendering humans themselves as the higher unity that coordinates production. In social subjection, humans relate externally to other machines, which they operate as subjects, users, or workers. In machinic enslavement a human is “enslaved by the machine”, while in social subjection he or she is “subjected to the machine” (ATP, p. 504). Accordingly, Félix Guattari explains that social subjection involves “full-fledged persons, easily manipulated subjective representations”, whereas

machinic enslavement combines infrapersonal and infrasocial elements, because of a molecular economy of desire more difficult to ‘contain’ within stratified social relations. Directly involving perceptive functions, affects, unconscious behaviours, capitalism takes possession of labour-power and desire, which extends far beyond that of the working class, sociologically speaking. (SS, p. 263)

It is useful to remember that for Deleuze and Guattari, the term “machine” does not simply refer to what we commonly define as technical machines. For these authors, technical, social, and living machines have no difference in nature. In fact, they all respond to the same abstract structure of desiring-machines. The difference emerges when the molecular level of desiring-machines is replaced with the molar level in which technical, social, and living machines appears as separate, autonomous entities. For this reason, Lazzarato (2008) suggests that the notions of machinic enslavement and social subjection should be interpreted using Deleuze and Guattari’s distinction between molecular and molar arrangements of desiring-machines:

We are enslaved to a machine when we are the cog in the wheels, one of the constituent parts enabling the machine to function. We are subjected to the machine when, constituted as its users, we are defined purely by the actions that use of the machine demands. Subjection operates at the molar level of the individuals (its social dimension, the roles, functions, representations and affections). Enslavement on the other hand operates at the molecular (or pre-individual or infra-social) level (affects, sensations, desires, those relationships not yet individuated or assigned to a subject). (2008)

This means that when we use or put to work a technical machine we should not speak in terms of machinic enslavement, but rather of social subjection (since we operate the machine as ‘subjects’ or ‘users’, i.e. we as subjects are the higher unity guiding the machine). Put differently, in social subjection the relation between an individual and a machine appears as a relation between a subject and an object, that is, as an external relation where a subject “uses” a machine. As Lazzarato (2014, p. 26) suggests, in social subjection “the individual works or communicates with another individual subject by way of an object-machine, which functions as the ‘means’ or mediation of his action or use”. For Deleuze and Guattari, capitalism

emerges as a “worldwide enterprise of subjectification”, the “point of subjectification that constitutes all human beings as subjects” (2004, p. 505). This “worldwide enterprise of subjectification” was made possible by the spread of disciplinary institutions throughout western societies.<sup>32</sup> Seen from this perspective, the notion of social subjection allows highlighting the internal relation between disciplinary societies and industrial capitalism.

With the passage from industrial to post-industrial society, however, capitalism pushes to restore, “in new and now technical forms, an entire system of machinic enslavement” (ATP, p. 505). As seen in chapter four, with the introduction of automation and cybernetic machines “the work regime changes” and “surplus value becomes machinic” (ATP, p. 506). In this new context, individuals cease to relate externally to machines and become contiguous to them, subsumed under a larger machine aimed at the production of machinic surplus value: humans and machines appear now as interchangeable parts of a production process organized around inputs and outputs of flows of capital, flows of information, and flows of desire (Lazzarato 2014, p. 26). It has been argued in the previous chapters that Marx’s understanding of the organic composition of capital reproduces an opposition between living labour and technical machines that is historically limited to industrial capitalism. From Deleuze and Guattari’s perspective, this opposition appears as the result of the conceptual distinction between subjects and machines which characterises social subjection. In post-Fordism, however, machinic enslavement reconfigures the relation between humans and machines, calling for a new interpretation of the organic composition of capital. In this regard, Deleuze and Guattari’s notion of machinic surplus labour represents an important contribution for any critique of contemporary capitalism since it allows identifying the new mechanisms of production of surplus value that go beyond the physicosocial definition of labour. Additionally, Deleuze and Guattari’s concept of machinic enslavement makes it possible to unveil the internal relation between the historical transformation of capitalism from Fordism to post-Fordism and the mutations in the diagram of power from disciplines to control.<sup>33</sup>

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<sup>32</sup> Lazzarato (2014) writes that: “by assigning us an individual subjectivity, an identity, sex, profession, nationality, and so forth, social subjection produces and distributes places and roles within and for the social division of labour” (2014, p. 24). This, he suggests, is what Marx defined as the process by which the capital-labour relation becomes “personified” (2014, p. 24). Furthermore, Lazzarato adds that in neoliberalism, “human capital” and the “entrepreneur of the self” become the paradigmatic forms of social subjection (2014, p. 24). Most significantly, the regime of private property constitutes capitalism’s most important apparatus of individuation and subjection. Put differently, the fact that capitalism cannot be thought of without the axiom of private property illustrates the central role played by social subjection and disciplinary individuation for the reproduction of capitalist social relations.

<sup>33</sup> This relationship has been developed by Holland (1998), Hardt (1995; 1998), and Lazzarato (2014).

The attention economy emerges as a result of this specific passage, in which cybernetic machines begin to respond to a new dominant logic of power. On the one hand, cybernetic machines provide the technical ground to capture attention and to make the statistical patterns of a population visible. On the other hand, cybernetic machines articulate this information (harvested through the analysis of attention) and communicate it to the sphere of production (which itself has been transformed in order to exploit the cognitive dimension of labour). As Deleuze points out, it is important to bear in mind that the replacement of one machine by another is deeply rooted in a broader transformation of capitalism (N, p. 180). In this sense, the passage from disciplines or social subjection (with their thermodynamic machines) to control or machinic enslavement (and the primacy of cybernetic machines) has to be interpreted from the standpoint of the decline of Fordism and the rise of a post-Fordist mode of production. For Deleuze, societies of control emerge in a context in which marketing departments replace the assembly line as the core element of production. In Deleuze's words, capitalism becomes directed towards "metaproduction" and marketing becomes the new "instrument of social control" (N, p. 181).<sup>34</sup> As it has been shown in chapter two, attention becomes a new form of immaterial labour that responds to the mutation from the industrial assembly line to the marketing department characteristic of post-Fordism. As such, attention facilitates the smooth communication between the spheres of consumption and production, shifting the way surplus value is both produced and realised. In this sense, the attention economy appears as a new form of labour that generates machinic surplus value and as a new power apparatus that subsumes individuals to novel forms of machinic enslavement. Nevertheless, it is important to point out that Deleuze and Guattari also suggest that social subjection and machinic enslavement should not be conceived of as successive stages, but rather as two coexistent poles of capitalist power formations that reinforce each other (ATP, p. 506). Deleuze and Guattari give the example of television in order to show how these two poles can coexist in one and the same object:

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<sup>34</sup> It is important to note that Deleuze acknowledges the fact that this transformation from "production" to "metaproduction" is rooted in a displacement of factories to remote parts of the world. Production, he writes, "is often transferred to remote parts of the Third World, even in the case of complex operations like textile plants, steelwork, and oil refineries" (N, p. 181). Deleuze defines this metaproduction as follows: "it [capitalism] no longer buys raw materials and no longer sells finished products; it buys finished products or assembles them from parts. What it seeks to sell is services, and what it seeks to buy, activities. It is a capitalism no longer directed toward production but toward products, that is, towards sales or markets. Thus it is essentially dispersive, with factories giving way to businesses" (N, p. 181). Nonetheless, Deleuze notes that one thing has not changed: "capitalism still keeps three quarters of humanity in extreme poverty, too poor to have debts and too numerous to be confined; control will have to deal not only with vanishing frontiers, but with mushrooming shantytowns and ghettos" (N, p. 181).

One is subjected to TV insofar as one uses and consumes it [...] ('you, dear television viewers, who make TV what it is...'); the technical machine is the medium between two subjects. But one is enslaved by TV as a human machine insofar as the television viewers are no longer consumers or users, nor even subjects who supposedly 'make' it, but intrinsic component pieces, 'input' and 'output', feedback or recurrences that are no longer connected to the machine in such a way as to produce or use it. (ATP, p. 506)

Deleuze and Guattari's reference to Television is a clear example of how the attention economy can operate both as an apparatus of both social subjection and machinic enslavement. On the one hand, the attention economy turns human attention into a source of meta-information that is then processed and fed back into the productive sphere. From this perspective, the attention economy treats human attention as a mere cog in the larger machine of capitalist valorisation. On the other hand, the attention economy reproduces individual desire as a key aspect in the reproduction of the economic cycle, thus revealing the persistence of social subjection for contemporary power formations. This means that the attention economy does not simply substitute machinic enslavement for social subjection. Instead, the attention economy reproduces the dual regime of machinic enslavement and social subjection that defines contemporary capitalism: we are "enslaved to the machinic apparatuses of business, communications, the welfare state, and finance", but we are also "subjected to a stratification of power that assigns us roles and social and productive functions as users, producers, television viewers, and so on" (Lazzarato 2014, p. 38). In this regard, the attention economy operates by constantly subsuming each one of these two poles under one large axiomatic: the world capitalist market. This conclusion is significant since it allows bringing together some of the hypotheses from the previous chapters.

Firstly, the notions of machinic enslavement and social subjection unveil an internal relation between labour, value and power. In chapter one, it was argued that an immanent critique of the attention economy should not be developed from the perspective of labour (as an external standpoint from where to evaluate the exploitative nature of capitalism). Instead, chapter one suggested that the category of labour had to become the object of analysis through a historically specific approach. Chapter two developed this historically specific approach by addressing the historicity of the labour-value relation, and suggested that Marx's labour theory of value needs to be subjected to critical examination when explaining the production and exploitation of surplus value in post-Fordist capitalism. Through the prism of Deleuze and Guattari's notions of machinic enslavement and social subjection it is possible to connect the arguments from these two chapters to the concept of machinic surplus value developed in chapter four.



According to Deleuze and Guattari, capitalism put forth a worldwide enterprise of social subjection. A central aspect of this enterprise is the twofold discovery of labour and desire as the subjective essence of wealth (of both material and subjective economies, respectively). This approach historicizes labour and desire, questioning their transhistorical role for the human and social constitutions. In other words, labour and desire have to be understood as historically specific categories. For Deleuze and Guattari, industrial capitalism is grounded on a physicosocial definition of labour which conceives labour as human activity that is measured in terms of abstract labour time and in relation to an accumulated surplus (fixed capital). At the same time, the rise of post-Fordist capitalism turns this physicosocial definition of labour into an obsolete category incapable of explaining the new mechanisms of production and accumulation of surplus value. Deleuze and Guattari forge the notion of machinic surplus labour in an attempt to offer a reinterpretation of Marx's theory of value more suitable to this new productive scenario. What is most significant is that by connecting the physicosocial definition of labour to social subjection and the notion of machinic surplus labour to that of machinic enslavement, Deleuze and Guattari manage not only to historicise the category of labour, but also to highlight the immediate relation between labour and power that characterises capitalist societies.

Secondly, the categories of social subjection and machinic enslavement offer new light on the interpretation of the attention economy as a power apparatus presented in chapters three and four. More specifically, from the standpoint of social subjection and machinic enslavement, Stiegler's critique of the industrialisation of consciousness and Deleuze and Guattari's immanent analysis of desiring-machines can be seen as two complementary aspects of contemporary power formations. In other words, by understanding the attention economy as an articulation between social subjection and machinic enslavement, Stiegler's critique of the loss of individuation and *Anti-Oedipus*' novel concept of desiring-machines no longer appear as two contradictory frameworks that mutually cancel each other. On the contrary, these two theoretical frameworks can be seen as two supplementary analyses that explain two ways in which the attention economy manages to successfully reterritorialize the unleashed productive powers of post-Fordism under a single axiomatic.

As seen in chapter three, Stiegler explains the contradictory nature of contemporary capitalism by exposing the systematic loss of individuation put forth by mass consumption. In this regard, the attention economy can be understood as an apparatus of social subjection that attempts to capture and normalise individual desire in order to accelerate mass consumption.

At the same time, Deleuze and Guattari's immanent analysis of desiring-machines works as a supplementary critique of the attention economy that places the loss of individuation within a larger context of machinic enslavement. From Deleuze and Guattari's perspective, the attention economy appears as an illegitimate power apparatus that reterritorializes the productive powers unleashed by cybernetic machines under the asymmetric power relations that define capitalist societies. This reterritorialization is not understood merely at a subjective level, but from a global perspective that conceives capitalist society as the immanent (but asymmetric) articulation of flows of desire, information, energy, and capital. What becomes clear in both cases is that in post-industrial societies, subjectivity itself begins to operate as a key territory where the reproduction of capitalist power relations takes place. Consequently, the categories of social subjection and machinic enslavement provide a powerful theoretical apparatus to explain the mechanisms through which, despite all their internal contradictions, capitalist power formations manage to reproduce themselves.

## CONCLUSION

This thesis has attempted to develop an immanent critique of the attention economy. The notion of immanent critique has been understood as a specific methodology that enables the analysis and exposure of the internal contradictions of an object, rather than presupposing an external perspective from where normative judgements are posed and conclusions drawn concerning it. Each of the five chapters in this thesis has focused on a specific aspect of the attention economy: labour, value, temporality, machines, and power. Furthermore, each of these chapters maintains an immanent approach that does not grant a transhistorical definition to any of these concepts. Instead, such an approach questions the internal contradictions of these concepts and outlines the manner in which these contradictions become evident in the specific case of the attention economy. This has allowed for reflection on the validity of Marx's critique of political economy as a tool for an analysis of post-industrial capitalism.

The first chapter examined the attention economy as a form of labour. By means of the Marxist distinction between labour process and labour power, chapter one argued that the critique of the attention economy demands a methodological shift from the sphere of consumption (where the value of attention is indicated by the abundance of information) to that of production (where attention appears as a value-producing activity). Using the seminal work of Jhally and Livant (1986), it was shown how watching becomes a form of labour since it generates a surplus that is then monetised by media networks. Similarly, Jonathan Beller (2006) explores the relation between attention and labour in the age of the internet, and argues that sites like Google, Youtube and Facebook generate a profit through the exploitation of their users' attention. Informed mainly by Marx's labour theory of value, these authors condemn the exploitative and alienating nature of the attention economy.

Seen from the perspective of an immanent critique, however, the critical works just mentioned reproduce a transhistorical definition of attentive labour. To claim that the attention economy alienates the spectator from his or her attention implies (at least in

principle) that a non-alienated form of attention must exist prior to such alienation. Furthermore, these authors use this non-alienated definition of attention to draw a normative judgement of the exploitative character of the attention economy. Therefore, it was argued that an immanent critique of the attention economy must take into account a methodological reinterpretation. Firstly, the definition of attention as a new form of labour demands challenging any transhistorical definition of labour. As Postone (1993) suggests, labour is a strictly capitalist category. For this reason, a critique of capitalism cannot be a critique from the transhistorical standpoint of labour but an immanent critique of the category of labour itself. Accordingly, it was suggested that a critique of the attention economy must focus on the historical conditions that made it possible for attention to become a value-producing activity in the first place. Secondly, chapter one called for an analysis capable of addressing the historical specificity of the labour-value relation in order to understand the concrete mechanisms through which the attention economy generates and exploits surplus value. This second point was developed in chapter two.

Chapter two posed thus the question regarding the historicity of the labour-value relation. One of the most debated issues in Marx's labour theory of value is the claim that human labour alone is the source of all value. Using Alquati's (1962; 1963) concept of 'valorizing information' and Lazzarato's (1996) notion of 'immaterial labour', the second chapter contended that the technological transformations put forth by post-Fordism demand a reinterpretation of Marx's labour theory of value that challenges the opposition between living labour and fixed capital. Similar to chapter one, this chapter developed its argument from an immanent perspective that does not naturalise the labour-value relation (as political economy does), but which examines this relation from the standpoint of the endogenous transformations of capitalism. In contrast to the definition of attention as labour presented in chapter one, chapter two contended that the attention economy generates value by bridging the spheres of consumption and production. Hence the attention economy blurs the conceptual distinction between labour time and leisure time (and between productive and unproductive labour) and turns all human activity into a potential source of surplus value.

This entails certain methodological consequences for an immanent critique of the attention economy. These consequences have been examined in the final section of chapter two following what Antonio Negri (1996) has called a 'deconstruction of the law of value'. According to Negri, the cognitive and immaterial dimensions of post-industrial labour have produced a crisis of the measurability of value. The crisis of measurability, in turn, has

caused the obsolescence of Marx's definition of exploitation based on the appropriation by the capitalist of a portion of the working day. This obsolescence of the notion of exploitation does not mean, however, that exploitation ceases to occur. On the contrary, the expansion of the valorisation process of capital beyond factory walls means that every human activity can potentially become subject to exploitation. The difference is that this exploitation occurs by appropriating the productive (social) powers unleashed by post-Fordism (what Marx called the 'general intellect'). What is most significant in Negri's methodological analysis is the fact that in the context of post-Fordism labour tends to become disentangled from a pure value relation, and appears more and more as a concrete power apparatus. This immediate relation between labour and power is of great importance for an immanent critique of the attention economy. This is so mainly because it warrants the claim that the attention economy is not only a form of labour (that appropriates part of our watching activity to generate surplus value), but also a concrete power apparatus aimed at the reproduction of capitalist social relations. This definition of the attention economy as a power apparatus delineated the approach of the three remaining chapters.

Chapter three focused on the relation between temporality and power in the specific case of the attention economy. Some authors have argued (Berardi 2009 and 2011; Crary 2013; Davenport and Beck 2001; Marazzi 2008) that the temporality of the attention economy is defined by the asymmetric relation between the temporality of the flows of information and the temporality of the subject that attempts to process this information. Berardi (2009), for example, suggests that the temporality of the attention economy is the result of the constant acceleration of cyber-time in relation to the finitude of human time. This definition of the temporality of the attention economy is problematic because it reproduces a transhistorical definition of human-time. Similar to the critiques of the attention economy as a form of labour presented in chapter one, Berardi universalises a given notion of human time from where he then judges the negative effects of the attention economy. Contrary to this, chapter three uses Stiegler's (2011b) notion of cinematic time in order to develop an immanent approach to the temporality of the attention economy. According to Stiegler, the production of temporality is always the result of a process of exteriorisation. Through the analysis of the temporality of the three syntheses of imagination, Stiegler contends that the "human" capacity to experience an object's temporal unfolding is shaped by the technical surface on which those temporal objects are recorded. Chapter three suggested that Stiegler's critique of the metaphysical opposition between living memory and dead technical time is significant for

at least two reasons. Firstly, it challenges any transhistorical definition of human time as an external point from where to understand the temporality of the attention economy. Secondly, it can be used to put into question the opposition between living labour time and dead technical machines that characterises Marx's definition of the organic and technical composition of capital. In this regard, Stiegler's notion of cinematic time makes it possible to continue the post-Fordist reinterpretation of Marx's labour theory of value introduced in chapter two.

In addition to this, chapter three considered the political consequence of Stiegler's theory of cinematic time. According to Stiegler (2011a), the massification of digital technologies has put forth an "industrialisation of temporality" which in turn is creating a "systematic loss of individuation". In this sense, hyper-attention is gradually replacing deep-attention as the dominant attentional regime (Stiegler 2012), while the proliferation of "real-time" temporal objects is damaging the temporal gap that necessarily grounds all processes of individuation (Stiegler 2011c). This creates a process of normalisation that ultimately weakens individual desire and hence undermines capitalist consumption. From the perspective of an immanent critique of the attention economy, however, Stiegler's political conclusions seem to reintroduce a normative judgement that presupposes a transhistorical understanding of the relation between desire, temporality, and individuation. Stiegler explains the negative effects of hyper-attention by denouncing the loss of a specific form of temporality that defines desire and that as such grounds the processes of individuation. Despite all his efforts to develop an immanent theory of time, Stiegler restores an obsolete critique of contemporary capitalism based on a transhistorical definition of desire (more suited to the normalising character of industrialism than to the dynamic pace of post-industrial capitalism).

In order to address the limits of Stiegler's critique of contemporary capitalism and to advance an immanent approach to the attention economy, chapter four introduced Deleuze and Guattari's social theory. In *Anti-Oedipus* (2004a), Deleuze and Guattari define society as an organization of flows. What defines capitalism is that instead of coding these flows (as non-capitalist social formations do) it systematically puts forth a process of deterritorialization and decoding. What is most significant is the fact that Deleuze and Guattari attempt to develop an immanent critique of capitalism based strictly on the analysis of its internal contradictions. Using the Kantian distinction between legitimate and illegitimate uses of syntheses, Deleuze and Guattari highlight the contradiction between capitalism's

deterritorializing tendency and its need to constantly reterritorialize the liberated productive forces.

Chapter four also showed that in order to develop this immanent critique of capitalism, Deleuze and Guattari introduce the concept of desiring-machines. This concept challenges both the traditional definition of desire (understood as lack), as well as the traditional understanding of machines (understood as technical machines). In this sense, the category of desiring-machines is relevant for an immanent critique of the attention economy for two reasons. On the one hand, it makes it possible to question Stiegler's notion of desire and hence to overcome his understanding of contemporary capitalism. On the other hand, it allows developing the debate against the opposition between living labour and machines that defines Marx's labour theory of value. In *Anti-Oedipus*, desiring-machines are defined as the molecular organization of a threefold synthesis of the unconscious. Like the analysis of the temporality of the three syntheses presented in chapter three, the threefold synthesis in *Anti-Oedipus* is a reinterpretation of the Kantian theory of imagination from the first edition of the *Critique of Pure Reason*. The main difference, however, is that while Stiegler focuses on the temporal character of the three syntheses and connects them to Husserl's concept of retention, Deleuze and Guattari read the threefold synthesis through Marx's analysis of the three levels of the economic cycle: production, distribution, and consumption. This difference impacts in the way desire is conceived. By focusing on the relation between temporality and desire, Stiegler cannot overcome the understanding of desire from the standpoint of consumption (just as political economy does). In contrast, Deleuze and Guattari understand desire from the immanent standpoint of production (where desire is productive, and not merely limited to lack, representation, and consumption). In the case of the attention economy, this difference is significant because it allows posing the attention economy as an active apparatus of production. Primarily, it produces information in order to generate machinic surplus value (i.e. surplus value that does not entail the physical expenditure of abstract labour time). To achieve this, the attention economy turns subjectivity into a new territory for the self-valorisation of capital. Chapter four suggested that this shift towards subjectivity is guided by a twofold objective: counteracting the falling rate of profit by expanding the sources of surplus value and reproducing a given social order by means of reterritorializing a private notion of labour and desire. Therefore, the attention economy appears not only as a source of economic profit, but also as a concrete power apparatus. To develop this point, however, it

was necessary to examine the transformations in the logic of power that characterise the passage from Fordism to post-Fordism. This task was developed in chapter five.

Chapter five used the attention economy to illustrate the shift from disciplinary to control societies suggested by Foucault (2009) and Deleuze (1995). Moreover, chapter five connected this passage to the broader historical context of the crisis of industrial capitalism and the emergence of a post-industrial mode of production. This does not mean, however, that the mutation in the logic of power has been understood either from the perspective of historical materialism or from the point of view of technical determinism. Instead, the rise of control societies was seen as the result of an immanent transformation that responds to the internal demands and contradictions of disciplinary societies. In particular, chapter five focused on the shift from the mass/individual dichotomy characteristic of disciplinary societies (Foucault 1995; Crary 1991) to that of individuals and databanks in control societies (Deleuze 1995). In this context, it was argued that the attention economy does not attempt to normalise attention (as Stiegler suggests), but rather that the attention economy uses the attention of individuals to generate data samples about a given population. In this way, the attention economy illustrates the passage from normalisation to governmentality as the dominant political rationality.

The last section in chapter five examined the attention economy using Deleuze and Guattari's notions of machinic enslavement and social subjection. In *A Thousand Plateaus* (2004b), Deleuze and Guattari suggest that these two concepts express two poles of capitalist power formations. To a certain extent, a correspondence can be established between social subjection and disciplinary societies, and between machinic enslavement and control societies. At the same time, however, Deleuze and Guattari argue that contemporary power formations need to be understood not as the mere substitution of one for another form of power, but as the constant articulation and reinforcement of a division between social subjection and machinic enslavement. Television, for example, addresses the spectator simultaneously as a subject (of communication) and as a cog in a larger machine (of rating and audiences). Accordingly, the attention economy can be seen as a power mechanism that constantly operates as an apparatus of subjection (it reterritorializes individual desire and individual labour as the source of capitalist social relations) and an apparatus of machinic enslavement (it subsumes individual attention within a larger machine aimed at capturing banks of metadata in order to economically organize a population).



The concepts of machinic enslavement and social subjection are significant for an immanent critique of the attention economy because they allow to bring together some of the main arguments from the previous four chapters. Firstly, these concepts can be connected back to the notion of machinic surplus value from chapter four and to the concept of immaterial labour from chapter two. Social subjection and machinic enslavement allow historicising not only the category of labour, but the threefold relation between labour, value, and power. From this perspective, it was argued that industrial capitalism relies on disciplinary institutions as the dominant power diagram. At the same time, industrial capitalism responds to a physicosocial definition of labour (human activity measured in terms of abstract labour time). It was also noted that this physicosocial definition of labour informs Marx's labour theory of value and determines what he identifies as the core contradiction of industrial capitalism: the attempt to reduce labour to a minimum while keeping labour as the sole source of value (Marx 1973). The spread of this contradiction, together with the advent of cybernetic machines and the expansion of cognitive and immaterial forms of labour creates a situation in which not all surplus value can be traced back to a physicosocial definition of labour. In this post-industrial context, capital finds new ways of valorising itself through activities that are not necessarily conceived as labour. Therefore, if the concept of social subjection allows connecting industrial capitalism to disciplinary societies and to the physicosocial definition of labour, then the concept of machinic enslavement highlights the immanent relation between post-Fordism, control societies and machinic surplus value.

Secondly, the argument that machinic enslavement and social subjection define two aspects of contemporary power formations casts new light on the opposition between Stiegler and Deleuze and Guattari as presented in chapters three and four. If these notions represent two poles that constantly reinforce each other, then the subjective analysis put forth by Stiegler and the machinic critique of capitalism developed by Deleuze and Guattari can be understood as two complementary frameworks. Therefore, rather than cancelling each other, these two frameworks attempt to explain two different poles of the attention economy: the subjective level where the attention economy reterritorializes individual desire and individual labour as the main forces moving the capitalist mode of production, and the machinic level where individuals are turned into cogs of a larger machine aimed at the expansion of capital's self-valorisation process.

Finally, it is important to mention that the development of these hypotheses has opened up a series of theoretical questions that would require further exploration. This thesis has

developed an immanent method in order to address the relation between images and power in contemporary capitalism. This means that images are not reduced to their representational content, but rather that images are seen as an active element of capitalist production. Nevertheless, this non-representational relation between images and capital has to be taken further. One way of doing this is by developing a non-representational and non-anthropocentric theory of value. A non-representational theory of value should question the definition of value as the mere representation of labour (even as the representation of the social relations embedded in labour). Similarly, a non-anthropocentric theory of value must challenge any understanding of value based strictly on human labour (or human activity in general). This thesis has shown that Italian post-Marxism and Deleuze and Guattari's appropriation of Marx provide two powerful theoretical frameworks for developing a new theory of value more adequate to the critique of contemporary capitalism. By questioning the distinctions between productive and unproductive labour, and between labour and leisure time, Italian post-Marxism paves the way for new theoretical tools capable of explaining the valorisation process of capital in a world in which every human activity becomes a potential source of surplus value. In this way, concepts such as "social factory", "socialised worker", "immaterial labour", "affective capitalism", etc., become highly relevant for present and future social critiques. Furthermore, Deleuze and Guattari's concept of desiring-machines constitutes an essential step forward for a non-representational and non-anthropocentric theory of value. This concept challenges the ontological opposition between technical, social, and organic machines, as well as the conceptual distinction between production, distribution and consumption. In doing so, Deleuze and Guattari pose essential questions regarding the nature of value in contemporary capitalism, its sources, its mechanisms of reproduction and its role for the perpetuation of capitalist power formations.

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