

Harun Farocki's Asignifying Images

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Abstract: With the recent publication of *Signs and Machines* by Maurizio Lazzarato and *Critical Semiotics* by Gary Genosko, the concept of asignifying semiotics introduced by Félix Guattari in the late 1960s is regaining attention. This revived interest responds largely to the rise and consolidation of new technologies of power based on algorithmic control and Big Data analysis. In the new context of informational capitalism, Guattari's asignifying semiotics appears a powerful conceptual tool for exploring the role of information technologies in the reproduction of capitalist power relations. This article contributes to this discussion by introducing the notion of asignifying images to explore the role that images acquire in this new age of algorithmic control. To achieve doing so, this article focuses on Harun Farocki's concept of operational images and reads some of his audiovisual work through the prism of Guattari's asignifying semiotics. More specifically, this article compares the representational account of labour in the film *Workers Leaving the Factory* (1995) with the non-representational perspective deployed by the video installation *Counter-Music* (2004). The distinction between a representational and a non-representational framework responds to the distinction between signifying and asignifying semiotics. By comparing these two perspectives, this article attempts to delineate some key elements for a broader reflection upon the transformation of the role of images in the reproduction of contemporary capitalism.

Keywords: Asignifying Semiotics, Deleuze, Guattari, Lazzarato, Cinema, Images, Farocki, Power, Capitalism

Acknowledgement: This work was supported by CONICYT (Chile) under the grant Fondecyt Postdoctorado 2016 (N° 3160053), and by the Westminster Institute for Advanced Studies, University of Westminster, London.

1. Introduction

With the recent publication of *Signs and Machines* by Maurizio Lazzarato, and *Critical Semiotics* by Gary Genosko, the concept of asignifying semiotics introduced by Félix Guattari in the late 1960s is regaining attention. This revived interest responds largely to the rise and consolidation of new technologies of power based on algorithmic control and Big Data analysis. Concepts such as "societies of metadata" (Pasquinelli 2015), "algorithmic governmentality" (Reigeluth 2014), "protocol control" (Galloway 2004) and "meaning machines" (Langlois 2014) speak of a world in which the classic category of ideology is being replaced by new power mechanisms based on information technologies closely linked to what Gilles Deleuze called "societies of control" (1995). In this new context of semicapitalism, info-commodities, and affective labour, Guattari's asignifying semiotics appears as a powerful conceptual tool for exploring the role of information technologies in the reproduction of capitalist power relations. This article contributes to this discussion by introducing the notion of

asignifying images in order to explore the role that images acquire in this new age of algorithmic control. To achieve this goal, this article focuses on Harun Farocki's concept of operational images and reads some of his audio-visual work through the prism of Guattari's asignifying semiotics. More specifically, this article compares the representational account of labour in the film *Workers Leaving the Factory* (1995) with the non-representational perspective deployed by the video installation *Counter-Music* (2004). This distinction between a representational and a non-representational framework responds to the distinction between signifying and asignifying semiotics. By comparing these two perspectives this article attempts to delineate some key elements for a broader reflection upon the transformation of the role of images in the reproduction of contemporary capitalism.

2. Asignifying Semiotics

According to Félix Guattari, capital is not an abstract category but “a semiotic operator” (2009, 244). This means that capital does not simply “represent” social relations. Capital operates, it functions. Not just at economic, but at semiotic and subjective levels. From Marx to Althusser to Žižek, the notion of capital has been understood from the perspective of representation (Hartley 2003). Contrastingly, Guattari contends that capital puts forth a deterritorialising force that cannot be grasped solely in terms of representation, meaning or signification. What is needed is a new hybrid semiotics, that is, a semiotic theory capable of explaining how signifying and asignifying elements integrate in order to reproduce capitalist power relations.

In *Anti-Oedipus*, Deleuze and Guattari contend that capitalism differs from previous social systems because of its deterritorialising drive (2004, 35). Every society needs codes, fixed representations, and solid systems of belief in order to reproduce itself (which, as Marx has shown, means not just reproducing the material conditions of production of a given society but mainly the power relations that organise those conditions). But capitalism is different. It replaces every concrete set of beliefs with a general, universal and abstract value. In doing so, capitalism shatters tradition: “everything that was solid melts into air”. Substituting tradition, an abstract, deterritorialised axiom arises. In this new context, social reproduction operates mostly through the production of an abstract surplus which is indifferent to its content, meaning, representation or belief. As Maurizio Lazzarato puts it, capitalist production “depends on abstract, unqualified, subjective activity irreducible to the domain of either political or linguistic representation” (2014, 23). At the same time, however, capitalism must “reterritorialise with one hand” what it “deterritorialises with the other” (Deleuze and Guattari 2004, 279). In order for capitalism not to undermine its own foundations, its deterritorialising force must be recaptured and restrained. Deleuze and Guattari suggest that capitalist reterritorialisation is achieved by deploying a private subject who ensures the reproduction of private desire and private property (the ‘holy grails’ of capitalism’s social reproduction).

Capitalist production thus merges two heterogeneous power apparatuses in order to reproduce its conditions and relations of production: a new form of machinic enslavement that operates at an abstract, deterritorialised and non-representational domain; and an apparatus of social subjection that reterritorialises the decoded flows of production in the form of an individual subjectivity, reinstating through language “a signifying and representational web from which no one escapes” (Lazzarato 2014, 24). Although heterogeneous, the molecular and pre-individual dimension of machinic enslavement and the molar and individual dimension of social subjection are “complementary, interdependent, and contribute to the functioning of capitalism”

(Ibid., 34). This means that on the one hand, we are “enslaved to the machinic apparatuses of business, communications, the welfare state, and finance”, while on the other “we are subjected to a stratification of power that assigns us roles and social and productive functions as users, producers, television viewers, and so on” (Ibid., 38).

Modern political thought has examined thoroughly the problem of social subjection. Most significantly, Michel Foucault has demonstrated a firm connection between the disciplinary diagram that shapes modern social institutions such as prisons, schools, hospitals, barracks, etc., and the role of social subjection for the reproduction of capitalist society. Discipline is, after all, a technology of power “by which the body is reduced as a political force at the least cost and maximized as a useful force” (Foucault 1995, 221). The concept of machinic enslavement, by contrast, has remained underexplored and constitutes “Deleuze and Guattari’s original contribution to our understanding of how capitalism works” (Lazzarato 2014, 36).

Social subjection operates at the representational level of individual subjectivity. Its main purpose is to reterritorialise the decoded and non-representational flows liberated by capitalist production in order to prevent those flows from shattering the given power relations. Social subjection involves “full-fledged persons, easily manipulated subjective representations” (Guattari 2009, 263). This means that social subjection assigns each one of us “an individual subjectivity, an identity, sex, profession, nationality, and so forth”, and hence “produces and distributes places and roles within and for the social division of labour” (Lazzarato 2014, 24). Machinic enslavement, instead, does not institute an individuated subject. Machinic enslavement operates at the level of deterritorialised codes and non-representational signals where the individual becomes a cog of a larger machine that reduces all singular content to an abstract value or axiom.

It is important to note that machinic enslavement should not be confused with the social use of technical machines. In fact, both social subjection and machinic enslavement rely on technical machines. The difference is that in social subjection there is a subject that uses technical machines, while in machinic enslavement both the subject and technical machines become part of a larger social machine that integrates decoded, non-representational signals. From the perspective of social subjection, the relation between an individual and a technical machine appears as a subject-object relation. In subjection, Lazzarato contends, “the individual works or communicates with another individual subject by way of an object-machine, which functions as the means or mediation of his actions or use” (2014, 26). This means that there is an external relation between the individual and the technical machine, which is why it is possible to say that a subject is alienated by technical machines. Conversely, in machinic enslavement the individual “does not stand opposite machines or make use of an external object” (Lazzarato 2014, 26). In machinic enslavement individuals and technical machines appear as interchangeable parts of a production process, a social machine organized around inputs and outputs of decoded flows of capital, information, and desire.

Furthermore, each pole of the production of subjectivity in capitalist societies depends on a specific regime of signs. According to Lazzarato (2014, 39), social subjection “mobilizes signifying semiotics [...] aimed at consciousness and mobilizes representations with a view to constituting an individual subject” whereas machinic enslavement “functions based on asignifying semiotics (stock markets indices, currency, mathematical equations, diagrams, computer languages, national and corporate accounting, etc.) which do not involve consciousness and representations and

do not have the subject as referent". If capital is a semiotic operator, then its critique demands a hybrid semiotics capable of grasping both the signifying and the asignifying regimes of signs that are at work in the reproduction of capitalist social relations.

The notion of asignifying semiotics is thus one of Félix Guattari's most novel contributions to an analysis of contemporary capitalism. Traditionally, semiotics has been occupied with meaning, signification and representation (Genosko 2016, 1). For this reason, traditional semiotics has served only to explain the regime of signification that characterises social subjection, comprising only the representational level in which the decoded flows liberated by capitalism are reterritorialised in the form of fully-formed individuals. Asignifying semiotics, in contrast, have been largely neglected from the analysis of modern power relations. Signals, for example, have been excluded from traditional semiotics since they "can be computed quantitatively, irrespective of their possible meaning" (Eco 1976, 20). Guattari's concept of asignifying semiotics is an attempt to explore how abstract, decoded, and non-representational elements such as signals play a crucial role in the articulation of machinic enslavement and therefore in the reproduction of capitalist power relations.

While signifying semiotics produce meaning, signification, and representation through language, the asignifying dimension of machinic enslavement produces operations that act directly on things. Examples of asignifying semiotics that are at play in the reproduction of contemporary capitalism are "stock market indices, unemployment statistics, scientific diagrams and functions, computer languages, etc.", all of which produce neither discourses nor narratives, but rather abstract and decoded flows of data (Lazzarato 2014, 40). Asignifying semiotics, Lazzarato contends, "connect an organ, a system of perception, an intellectual activity, and so on, directly to a machine, procedures and signs, bypassing the representations of a subject" (2014, 40).

3. Asignifying Images

Asignifying machines play a very specific role in capitalism since capitalism depends increasingly on deterritorialised flows of abstract data. Thus, when addressing the question regarding the role of images in the reproduction of current capitalist power relations, the distinction between social subjection and machinic enslavement becomes critical. It has been argued above that these two poles represent two complementary power apparatuses in the reproduction of capitalism. It has also been argued that each of these poles entails a different regime of signs which can be expressed using the concepts of signifying and asignifying semiotics. Traditionally, images have been defined by their representational character. As Vilém Flusser puts it, images are "significant surfaces" that signify something "in space and time" which is made comprehensible to us through a process of abstraction (2000, 8). As significant surfaces, images have been reduced to the domain of signifying semiotics which applies strictly to the production and reproduction of social subjection. From a representational perspective, images have no direct repercussions for machinic enslavement. But what if images could also be studied from the non-representational and asignifying standpoint of machinic enslavement? Would it be possible to forge the notion of asignifying images in similar terms to Guattari's concept of asignifying semiotics, that is, as a conceptual apparatus that helps grasping the machinic dimension of contemporary capitalism? If so, the notion of asignifying images could contribute towards expanding our ideas regarding the role of images in the reproduction of contemporary capitalist power relations.

An initial attempt to address the issue of asignifying images can be found in Serge Daney's (1999) distinction between the image and the visual. Commenting on the military images from the first Gulf War, Daney differentiates between seeing a war in images and fighting a war with images. While the former refers to issues of representation, the latter opens up questions of operativity, logistics, and technology. For Daney, the essential character of an image is alterity: the presence-absence dialectics of representation. Its main effect is the production of meaning as a mechanism of social subjection. On the contrary, the visual refers to an "optical verification of a procedure of power, whatever this may be (technological, political, advertising, military)" (Daney 1999, 181). As such, the visual belongs to the non-representational realm of machinic enslavement, orchestrated by the constant flows of asignifying signals. A second approach to the question of asignifying images is Deleuze's concept of diagram. In his book on Francis Bacon (2003), Deleuze differentiates the image from the diagram in order to argue that the act of painting consists of rendering visually a set of otherwise invisible forces. The painter uses lines and colour patches to create not an image (a representation based on similarity) but a diagram, that is, "the operative set of asignifying and non-representative lines and zones, line-strokes and colour-patches" that give visibility to a given relation of forces (Deleuze 2003, 101). A third alternative mode of addressing the question of asignifying images can be drawn out from Guattari's own account of the hybrid semiotics of cinema. For Guattari, cinema's inherent movement introduces a degree of ambiguity that challenges the fixed connection between signifier and signified that defines signifying semiotics (2008, 243). Following Guattari, Lazzarato suggests that cinema "represented for a brief moment the possibility of moving beyond signifying semiologies, of bypassing personological individuations, and opening up possibilities that were not already inscribed in dominant subjectivations" (2014, 109). Despite the fact that commercial cinema and television have recaptured cinema's deterritorialised images and reintroduced them into a signifying realm that neutralise the disruptive force of asignifying semiotics, cinema remains an important case study for exploring the idea of asignifying images. As Deleuze suggests, since film images are constituted by "signaletic matter", they have the potential to disrupt the matter-form dialectic that informs most of Western metaphysics – including signifying semiotics (2005, 28). The visual, the diagram, and cinema as signaletic matter constitute three important attempts to conceptualise the image's asignifying dimension.

This article addresses the issue of asignifying images through the prism of a fourth alternative: Harun Farocki's notion of "operational images" (2004). According to Farocki, operational images are "made neither to entertain nor to inform" (2004, 17). Their primary function is not to represent an object for contemplation, but to organise a concrete and specific technical operation. In this sense, an operational image is not a vehicle of signification that transports a given representational content between two fully-formed individuals. Through a technical process, operational images act directly on things. They can comprise, among many others, images used for surveillance purposes, for medical examination, or for military and industrial logistics. Furthermore, Farocki suggests that with the development of automation and informational technologies more and more of these operational images are being processed by what Paul Virilio (1994) called "vision machines". What is unique in these new images is not just the absence of a human actor or creator, but also of a human spectator or reader. As Farocki puts it, "just as the robot in factories first used manual labourers as their model until they outperformed them and rendered them obsolete, [new] sensory automatons are supposed to replace the work of the human eye"

(2004, 17). The automation of both the production and consumption of images foreseen by Virilio in the 1980s and then identified by some of Farocki's video installations in the early 2000s is today becoming a fully pervasive phenomenon. This calls for a renewed effort to examine a machinic and asignifying dimension of images that has remained largely underexplored.

Most of Harun Farocki's films and video installations are characterised by the appropriation and repurposing of found footage.¹ As David Rodowick puts it, "Farocki was a master of building arguments from appropriated images and situations – from surveillance cameras, automated drones, aerial photography, computer displays, training sessions and so forth" (2015, 191). Farocki weaved these images together "to bring forward unseen and unexpected correspondences" (Ibid.). In doing so, he developed a "critique of images by means of images" (Ibid.). It must be emphasised, however, that this critique is never reduced to an aesthetic dimension but is rather an analysis of the "networks of forces that produce, disconnect and recombine images as we encounter them today" (Ibid., 197). According to Christa Blümlinger,

"Farocki outlines an audiovisual history of post-industrial civilisation and its techniques, in which he positions the convergence of war, economy, and politics within the social sphere. If the assemblage of existing images distinguishes Farocki's work, it is because he analyses this social space by way of the images that circulate within it." (2005, 319)

Farocki's work evidences a recurrent interest in the historical development of capitalism. A large part of his work explores the evolution of the ways of seeing in relation to "the historical transformation of labour-power as it morphed from handwork to machine work to data work" (Langston 2016, 9). Furthermore, both the historical transformation of labour and the evolution of the ways of seeing that Farocki examines in his films and video installations suggest that a new diagram of power is in place. Following Deleuze's control hypothesis, Farocki explores how new vision machines introduce a gradual shift from the sphere of social subjection based on signifying semiotics towards the sphere of machinic enslavement based on asignifying semiotics. This means that the transformation of vision put forth by the passage from handwork to machine work and then to data work can be read as the gradual instatement of a power mechanism based on asignifying images. To explore this assumption, this article compares the film *Workers Leaving the Factory* (1995) and the video installation *Counter-Music* (2004). While the former still belongs to the representational regime of signifying semiotics, the latter examines the non-representational and asignifying terrain of operational images produced and consumed by vision machines. In this way, *Counter-Music* makes it possible to reflect upon the role of asignifying images in contemporary capitalism.

4. *Workers Leaving the Factory*

Workers Leaving the Factory was produced for the 100th anniversary of the homonymous film by the Lumière brothers. In what is considered to be the first film in the history of cinema, the Lumière brothers placed their camera in front of the gates of their factory in Lyon to show for about 45 seconds how the workers left the workplace as if they had just finished a day's work. Harun Farocki contends that even if

¹ For an analysis of found footage cinema, see Wees (1993).

the primary aim of this first film was “to represent motion”, an “additional sense [was] already being signalled”, that is, “that the visible movement of people is standing for the absent and invisible movement of goods, money, and ideas circulating in the industrial sphere” (2005, 243). In 1995, Farocki decided to explore how this “additional sense” which marks the “birth” of cinema had been “repeated” throughout the hundred years of film history. The result is a collection of recycled scenes from the history of cinema where the same *motif* of workers abandoning the workplace can be identified. Among others, these include scenes from Griffith’s *Intolerance* (1916), Lang’s *Metropolis* (1927) and *Clash by Night* (1952), Pudovkin’s *Deserter* (1933), Chaplin’s *Modern Times* (1936), and Antonioni’s *Red Desert* (1964).

As mentioned above, *Workers Leaving the Factory* belongs to the realm of signifying semiotics. As such, it explores the relation between images and labour from a representational realm. It appropriates and repurposes images based on their content and creates a narrative that follows a given meaning. In particular, the film explores the ambiguous relationship between cinema and the privileged space of industrial capitalism, the factory. It does so from at least three perspectives. First, the film suggests that throughout the twentieth century cinema and factory have mutually excluded each other. In the first film by the Lumière brothers, the camera remains outside the factory. It does not represent a labour process nor labour time; it represents the workers as they are exiting the workplace. For Farocki, the fact that cinema was born with this image can be read as a symptom of the mutual exclusion between labour and cinema. On the one hand, cinema as a technical invention was quickly turned into a form of entertainment for the mass worker, an entertainment meant to fulfil non-labour time, that is, time outside the factory. On the other hand, most stories that narrative cinema has been telling for over a century “take place in that part of life where work has been left behind” (Farocki 2005, 238).

Second, Farocki’s *Workers Leaving the Factory* suggests that despite the fact that cinema and the factory have mutually dismissed each other, the factory gates can be employed as a symbol of the key antagonistic relation that defines capitalist society, namely the struggle between labour and capital: “factory gates serve as the boundary between the protected production sphere and public space; this is precisely the right spot to transform an economic struggle into a political one” (Ibid., 240). By collecting different representations of factory gates, Farocki’s film gives visibility to the space that remains invisible in the world of commodity production. The factory gates represent the invisible struggle between labour and capital that constitutes the “secret” of commodity fetishism and capitalist social relations.

Third, it can be argued that *Workers Leaving the Factory* is a metaphor of what Antonio Negri has called the transition from the mass worker to the socialised worker, that is to say, a metaphor of the “exodus of workers from industrial modes of production” (Steyerl 2012, 65). As Thomas Elsaesser puts it, this film “stands as the emblem for the fact that [ever since the factory and the cinematograph] made contact, collided and combined, more and more workers have been ‘leaving’ the factory” (2005, 35). This does not mean that labour ceases to exist. The fact that workers leave the factory “doesn’t mean that they have left labour behind” (Steyerl 2012, 65). Rather, it means that “they take it along with them and disperse it into every sector of life” (Ibid.). This dispersion of labour to every aspect of society is what Negri (2005) has named the passage from the mass worker to the socialised worker. This passage defines one of the key characteristics of post-industrial capitalism.

Antonio Negri introduced the concept of the socialised worker to explain “the new social dimensions of productive cooperation” (2005, 77). The concept emerges from

the need to explain certain phenomenological transformations in the domain of labour: mainly, that “work has become diffused throughout the entire society. This is because it is carried on both within and outside” (Ibid.). The passage from the factory worker to the socialised worker coincides with the emergence of new forms of cognitive, affective, and immaterial labour. Following Negri it could be said that in this new stage of capitalist development exploitation takes place not only by appropriating labour time, but also – and mainly – by appropriating the collective intellect (the accumulated productive powers of social cooperation). In this sense, the relation between the birth of cinema and workers leaving the factory becomes even more significant. As Hito Steyerl puts it, “as workers exit the factory, the space they enter is one of cinema and culture industry, producing emotions and attention” (2012, 66).

Thematically, it can be argued that *Workers Leaving the Factory* depicts the passage from the industrial factory to the social factory, from the mass worker to the socialised worker. It does so, nevertheless, in negative terms: we see the disciplinary space that the workers are leaving behind but we do not see the apparatuses of control to which they are heading. Regarding the regime of signs associated with the transformation of labour depicted in it, *Workers Leaving the Factory* belongs to the terrain of signifying semiotics. To put it differently, *Workers Leaving the Factory* uses found footage in order to create a representational account of the internal relation between cinema and industrial capitalism. As such, it belongs to the sphere of social subjection in which specific social roles are assigned to individuals following issues of identity such as class, gender, and race. Farocki’s video installation *Counter-Music*, on the contrary, is not a depiction of the place that workers leave behind but an examination of the new productive scenario into which they have been forced by post-industrial capitalism. In *Counter-Music*, Farocki shifts towards a new type of image (operational images produced by automated vision machines) to reflect upon the transformation of labour in post-industrial capitalism from a non-representational and asignifying perspective. Given that asignifying semiotics entail “operationality as opposed to representationality” (Genosko 2016, 38), Farocki’s operational images become a fertile territory for exploring the concept of asignifying images as a key aspect of contemporary power apparatuses. *Counter-music* appears, thus, as a privileged case study for reflecting upon the role of images in the emerging apparatuses of asignifying machinic enslavement.

5. *Counter-Music*

Counter-Music is a double-screen video installation produced by Harun Farocki in 2004. Its aim is to explore the possibility of representing the French city of Lille in its contemporary form. As Michael Cowan points out, *Counter-Music* should be understood in relation to the avant-garde, modernist city film (2008, 78). Farocki’s video installation makes explicit references to both Dziga Vertov’s *Man with a Movie Camera* (1929) and Walter Ruttmann’s *Berlin: Symphony of a Metropolis* (1927). For these two modernist filmmakers, cinema was the only medium capable of representing the complex networks that regulated the emerging metropolis. Similar to Vertov’s portrayal of a day in a soviet city, *Counter-Music* attempts to depict a day in Lille. Unlike Vertov, however, Farocki poses the question regarding the limits of visual representation to properly depict the contemporary city where more and more of the processes that regulate it have become automated. As usual, Farocki resorts to the appropriation and repurposing of recycled images. While for Vertov “the day begins with the production of images”, for Farocki, “it begins with their reproduction”.

Most significantly, *Counter-Music* compares the eviction of the manual worker from the industrial factory with the eviction of the cognitive worker from the post-industrial social factory. Whereas in the first form of eviction machines still operated ‘blindly’ and thus required the human eye for supervision purposes, in the latter intelligent vision machines are taking over the small portion of the productive process where human activity was still necessary.² This creates a paradoxical situation in which the development of algorithmic vision machines transforms even the “work of watching” into an obsolete and redundant human activity. In his analysis of *Counter-Music*, Martin Blumenthal-Barby writes:

“The increasing ‘abolition’ of humans in modern-day surveillance is one that Farocki explicitly problematizes by way of analogy with the textile industry in Lille. Just as human beings, in the course of industrialisation and the automation of weaving, have turned into ‘appendages of the apparatus’, so the human eye, according to Farocki’s suggestive montage, has been relegated, in line with the automation of surveillance via automatic-recognition systems, to ‘appendages of the apparatus’. The labour of weaving, as well as the labour of seeing, is ever less dependent on the involvement of human beings, an observation that led Paul Virilio to speak of the ever-increasing importance of ‘vision machines’.” (2015, 137)

In one of *Counter-Music*’s key moments, Farocki compares users of satellite TV who “pay for images” and cognitive workers who are “paid to view images”.³ This distinction allows furthering the definition of operational images by introducing the notion of “operational spectators”, that is, consumers of images that become active elements within a given technical operation. Ingrid Hoelzl and Rémi Marie use Farocki’s notion of operational images in order to show how the “algorithmic turn” that characterises websites like Facebook and Google implies that, actually, images are “operating us” (2015, 101). This is a clear example of the new forms of machinic enslavement that characterise contemporary capitalism. Moreover, the notion of “operational spectators” makes it possible to grasp the asignifying dimension of images in this new context of machinic enslavement. In the age of Big Data and algorithmic governmentality, “probability displaces signification and this pushes representation into crisis” (Genosko 2016, 47). This crisis of representation means that even the consumption of images is now being recast algorithmically so that images “may be understood relationally and probabilistically” (Ibid.).

² Martin Blumenthal-Barby (2015) contends that the work of Farocki explores the emergence of machine vision on at least three levels: a) the production of images with no cameraman; b) the production of images in which humans are no longer the subject-matter (the subject matter may be the data of human conglomerates but not the human as an individual subject); and c) images produced by machines and for machines, abolishing the need for a human spectator. Some examples of vision machines given in *Counter-Music* include: automated CCTV capable of identifying people who are moving and people who remain still in public spaces meant for circulation; traffic control cameras that automatically detect traffic incidents; software that uses cameras to keep count of people entering and exiting from a metro station; and heat-meters used to measure the frequency of trains.

³ For an analysis of how watching can become a new form of labour, see Jhally and Livant (1986). For a critical reading of Jhally and Livant’s article, see Fuchs (2014).

The emergence of advanced algorithms and the fast development of automation create a gradual process in which operative images are breaking free from the presence of a human eye. French theorist Paul Virilio (1994, 59) was one of the first to analyse this phenomenon by introducing the concept of 'vision machines'. Virilio speaks of an "automation of perception" and of "artificial vision" (Ibid.), both of which correspond to "the latest and last form of industrialisation: the industrialisation of the non-gaze" (Ibid., 73). During the highpoint of industrial capitalism, Fordism and the culture industry functioned as two aspects of a systematic industrialisation of life which aimed at producing a disciplined body and a disciplined perception.⁴ The industrialisation of the gaze was a crucial aspect of the generalised industrialisation of life characteristic of Fordist capitalism. This industrialisation of the gaze, however, took place in an age where industrial machines were still "blind machines" (Tomas 2013, 232). This means that industrial machines were incapable of adapting automatically to unforeseen events and situations. For this reason, the worker was needed to provide the necessary vision to the productive chain. As Marx famously claimed, with the development of modern industry, workers are cast as the "conscious linkages" between the different mechanical organs that conform the "automatic system of machinery", and their immediate productive task is limited to supervising the overall system and guarding it "against interruptions" (1982/1867, 692). In this sense, the industrialisation of the gaze can be understood as a necessary condition of industrial capitalism which reduced human labour to the sphere of visual supervision.

With the development of automation and information technologies, however, a new form of industrialisation became possible: the "industrialisation of the non-gaze". New forms of automatic, sightless vision; images produced by machines and for machines. This intensified the already systematic eviction of the worker from factory labour, replacing the visual and intellectual labour of the worker (as the conscious linkage between the different components of the automated system of machinery) with the automated work of algorithmic vision machines. Farocki's *Counter-Music* constitutes a thorough exploration of Virilio's almost prophetic analysis of machine vision. As Hal Foster suggests, "Farocki intimates that a new 'robo eye' is in place, one that, unlike the 'kino eye' celebrated by modernists like Dziga Vertov, does not extend the human prosthetically so much as it replaces the human robotically" (2004, 160). As such, Farocki's work "points to a postsubjective seeing, 'an optical nonconscious'" (Ibid.).

In this new context of algorithmic vision, the representational nature of images as "significant surfaces" is put into question. In other words, the emergence of "sightless vision" demands rethinking the concept of image. According to Virilio,

"image' is just an empty word here since the machine's interpretation has nothing to do with normal vision (to put it mildly!). For the computer, the optically active electron image is merely a series of coded impulses whose configuration we cannot begin to imagine since, in its automation of perception, image feedback is no longer assured." (1994, 73)

Virilio's observation on the notion of image in the age of vision machines is closely connected to Farocki's concerns regarding the consequences of the automation of vision. For both Virilio and Farocki the question is how to conceptualise the new

⁴ See Adorno and Horkheimer (2002) and Virno (2004, 56-59).

forms of technical representation in which images are not conveyors of meaning but binary codes subject to algorithmic calculation. Put differently, both Virilio and Farocki's theoretical reflections pave the way towards a new conceptualisation of the image as an active element of asignifying machinic enslavement in the emerging forms of capitalist power formations. Like asignifying semiotics, asignifying images act on things, bypassing the domain of representation that characterises social subjection. Farocki's operational images can hence be read as a deterritorialised flow of information that belongs to a technical, and thus abstract, machine. As such, operational images appear as asignifying elements which involve "the harnessing of material intensities and the deployment of a system of signs to intervene in the production of reality" (Langlois 2014, 82). In doing so, these asignifying images "are not primarily concerned with meanings as the content of signification, but with the adequation of a communicative ensemble with the real" (Ibid.). To exemplify how asignifying semiotics "intervene in the production of reality" Deleuze and Guattari refer to McLuhan's notion of electric language:

"Three million points per seconds transmitted by television, only a few of which are retained. Electric language does not go by way of the voice or writing; data processing does without them both, as does the discipline appropriately named fluidics, which operates by means of streams of gas; the computer is a machine for instantaneous and generalized decoding." (2004, 262)

According to Deleuze and Guattari, the electric language is "a nonsignifying language of decoded flows which remains indifferent to its substance or its support" (2004, 261). Hence, the significance of McLuhan is "to have shown what a language of decoded flows is, as opposed to a signifier that strangles and overcodes the flows" (2004, 261). Following these authors, Lazzarato suggests another example of asignifying semiotics, the microchip, where flows of signals "act directly on the material components" (2014, 85). According to Lazzarato, in a microchip "the polarities of iron oxide particles are converted into binary numbers; [and] the signs function as the input and outputs of the machine, bypassing denotation, representation, and signification" (2014, 85). These asignifying signals act on real flows, giving orders and producing material change. Likewise, it can be argued that one of the major merits of Farocki's work is to have introduced a new theory of the image. Just like McLuhan's notion of an electric language, Lazzarato's example of the microchip, and Virilio's reflections regarding the effects of vision machines, Farocki's concept of operational images challenges the limitations of the traditional definition of the image understood as a conveyor of meaning, that is, limited to the representational realm of signification. This, in turn, demands challenging the political approach that reduces images to the realm of social subjection, that is, to the domain of ideology.

Deleuze and Guattari suggest that the way in which a society reproduces its power relations has to be explained not from the point of view of what desire means (as in psychoanalysis or in any form of ideology critique) but from the perspective of how it functions (2004, 197). For these authors, desire "does not mean anything [...] it does not speak, it engineers. It is not expressive or representative, but productive" (Ibid.). Therefore, the first analytical question of a critique of capitalism should be: "how does desire work?" (Ibid.). For this reason, Deleuze and Guattari challenge the notion of ideology as a suitable framework for explaining the reproduction of a given social order. They refer to ideology as "an execrable concept that hides the real problems,

which are always of an organizational nature” (2004, 378). Likewise, in Farocki’s treatment of operational images, what matters is not what these images mean (the message they convey), but rather their specific function as part of a technical process and an institutional network of power. What Farocki teaches us is that the relation between images and power in contemporary capitalism should not be reduced to the representational and signifying perspective of ideology. Rather, asignifying images reproduce a given power relation based on their non-representational “organizational nature”. Therefore, the question we are left with is not what a particular image means or represents, but what function it fulfils within a given social machine.

6. The Machinic Labour of Vision

In the specific social machine of post-industrial capitalism depicted by Farocki in *Counter-Music*, the emergence of vision machines and the resulting eviction of the worker from the productive arena raise the complex question regarding the relation between value and machines. In line with the reinterpretation of Marx put forth by Deleuze and Guattari in the two volumes of *Capitalism and Schizophrenia*, Farocki’s repurposing of operational images triggers in the spectator the question of how vision machines are transforming information into a new source of “machinic surplus value”. It is important to note that for Deleuze and Guattari a machine is a device aimed at the augmentation of a given flow (Pasquinelli 2015, 58). From this perspective, machinic surplus value refers to the augmentation of any abstract, deterritorialised flow. With this concept, Deleuze and Guattari challenge the traditional understanding of the organic composition of capital which clearly demarcates living labour from the dead labour of machines.⁵ 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 capital (2005, 543). The smooth and the striated 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 organises movement according to stable points that delimit its range and extension. Put differently, smooth space tends to absolute movement in which variation is intensive, while striated space organises movement in a way that variation can only manifest itself extensively. To a certain extent, it could be said that smooth space tends towards the deterritorialisation of movement and striated space towards its reterritorialisation. Consequently, Deleuze and Guattari define striated capital as any form of surplus that is produced by appropriating striated human labour, that is, abstract human labour measured in terms of a striation of space and time (2005, 541). Smooth capital, by contrast, refers to the production of a surplus that depends less and less “on a striation of space-time corresponding to the physicosocial concept of work” and more and more on a “generalized machinic

⁵ Maurizio Lazzarato contends that Marx’s labour theory of value (and his definition of the organic composition of capital), by distinguishing between living labour and dead labour, assigns “all creativity and productivity to the former and relegates to the latter a mere reproductive function” (2014, 120). This distinction, he argues, may function at the level of social subjection and signifying semiotics, but is insufficient to understand fully the role of machines in contemporary capitalism (defined by the emergence of machinic enslavement and asignifying semiotics). According to Lazzarato, humans as well as machines “are hybrids of dead and living labour” (Ibid., 130). This means that without a proper theory of machines there can be no proper understanding of contemporary capitalism nor its relations of domination (Ibid., 90).

enslavement” that integrates human activity and information technologies in order to produce an augmentation of deterritorialised flows of value (2005, 542-43).

While the category of striated capital informed classical political economy as well as Marx’s labour theory of value, smooth capital appears as a conceptual device aimed at explaining how the application of information technologies in post-industrial societies unveils a cognitive and immaterial dimension of human activity which demands a new conceptualisation of labour, time and surplus value. In this new productive context, surplus value is no longer produced only by reterritorialising human activity under a striated space-time, but by integrating cybernetic machines together with the cognitive dimension of labour. In the case of *Counter-Music*, the vision machines depicted by Farocki do not subsume human activity under abstract (striated) time but rather appropriate the cognitive dimension liberated by post-industrial technologies. Operational images refer to a new kind of image, not intended for conveying a given meaning, but for transmitting a flow of information within a technical process. At the same time, algorithmic vision machines process information about information (metadata) to generate an augmentation, a surplus, of deterritorialised data. As such, these asignifying images form an essential aspect in the transaction of abstract flows that accelerates the production, distribution and consumption of commodities (and hence the production of economic surplus value) while at the same time reinforcing the given power relations (more specifically, new forms of machinic enslavement).

Furthermore, it is possible to connect Deleuze and Guattari’s notions of striated and smooth capital to the concepts of signifying and asignifying semiotics. Since striated capital is based on the physicosocial definition of labour (that is, it refers to human action that has been subsumed under a striated space and time), it is correct to say that striated capital operates in the domain of signifying semiotics. This means that striated capital (human surplus value) depends on a coding system that operates as a “general equivalent” that reterritorialises the liberated decoded flows through a system of signification. Contrastingly, smooth capital is produced by machinic labour and, as such, it refers to a non-representational domain of asignifying semiotics where signs do not communicate a given content but operate as specific elements within a technical and machinic operation. Accordingly, the notion of asignifying images makes it possible to strengthen the bridge between Deleuze and Guattari’s concept of machinic surplus value and Farocki’s vision machines. In both cases, images operate within an asignifying technical domain, as conveyors of flows of information. Machine vision and machinic labour belong to the same collective assemblage of smooth capital in which social subjection and signifying semiotics have been replaced by machinic enslavement and asignifying semiotics. The analysis of Farocki’s *Counter-Music* thus reveals that, in order to better understand the production of value and the reproduction of power relations in contemporary capitalism, a non-representational theory of the image becomes necessary. To achieve this, Farocki’s treatment of operational images and vision machines understood through the lens of Guattari’s asignifying semiotics represents a significant step forward.

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