

Defining ectosubjectivity: extraction and implantation of protosubjective fragments

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Article abstract

This article questions the reterritorialization of human subjectivities by deep learning algorithms and adaptive web platforms, by introducing the concept of ectosubjectivity. This concept, surfacing from a study of the machinic theorizations of Karl Marx and Félix Guattari, attempts to grasp the processual extraction and implantation of subjective fragments by algorithms. The transformative oscillations engendered by these processes are redistributions of human subjectivities towards serialization and mass production. Thus, this article defines ectosubjectivity and questions the transformation of these subjective fragments to fit a homogenized mold.

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Résumé

Cet article interroge la reterritorialisation des subjectivités humaines par les algorithmes et les plateformes web adaptives en proposant le concept d'ectosubjectivité. Ce concept, qui émerge d'une étude des conceptions machiniques de Karl Marx et de Félix Guattari, tente de saisir les processus d'extraction et d'implantation de fragments subjectifs par les algorithmes. Les oscillations transformatives engendrées par ces processus sont autant de redistributions des subjectivités humaines vers la sérialisation et la production de masse. En somme, cet article définit l'ectosubjectivité et questionne la transformation de ces fragments de subjectivité en vue de les arraisonner à un moule homogène.

Abstract

This article questions the reterritorialization of human subjectivities by deep learning algorithms and adaptive web platforms, by introducing the concept of ectosubjectivity. This concept, surfacing from a study of the machinic theorizations of Karl Marx and Félix Guattari, attempts to grasp the processual extraction and implantation of subjective fragments by algorithms. The transformative oscillations engendered by these processes are redistributions of human subjectivities towards serialization and mass production. Thus, this article defines ectosubjectivity and questions the transformation of these subjective fragments to fit a homogenized mold.

Mot-clés : machine, Marx, Guattari, pouvoir, extraction, algorithmes, agencement machinique, ontologie, sérialisation, subjectivité

Keywords: machine, Marx, Guattari, power, extraction, algorithms, machinic assemblage, ontology, serialization, subjectivity

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Defining ectosubjectivity: extraction and implantation of protosubjective fragments

Alexandre Desrochers Ayotte

Since its emergence in the beginning of the twenty-first century as an after-effect of the collapse of the dotcom, Web 2.0 has increasingly deepened the networking of platforms and users, generating an increase in interactivity, participation and engagement (O'Reilly 2005). These new platforms, such as social media, apps and Google, for example, create and strengthen relational networks between humans by fostering affective archives (Pybus 2015), make the world coherent and intelligible through visual and conceptual mapping (Gordon 2007), and, more importantly for this article, redefine subject-object relations through adaptable algorithms (Uricchio 2011).

The adaptable platforms and algorithms of Web 2.0 have “a transformative effect on how we expect to receive and share information” (Pybus 2015, 235), but also redistribute our subjectivity in the semiotic regime of web ubiquity in an era where constant connection is the norm. Targeted advertising and social media are two examples of the constant redefinition and redistribution of subjects by attempts at fixating them in space and in time. Surfing the web has become engulfed by processes of power that take the form of suggested content and codify opinions, consumption and habits. This regime of digital semiotization, driven quasi-exclusively by Google's AdSense and Facebook's adaptable interface, has generated both concern and interest from researchers in a variety of disciplines: legal studies, social sciences, psychology, design, mathematics, economics, politics, etc.

Several scholars of political economy have studied how targeted and adaptive content is framed through capitalist principles (Fuchs 2011; Zuckerman 2014), namely political and hierarchized distributions of users and the monetization of specific sources of content and products. What content is distributed be-

longs to the few who can afford to purchase visibility and the monopoly of consumer attention. Redistribution of the semiotics of consumption towards the evanescence of the web also alters the habits, physicality and temporality of consumption as it becomes removed from the sphere of corporeality (Kessous 2012). Capital thus circulates in ethereal environments according to a hierarchized, capital-based economy. Considering that 88.7% of Google's multi-billion yearly profit comes from advertising (Graham 2017), the prevalence of a hierarchized, ad-based model over any other free-market collectivism fosters some profound political economy problematics such as the enframing of visibility and opportunity within the bounds of capital in the seemingly open environment of the Internet.

In stride with these problematics, legal scholars and law-makers are concerned about the security (or lack thereof) of users, as well as the lawless usage and tracking of freely circulating personal data for profit. In the context of companies evading laws regarding data usage and tracking, issues of privacy (McStay 2016), disempowerment (Heyman and Pierson 2013; He 2017) and security (Schneier 2013) become prevalent in questioning the ethics of web usage and increasing the range of national and international legislation.

However relevant and important, the political economy and legal approaches study the effects and dangers of data use, but not the affects of these processes on the users and how they respond to adaptive platforms. The field of affect theory fills the gap in that regard, by focusing on emotions and perceptions in the context of social networking (Boyd 2010; Pybus 2015), as well as using affect as a means of proposing new relational territories (Wojtaszek 2014). One advantage of this approach is its focus on individual and collective affect and relational networks, making humans the epicenter of analysis through the introduction of experience, in all its manifestations and influences, into the study of processual becomings.

Jennifer Pybus, in her article *Accumulating Affect: Social Networks and Their Archives of Feelings*, argues that affect is produced by a networking of something generated inside a body that moves outward and something outside a body that moves inward (2015) 240; *quoting* (Ahmed 2004). In other words, internal human processes (emotions, desires, moods) are externalized, and external processes (social constructs, culture production, peer pressure) are internalized. As such, the productive tension between the inside and the outside molds and creates affective response. She adds a layer of complexity

to her conceptualization by introducing Brian Massumi's concept of vitality affect:

[...] instead of looking specifically at how affect accumulates within objects and bodies, he is interested in how shared experiences between 'forms of life' produce 'vitality affect'- that which gives form to the parts of our lives that are fundamentally shared through the rhizomatic movement of affect. [...] The active notion of vitality encompasses the very complex dynamics that are experienced when subjects engage with other subjects and/or objects. [...] Objects within the archive equally weave a complex web of interconnectivity; hence for Massumi, there is a deep resonance imbricated within the relational traces that these always embody. (Pybus 2015, 241)

Following Pybus' theorization of affect in relation to social media, what is made apparent is both the permeability of human subjectivities to interior and exterior influence and the constant redistribution of these subjectivities by networking with subjects and objects. What is more, affect archives a cumulative web of interconnexion in engaging with subjects or objects, producing residue in the form of traces that influence a plurality of relational networks. Jennifer Pybus opens up a crucial problematic in the experience of affect and subject/object relationships on web platforms, that is framed in the following question: What processes of redistribution of subjectivity are at play in our relational networking with the adaptable algorithms that permeate web usage?

In stride with this problematic, the present article will introduce and define the concept of ectosubjectivity, in order to open up a theoretical discussion about how digital adaptable algorithms redistribute human subjectivity towards homogenization. Through an exploration of Karl Marx's concept of the automated machine and Félix Guattari's notions of machinic assemblages and subjectivity production, this article will extract a protosubjective conceptualization of human individuality, questioning its redistribution through the machinic elements of adaptable algorithms.

Fluidity and exchange

Imagine a towel. I hold it in my hands. Let's assume this towel has just come out of the factory where it was produced. What constitutes it as a towel is a multitude of properties and potentialities: its fibers are aligned in a specific way, its texture is particular, it can dry my hands, or the floor, or be curled in a useless or useful ball. Now if I submerge the towel completely in water, it has changed. Yes, it has become wet, but that is not all. The alignment of the fibers, the texture of the towel, these properties have changed as well. In addition, now that it is wet the potentialities of drying my hands or the floor are reduced, while other, unforeseen potentialities have emerged. Symmetrically, the water has also been transformed. Some of it might have left the bowl with the towel, lowering its level. The water itself might contain new molecules, bits of fibers: its molecular integrity has changed. Its potential as drinking water has been redistributed towards new relational territories.

In summary, both the towel and the water have been altered through their contact. What was produced was an exchange and a transformation.

From this simple example emerges the idea of an intricate process of subjective networking. Just like the towel and the water, the networking of human subjectivity with external processes (such as stimuli and knowledge composites) has a transformative effect on the former and the latter to varying degrees. Each and every single mediation, contact, feeding, excretion, smile, sound, intensity is a mutation of human subjectivities as humans and as agglomerations of atoms. I am not the same this very minute that I was the previous, or that I will be in the next. Both physically and psychologically, both individually and collectively. There is constant exchange and residue, tension and loosing, extraction and implantation.

This notion of fluidity was foreshadowed by Heraclitus more than two thousand years ago, in his famous twelfth fragment: one cannot cross the same river twice. The old maxim pertains to both the fluidity of all processes and the mutability of identity. It is understood that the river flows, but so do subjectivities engaged in the constant, processual becomings of human life. The river is changed by the flow of water; the human will grow older and evolve. But a transformation is also produced by the very contact of human and river. The footprints of the humans crossing the river might carry residue deposits, erode stones, move the river bed, contaminate a downriver

fish shoal, destroy a bubble nest. Symmetrically, humans are transformed by the river: a change in internal body temperatures, the memory of a river from childhood, the sound of the flowing river producing a thought or muting a warning cry, a wound from an unseen crab or twig. Just like the towel and the water bowl, the relational network of subject-object is one of exchange and transformation.

How do these examples relate to the adaptive algorithms of web platforms, such as targeted advertisement, for example? The next section will argue that the machinic alteration of human subjectivity crawls to the subterranean levels of protosubjective elements, leading on to the definition of ectosubjectivity.

Machinic assemblages and fragmented subjectivities

Before introducing the concept of ectosubjectivity as protosubjective fragments of human subjectivity that are extracted and transformed, the machinic theorizations of two philosophers reveal tremendous importance in understanding the transformative relationships of humans with machines, or in other words, of subjects with objects.

To begin with, Marx's conception of the machine thinks machine and human on the same ontological plane, breaking away from traditional subject/object binarism. In his unfinished work *Grundrisse*, Karl Marx wrote an influential fragment often called the *Fragment on machines*. Marx's notion of the machine emerges from the arrival of automation in factories. Automation redistributed the role of the worker because machinic work mutated from a worker using a tool or activating a machine towards the machine doing part of the work automatically. Marx wrote:

The worker's activity, reduced to a mere abstraction of activity, is determined and regulated on all sides by the movement of the machinery, and not the opposite. The science which compels the inanimate limbs of the machinery, by their construction, to act purposefully, as an automaton, does not exist in the worker's consciousness, but rather acts upon him through the machine as an alien power, as the power of the machine itself. (1993, 693)

Marx considers that the laborers' work is conditioned by machinic processes that are integrated into their work, that a force of the machine is imposed upon the workers' consciousness to codify how they relate to the machine and how they work. This force is identified in the ontological core of the machine, its design and construction, in which science becomes apparent as an organizing force. The effect of this machinic force on the workers is the redistribution of their subjectivities as part of the machine: the worker becomes a cog in the wheel. This is a massive redistribution of power that negates the primacy of the human subjects over natural object or artifacts, proposing instead a relational perspective to the subject-object dyad. Here, human subjectivity and objects belong to the same smoothed ontological plane. What is more, humans are transformed at the contact of the machine's power. The worker is not a domineering subject acting on a machinic object in a relation of production. He or she is subject and object of the machine, created by the machine and creator of the machine's work. In Marx's conception, it becomes apparent that the human worker is already a machine in liminal networking with other machinic assemblages. The workers' subjectivities are redefined towards new territories of ontological distributions.

Similarly, Theodor Adorno, in his work on mass culture, theorized the mechanization of human consciousness in the capitalist context of art production. In his article *The Schema of Mass Culture*, Adorno wrote: "Imagination is replaced by a mechanically relentless control mechanism which determines whether the latest imago to be distributed really represents an exact, accurate and reliable reflection of the relevant item of reality." (2005, 64) Human processes of imagination and cognition are here replaced with automatized mechanisms of assessment and value, what Adorno calls the "technicized forms of modern consciousness." (2005, 96) Through the replacement of human affect by a value system integrated in the production of mass art itself, the human receiver is redistributed as a mere vessel of consumption. Thus, mass culture codifies human habits and consciousnesses towards fulfilling the needs and whims of the market, making them "objects that can be manipulated without further objection" (Adorno 2005, 93). As in Marx's conception from the *Grundrisse*, Adorno smoothes the borders between human subjects and machinic objects: human subjectivities seem somewhat subservient to the codification of their needs and habits through the massively distributed objects of mass culture.

A second vision of the machine, namely Félix Guattari's essay *On Machines*, goes even further in redefining subject-object relations. In this text, Guattari offers a conceptualization of the machine as engaged in processual networking with a multiplicity of other machines: social machines, economical machines, affective, artistic, organic, natural machines. A multiplicity of connections happening at various speeds and on various semiotic planes generates a productive chaos of liminal networking. Guattari, like Marx, uproots the mechanical conception of the machine in profit of a machinic regime where everything, even the human, is a connective machine on a variety of ontological registers and supports. That is to say that every networking produces new semiotizations, every machine is embedded in machinic assemblages *ad infinitum*. Guattari underlines the smoothing of the liminal borders between machines and humans: "Ever since Leibnitz, the concept of an articulated machine has been available, which one would qualify today as fractal, with other machines which are themselves made up of infinite machinic elements. Thus, the machine's environment forms part of machinic agencements." (Guattari 1995)

For Guattari, every machine has an ontological core, something he calls protosubjectivity, that he closens to the *anima* of humans and animals. Protosubjective elements are inherently machinic, they are fragments of the machine's ontological core, less than a whole, both connectable and fractal. The machine has ontological affirmations of its own, differentiated from its automatic processes, something with which other protosubjective fragments can network. Thus, machines possess something akin to human subjectivity, something that interacts with said subjectivities to produce signification and new subjects in relational networking. Through fluidity and exchange, all machines in a specific assemblage are constantly becoming. In that regard, Maurizio Lazzarato, in his book *Signs and Machines*, offers a great example of how protosubjectivities and human subjectivities connect to produce new subjects. Lazzarato gives the example of driving a car to illustrate machinic redistributions of subjectivity. The human driver surrenders a portion of his or her consciousness to network with that of the car, thus becoming part of the machinic assemblage of this particular car and its movement. Lazzarato argues that the human driver is "guided by the machinic assemblage" (2014, 89), meaning that the driver becomes one more machinic element in the assemblage, on the same ontological level as the engine, the brakes, the ignition, the wheels, etc. This example speaks directly to Marx's notion of the ma-

chine acting upon human consciousness in the driver's resubjectivation on the same plane as engineering and machinic movement. Without the driver there is no movement; without the car there is no mechanical movement¹. To summarize, Guattari's concept of protosubjectivity reframes all machines as possessing cores of ontological affirmation, as well as the potentialities of connection between elements of machinic assemblages with fragments of human subjectivity.

Guattari's notion of protosubjectivity hints at the concept of ectosubjectivity because it identifies the fragmentation of an assemblage (a machine) into smaller ontological elements (protosubjectivities). Similarly, I want to argue that an assemblage (human subjectivity) can be fragmented into smaller parts (ectosubjectivities) which are connectable and transformable. If the machine and the human are redistributed on the same ontological plane, following Pierre Lévy's desire to bring down the iron curtain between things and humans (Lévy 1990), it should follow that some ontological similarities emerge from a stripping down of their phenomenological appearance as 'machine' and 'human'. Following the idea that humans and objects belong to the same ontological plane, if a machine is an agglomeration of fractal elements, why should a human subjectivity be a complete whole, undividable and immovable? Again, if a machine, as Marx argued, can act upon human subjectivity and, as Lazzaratto argued, if machinic assemblages redistribute human subjectivity by guiding it, how can it follow that a subjectivity is undividable and immovable? My conclusion follows my argumentation: human subjectivities are dividable and movable, mutable and fractal. They are constituted of ectosubjective fragments which contemporary machines, algorithms and artificial intelligence, extract and transform into power through an imperfect hermeneutics of fragmentality. The next section will define the concept of ectosubjectivity and subsequently analyze how contemporary, adaptable machines manipulate these fragments.

Defining Ectosubjectivities

Ectosubjectivities are ontologically mutable subjective fragments: desires, postures, ideas and opinions as they emerge and fade, rituals, actions or

¹Interestingly, this relationship becomes reterritorialized with the emergence of autonomous cars.

patterns, agglomerations of pictures and statuses on social media, acts of resistance or submission, among an endless supply of examples. They are transformative and transformable, they rise up in the present in certain forms that always become other in the next emergences. They are what the towel was produced from: undifferentiated materials that coalesced to emerge as 'towel' before disappearing towards a new becoming. They are the water molecules, rocks, fishes and amphibians, bacteria and residue that formed the flowing river, continually transforming anew by movement, exchange and molecular fluidity.

Ectosubjectivities are protosubjective, meaning they are something less than a whole subjectivity, a fragment that is networked with a multiplicity of other fragments, in the fashion of a Guattarian machine (1995) or a Deleuzian molecular network (Boutang 1996). The word fragment here relates to oscillations (Buchanan 2008, 10) and intensities, not structure. Their coalescing does not produce a coherent whole, but rather oscillations to a variety of ontological wavelengths and resonations with external pressures at given times and spaces to produce subjective revealing. To frame the concept of ectosubjectivity in guattarian terms, it is one of the plural *facteurs ontologiques* alongside fluxes, machinic phylums, existential territories and incorporeal universes, all figures of conjunctions of intensities (Guattari 2018, 300).

Jennifer Pybus, in her previously cited article, borrowed Deleuze's definition of subjectivity as the tension between an inside and an outside (Deleuze 1990, 238), and juxtaposed to it the notion of vitality affect as an accumulative, productive force of communality. What that offered was a definition of affect that considered both internal arrangements and external pressures, as well as something that is shared by accumulation in subject/subject or subject/object relationships. It can be theorized, following Pybus, that the configuration of ectosubjective fragments in a specific space-time, in tension with the external pressures of machinic networks, is what produces human individual subjectivity as it is imperfectly, temporarily revealed as a "C'était donc ça !" (Deleuze and Guattari 1972) The "C'était donc ça !", I must note, understands the evanescence of the unconcealment in its use of the past tense. Human subjectivity is not static but dynamic, fluid and constantly redefined and challenged anew by the reterritorializations of internal and external networking.

Thus, ectosubjectivities are fragments of an ever-flowing whole, discontinuous in space and in time, in constant mutation. As such, ectosubjectivities are always subjected both to a redistribution of their configurations as well as the pressures of external processes.

One of these semiotizing processes is the extraction, interpretation and reintegration of web data from and into human subjectivities. Adaptable algorithms of deep-learning, such as AdSense or Facebook Ads, target some ectosubjective fragments (demography, online preferences, location services, consumption habits, social media trends) in order to push relevant content to users. That process of data mining interprets and acts upon fragments of human subjectivity by considering them as complete and unchanging wholes rather than evolving multiplicities. Hence, knowledge is produced by the interpretation of fragments; power is exercised *a posteriori* on imperfect and past representations of individualities and collectivities.

Some concrete examples might further illustrate the problem at hand.

A Facebook profile can be considered as the exact reflection of an individual's life by an employer looking to screen potential candidates. The interpretation by the employer of the potential employee's quote from *Mein Kampf* or *Cannibal Holocaust*, or pictures holding alcoholic beverages on his Facebook wall is acted upon as problematic and the candidacy may be rejected.

A one-time online purchase can be considered as a consumption habit and be advertised continuously to the buyer to enhance and further this habit. Products faintly related to the purchase can even be pushed to the user, for example services of bicycle repairs for someone who bought a bicycle brand water bottle. It does not matter if the purchase was a gift, a mistake, a singular event; the products will be pushed to the buyer for an extended period of time and on a variety of connected platforms.

The interpretation of internet usage data as a voting intention or a political position, as witnessed in the Cambridge Analytics scandal, is acted upon through propaganda and attempts at furthering the candidacy of one candidate over the other. It does not matter if a *Like* was made by error, or if opinions have changed, or if the web usage was done by a guest on the main user's platform. The extraction of data will be acted upon via a saturation of content implanted into the excavated subjectivities to try and foster political support for a particular party or candidate.

These examples showcase the problematic frailty of adaptive algorithms in their attempts at creating a fixed model for subjectivity from one or several of its ectosubjective fragments. The algorithms have the tendency to negate the singularity of ectosubjectivities: fragments are considered as totalities (Guattari 2018, 280). The redistribution of knowledge in the excavated subjectivities takes the form of mediation: content, adverts, propaganda, social media personae, etc. These mediations cannot but be imperfect, non-adapted and homogenized, because they consider subjectivities as static and are ruled by monetary hierarchical choices of what content will be distributed by the platforms. Thus, the algorithms think the users (Vitali-Rosati 2018), think they think the user correctly and, accordingly, try to act upon a representation of the user generated from the interpretation of ectosubjective fragments. What is problematic in that regard is that when the mediations are implanted back into the initial subjectivity, it has already moved on to new becomings². Whereas the information distributed is static in its interpretation of ectosubjectivities, human subjectivity is in constant movement towards new territories of being.

However, whenever a human is engaged in processual networking with an outside (machines, processes, other humans, desires, events), some ectosubjectivities will be redistributed, deleted, added and mutated within that subjectivity, may it be one organism or a collective³. And although it comes *after* the moment of individuation which gave way to the excavation, the process of extraction and implantation has the effect of transforming the targeted subjectivity by codifying its future rising into the present.

Subjectivity production and serialization

Indeed, the temporal adaptability of algorithms is constantly evolving. Accordingly, the delay between the extraction and reintegration of ectosubjectivities is reduced to the point of quasi-instantaneity. However, as I have previously argued, they still lack the immediacy of individuation. They always

²Brenda Laurel's conception of the interface in *Computers as Theatre* (2013), and subsequent development of her model by Thierry Bardini, can showcase the temporal fissure between design and usage of digital platforms. See Desrochers Ayotte (2018).

³Indeed, the concept of ectosubjectivity can be applied not only to individual human organisms, but also, and perhaps more importantly, to larger 'organisms' such as societies, the cosmos, resistance organizations, economics, etc.

react to a certain configuration of subjectivity, unless they are integrated into the processes of subjectivation that *precede* individuation, something they are unable to do adequately as of yet. Accordingly, algorithms are increasingly trying to define and fixate fractal identities so as to reduce their delay in answering accelerating changes in consumption, habits, opinions, trends (Lévy 2000, 67). Algorithms thus constitute a collective equipment of subjectivity production which, by producing knowledge about its human users, also attempts to codify their future affects, their relationships with other subjects and objects, their habits and universes of reference.

I have argued that the unconcealment of subjectivity is the product of the permeable tension between an inside and an outside, and that algorithmic implantation of transformed ectosubjectivities consists in an outside permeating the inside of human subjectivity to try and fixate it in a certain posture. What, then are the effects of this external pressure of algorithmic implantation of transformed ectosubjectivities into excavated subjectivities? In other words, what forces of production are imposed upon human subjectivities by adaptive algorithms?

Although the aim of this article is merely to define ectosubjectivities, I cannot but attempt to frame this question towards future study. One answer lies within Guattari's conceptualization of subjectivity-production.

Speaking about machines and subjectivity, Guattari argued that “[t]he relation between the inside and the outside of a machinic system is not only the result of a consummation of energy, of the production of an object: it is equally manifested through genetic phylums. A machine rises to the surface of the present like the completion of a past lineage, and it is the point of restarting, or of rupture, from which an evolutionary lineage will spread in the future.” (1996, 267) Guattari theorizes individuation as a phylogenetic event, a mere spark along the gargantuan conflagrations of machinic networking, informed by its lineage and informing its successors. As such, machinic processes such as adaptive algorithms can apply an external pressure on certain configurations, or machinic ‘rises into the surface of the present’ in order to overwrite the coding of the rising machine to inform its phylogenetic successors. For example, by constantly distributing content about a political ideology to users answering to specific criteria, by implanting ideology through continual external pressure, there is a potential for transformation of the becoming of certain subjectivities, either through resistance, indifference,

mimesis or any other posture. In any case, the saturation of mediations that defines our societies will influence future rises into the present of the chosen subjectivities.

I have theorized that ectosubjectivities are extracted as data by the adaptive algorithms of targeted content and manipulated in the attempt to codify habits, relational networks, territories of semiotic grasping, etc. Taking into consideration that these altered fragments are then distributed back into the excavated subjectivities as discourse *about* said subjectivities via mediation, it becomes quite clear that the conversion of knowledge into power has a transformative potential. The conversion of desire into interest, a key to *Anti-Oedipus* according to Ian Buchanan (2008, 11) is unconcealed both by the external pressures of adaptable, consumable content and the capitalistic hierarchy of content visibility for users.

What is the effect on users of this external pressure that has the potential of rearranging the internal disposition of humans, and even maybe the thin membrane of permeation? In other words, if human subjectivities are in part produced by external processes such as algorithms, what, then, becomes apparent when they are fragmented in a multiplicity of ectosubjective elements? In the *Grundrisse*, Marx argued that it was science that became apparent in the organization of the machine, exercising power upon the worker's consciousness. Considering the connectability of machinic protosubjectivities and human ectosubjectivities, I want to argue that the organizing productive force made apparent in the ontological core of ectosubjectivities is *serialization*.

My hypothesis that serialization is the organizing force made apparent in the the extraction and reinsertion of ectosubjective fragments echoes with Guattari's ideas about capitalistic production of subjectivity. In an interview with Jacques Pain, he argued that the production of capitalistic subjectivity in the nineties differed from either pre-capitalist or proto-capitalist societies because it was based on artificial production and a "paradoxical cocktail of *hyper-segregation* and *generalized communication*." (1996, 124) He added: "It is necessary to see that individuated subjectivity has become the object of a sort of industrial production." (1996, 129) Guattari considered the collective equipments of power as producing homogeneity, in direct relation to Adorno's claim that the "schema of mass culture now prevails as a canon of synthetically produced modes of behavior." (2005, 91) Through the ubiq-

uity of mediation in the twenty-first century, individualities are increasingly reterritorialized towards regimes of serialized production. Notions of artificial and industrial subjectivity production cannot but remind directly of a factory production line where perfectly identical and inanimate objects flow on a conveyor belt⁴, or of Magritte's painting *Golconde* where seemingly identical men are stuck in limbo on the grid of serialization.

Serialization is made apparent in the extraction of swarming personal data and its redistribution as knowledge in the harvested human subjectivities.⁵ This implanted knowledge often concerns the subject, what is best for the subject, how he or she should act, consume, think, etc. Just like mineral mining, mining for data creates holes and fractures in subjectivities, ectosubjective absence, which are then filled with serialized narratives or messages. For example: 'This product will make you a better person, husband, father,' 'This product or new habit will change your existence,' or again 'Voting for this political candidate is the right idea for you and your country/province/region.' In advertisements, for example, an idealized lifestyle (idealized in the sense that it fits the representational mold of 'ideal') is represented, which often does not even concern the product or service advertised⁶.

Serialization is but one of the organizing forces made apparent in the fracturing of subjectivity. Just as the underlying organizing force of science was made apparent in the networking of the machine with the worker, a similar process of revealing is at play when human subjectivity is stripped down to its ectosubjective elements and altered by relational contact with serialized narratives and mediations. In that state of fragmentation, subjectivities are interpreted and acted upon by fractal algorithms, discourses and semiotizations. Hence, they are altered: knowledge is produced about them and reintegrated into them through mediation and content consumption. The data produced *about* the fragmented subjectivities becomes power-knowledge once analyzed, transformed and reinserted because it is built to govern human bodies and minds by way of serialization.

⁴Guattari developed this idea of mass-mediated instrumentation of subjectivity in an unpublished interview with Anne Brigitte Kern (2018, 277–83).

⁵Jean-Paul Sartre, in *Critique de la Raison Dialectique* (1985), questioned the notion of seriality in groups of individuals. It would be quite interesting to apply his reading to the ubiquitous collectives of Web 2.0.

⁶See Axe bodyspray and perfume adverts in particular.

Conclusion

In conclusion, adaptive algorithms displayed by AdSense and the Facebook interface is one of the many processes of redistribution of humans leading to subjective homogeneity. Although I have discussed the subject in the previous section, the following question leads to further study:

How is serialization, revealed through the fragmentation of human subjectivities, reproduced and resisted by subjects through the redistribution of ectosubjective elements?

If serialization acts upon the subjects as an organizing force, transforming them into new subjects, or rather forcing their becoming to fit a certain mold in their subsequent individuations, islands of resistance cannot but counterweigh the continents of acquiescence. A worker who has a bad performance review is redistributed as a problem for the company, regardless of personal issues such as mental health or illness. His boss and coworkers, through their attitude of disdain or helpfulness, strengthen this redefinition of the individual through a single aspect of his or her life. Similarly, when 87 million⁷ unknowing Facebook users whose data is analyzed and acted upon to influence their voting intentions go out and actually vote, are they aware that a fragment of their subjectivity has been extracted, analyzed, and reinserted to influence this specific action. How are these mimetic acquiescences of serialization reproduced and resisted? Are the postures of resistance or reproduction already codified and, if so, how? How many of our habits, thoughts and practices are thus artificially implanted through the constant saturation of mediation we are subjected to?

It appears evident that one question leads to a whole web of new problems concerning individuality, agency, individuation and subjectivity production at the age of mass-mediation.

As a final point, the extraction and implantation of ectosubjective elements by processes such as adaptive algorithms speak to, while redefining the networks of, power-knowledge. Power is exercised through a continual networking with digital processes of semiotization, through not only an extraction but more importantly through an implantation, a serialized graft. Are these processes modulations of the societies of control introduced by Deleuze, or

⁷« Facebook scandal “hit 87 million users” », *BBC News*, 4 avril 2018

has the accelerations of the homogenized swarms of consumption, democracy, capital and progress already morphed into a new kind of power?

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