Biopolitical Immanence or Whether Foucault and Deleuze Still Matter

di MOHAMMAD-ALI RAHEBI

Abstract

The dream of control is to be, simultaneously, absolutely *generic* (beyond individuation) and absolutely singular; seeing all *and* seeing every "person" in her singularity, purely immanent to her very *life*, her *bios*: a prosthetic God. The *Cybernetic Organon*, the "second schema of intelligibility" has enabled (through feedback mechanisms) this transition between the generic and the singular by short-circuiting individuation and the universal-individual continuum. The works of Foucault, Deleuze, and many more recent philosophers are based around the inherence of individuation to all control and government (Foucault's fine-graining, on the one hand, and his "population" theory on the other) and the conception of control as necessarily transcendent (for however fine-tuned and specified individuation may be, the singular always escapes it, as Deleuze teaches – the singular being the pure immanence of life, the bios). I will argue, with Rouvroy and Stiegler, for the immanence of cybernetic control as embodied most recently in Big-Data. But while Rouvroy separates the bodily and the affects from the domain of cybernetics and even proposes embodiment and affective desire as antidotes to cybernetic control (seen here merely in its capacity as "psychopower"), I will show how the immanence of cybernetics actually extends to the pure, bare life of individuals by allying itself with their body, affects and drives, the sub-subjective and the infra-personal. The fact that the latter have been championed for so long as the ultimate battlefronts against control, especially by Deleuze (and Guattari), gives us all the more reason to question them. In trying to re-evaluate the Deleuzian philosophy of immanence, I have engaged two (very different) philosophers whose conceptions of the latter greatly influenced Deleuze, namely Hume and Ruyer.

Introduction

> For how would anyone ever be capable of sitting beside each individual perpetually throughout his life and accurately prescribing what is appropriate to him?
>
> Plato

Husserl's pre-war lectures are one of the early attempts at capturing the denaturing of

the sciences, something that was taken to a whole new level after the Second World War. Among the last works of the German philosopher, the lectures on the crisis of Enlightenment ideals remind us of the truth of the sciences and their grounding in the Baconian organon, the *idea* of Enlightenment as the foundation of Europe. For Husserl, the crisis consisted of a divergence of the sciences from the primary truths and questions of being and human being, once united under the banner of philosophy and logic. Having become technical, functional, the sciences have progressed far beyond all expectation, but by dint of their pure functionality they are necessarily unable to answer the main questions of being with which the human being wrestles in an attempt to constitute his own truth. In 1926, on the occasion of Bacon's tercentenary, C. D. Broad delivered a lecture that ended with these words:

> May we venture to hope that when Bacon's next centenary is celebrated the great work which he set going will be completed; and that Inductive Reasoning, which has long been the glory of Science, will have ceased to be the scandal of Philosophy? (Broad 1926)

Now, nearly ten years away from the deadline, we are sadly aware of the irony of the hopeful question posed by Broad. The radicalization of what he knew as "inductive reasoning" into the logic of the black-box has not only ceased to bring any glory to science (even if it once did, which is unlikely), but has in fact rendered science obsolete. Scientific knowledge, once deemed inseparable from *efficiency* and "mastery of nature" by the Baconian Organon is now increasingly discarded as a hindrance; efficiency becomes the exclusive domain of the cybernetic embrace of Humean empiricism and "Big-Data Ideology" (Rouvroy, 2014), while knowledge becomes obsolete, destitute, and superfluous, banished to the domain of the private, once more becoming the Aristotelian *Sophia*: knowledge as the unnecessary. Rouvroy confirms this disappearance of knowledge and the demand for truth (not even in the sense Husserl used, but scientific truth, explanation and confirmation) by characterizing "Algorithmic Governmentality" as part of the "regime of untruth" (Rouvroy 2014), which replaces truth with "reliability" and predictive efficiency.

What is almost unique and certainly remarkable in Husserl's *Crisis* project is the conjunction or rather the unison that exists between care given to the emergence of a crisis in the sciences and to the notion of life. It seems, however, that the full title of the first part of *The Crisis of European Sciences* is usually not considered in its entirety: «The Crisis of the Sciences *as Expression of the Radical Life-Crisis of European Humanity*» (Husserl 1970). Today, in another, perhaps more dangerous, crisis of the sciences, we must be careful not to lose sight of the relation between that crisis and the one that is happening at the level of life itself. Of course the immanence of (control) technics afforded by the cybernetic organon and its alliance with the sub-subjective, pre-individual affects and bodily tendencies (against the human being) make it hard to

forget.

With the rise of Big-Data, the crisis inherent to the sciences since the time of Husserl has mutated into new forms. Resembling extreme versions of empiricism, the new sciences (the data-driven-sciences, behavioural/cognitive sciences) are entirely divorced from causation and attempts at explanation; instead there is an immanence of pure effects, aggregated into statistical heaps of data to be mined for predicting future (resulting) effects. Coupled with this "destitution of knowledge" are the new forms of control and government that simply demand a revision, if not a recycling, of the existing categories created, for example, by Foucault or Deleuze. In fact, Rouvroy proclaims that the type of governmentality we are experiencing (which she calls "algorithmic governmentality") cannot be made to accord with the forms proposed by Foucault; although certain elements of Foucault's "biopolitics" remain active in this mode of governmentality, they operate in a wholly different assemblage.

Indeed, as Rouvroy has pointed out, the emerging forms of governmentality are not in accord with what Foucault had predicted in his analyses of biopower and biopolitics, given the seemingly disembodied presentation of individuals ("*dividuals*") as data-bundles handled in real-time. Thus it seems we are facing a new "regime of (un)truth" that would have nothing to do with bodies (Rouvroy 2014). I will argue, however, that the data-accumulation and manipulation of individuals qua data-bundles (directing attention, gathering clickstreams, recommending commodities, etc.) is inherently and factually connected to the observation and manipulation of their bodily affects, their "sub-subjective," pre/non-reflective tendencies and drives (not desires, as Stiegler says, there are no longer any desires but drives). The fact that the possibility of "projects", as reflective decision-making for the future, has been taken away by Algorithmic Governmentality is not connected to a repression or erasure of embodied experience, of the "point of view". The taking away of choice and reflection by the real-time attendance of the Cybernetic Organon (or "Algorithmic Governmentality") is not to be contended with through embodiment and affect, since the latter are its allies in short-circuiting subjectivity and *reflection* (the "supra-subjective" links directly to the "subsubjective" as Protevi says, referring to the military's attempts to induce affects in soldiers to improve efficiency (Protevi 2009, 2013); rather, as Rouvroy briefly hints at, our line of defence lies solely in a radical rethinking of reflection and conscious decision-making. So, it becomes obvious that Foucault's category of biopolitics, although severely un-equipped to handle the current regime, is nonetheless viable and necessary. Hence, the crisis of biopolitics involves the handling of the immanence of governmentality or cybernetic control to the bios, to life itself.

By considering the immanence of the Cybernetic Organon to the bios, and the alliance of the affective to the cybernetic, the urgency of re-evaluating Deleuze's philosophy of immanence and life reveals itself. The surprising degree of similarity between Deleuze's ideas and emancipatory suggestions (e.g. in the works with Guattari) and the workings

of the Cybernetic Organon, compels us to take a new look at his philosophy and seriously question its emancipatory capability and even its relevance.

It is in Ashby's early *Introduction to Cybernetics* (Ashby 1956: 1) that we find the distilled nature of the cybernetic organon expressed in a concise statement of methodology: «It does not ask "what is this thing?" but "what does it do?"». Here we have a declaration of independence from all questions of essence and being whence we arrive at the full realization of what Stiegler calls the destitution of knowledge. Here we also find the primary operation of the cybernetic logic whereby knowledge (science and otherwise) is rendered obsolete, namely the "protocol." Ashby defines protocol as a list of the outputs generated by a black-box coupled with the inputs that provoked them. This is the very essence of what is now progressively taking the place of science, with the Behavioural Sciences and Cognitive Sciences as its forerunners. These are the prime examples of sciences dominated by the cybernetic logic. These transitional sciences are more like research projects aimed at coming up with a maximally efficient I/O table, a protocol for the human being. Turning Kant's "dark room" inside out, the cybernetic black-box makes a virtue of unknowing. According to the cybernetic schema, knowledge, once judged by the Baconian organon to be an inseparable ingredient for the maximum mastery of nature and efficient action, is considered a hindrance to maximally efficient actions. The human mind or spirit is thus short-circuited to achieve the efficiency of pure calculation without representation. «We thus have pure cognitive labour power utterly devoid of knowledge» (Stiegler 2010: 46), Stiegler intones regarding the effects of the cybernetic organon.

Algorithmic Governmentality

The recent work of Antoinette Rouvroy constitutes an important contribution to the growing analyses of the emerging order, the new forms of governmentality, the mutated organology. Her re-definition of "Algorithmic Governmentality" as «a mode of government that is fed mostly with raw data: *infra-personal signals* (not signs), which are computable despite, or rather *because they carry no meaning by themselves*» (Rouvroy 2014), launches the study of governmentality to a new, fertile plane where the true dimensions of the cybernetic principle come to light: non-representational, fully immanent calculation/computation, intelligence without consciousness, a form of control at the pre-individual, "infra-personal", non-conscious (*and* the "sub-subjective") level. «[Algorithmic Governmentality] does not know individuals, but *dividuals*, data-bundles» (Rouvroy 2014); I will soon address the implications of this mobilization of the "infrapersonal" and its relation to bodies, but first, there is another aspect of the cybernetic organon recognized by Rouvroy as part of the algorithmic government that must be discussed.

The Cybernetic Organon's throwing the "what" and the "who" into the domain of the "useless", away from the political realm (and the public sphere, see (Arendt 1998)) amounts to an "indifference to the nature of dangers that might arise" in algorithmic governmentality; instead of knowledge or explanation it offers "reliability". Reliability qua the "suspension of uncertainty" is independent of the potential sources of and possible reasons for the occurring dangers or risks. The formulation of the political effects of the cybernetic organon as a "suspension of uncertainty" is of great significance to the proper analysis of the logic of immanence and pure functionality that is cybernetics. As we shall see in the final part of the article, the abolishment of *certainty* (qua synthetic truth obtained through scientific inference), in favour of *reliability* and predictive *efficiency,* signals the ultimate crisis of science and the *end of the reign of the principle of sufficient reason*. With the rise of big data and the non-representational computation that is Algorithmic Governmentality, risk management and predictive reliability, "suspension of uncertainty", the question of truth and knowledge has become *superfluous*.

The "disappearance of the need to understand the dangers" (Hildebrandt & Rouvroy 2011) witnessed in the "postmodern government" of the "Security Society" is only a part or extension of the *obsolescence of knowledge* (or the "destitution of knowledge" as Stiegler calls it) in general. Hence it is vital to study the more essential process behind the whole transformation: we are not only talking about an algorithmic governmentality or psychopower, rather we must take into account all the aspects of the cybernetic mode of control.

She is very accurate in her description of the cybernetic organon (or the set of practices that define "algorithmic government") as partaking of pure immanence, or at least as striving towards it or laying claim to it. In a recent talk, on which I have drawn most, she broached the idea that the intense passion for the unmediated which was present in so much of the philosophical literature of the sixties and seventies is closely connected to the "ideology" behind the current rule of *the biopolitical immanent*, a claim that reinforces the intense similarity, if not identity, between the desire for immanence and the philosophy of Deleuze (and Guattari).

Rouvroy's appreciation of the non-representational nature of the cybernetic organon is crucial to her theory's ability to cut through the conceptual categories of the likes of Foucault, for whom representation and the rule of sufficient reason was a fact. She correctly identifies the infra-personal nature of *data* by asserting it to consist of signals rather than signs. The difference between data, as infra-personal, pre-subjective, and (more importantly) non-representational, and information is immensely important in the analyses of the cybernetic logic as embodied in recent data-technics, as it allows one to see how the processes of algorithmic-autonomous decision-making are different from human judgment. In fact, Rouvroy has already discussed the case in her work on "actuarial" judgment and the role of autonomous agents.

The Cybernetic Organon's linking of the singular and the generic by short-circuiting processes of individuation gives new meaning to the title of Foucault's Tanner Lecture, *Omnes et Singulatim* (Foucault 1981). Although originally not fully developed, the notion of "pastoral power" is an important register today under "Big Data ideology"; Pastoral power is mostly distinguished by the individuality of its scope and by its government of individual life on an individual basis. By reading Foucault's account of the forms it might take, it becomes obvious that with the cybernetic automation of government, i.e. with the emergence of Algorithmic Governmentality, pastoral power has taken a dramatic leap from a marginal position into full prominence, simultaneously undergoing drastic changes.

It must kept in mind, however, that Foucault's concept is still concerned with the individual instead of the singular, all the while separating the pastoral from the "juridical" by virtue of individuation-procedures. One gets the sense that in Foucault's later works on pastoral power, the life, the *bios*, is governed through *what kind* of life it is: without the possibility of automated, algorithmic governmentality, the pastoral relation can only be based on individuation rather than individuals. The massive sheep/shepherd rate before Algorithmic Governmentality was outside the capabilities of the pastor as conceived by Foucault.

The pastor's individualizing power has as its counter-part an individualized knowledge about his flock, about their individual sins and needs, and it is through this knowledge that pastoral *governance* operates. With the rise of real-time, automated, Algorithmic Governmentality, the very notion of individuation becomes obsolete, hindering the efficiency and liberty of the "government experience". Here, each single life that is at stake is not treated twice over with different models of power, *omnes et singulatim*; its government no longer a function of its individual-universal identity, but immanent to that beating life that is the singular, changing in real-time as it changes. In fact, the difference between the pastoral and the algorithmic models of governmentality is manifested in the pastor's "individualized knowledge"; however finely grained such a knowledge might be, it is still knowledge *qua* abstraction and individuation. The algorithmic model, on the other hand, has no use for knowledge since its power is an automated processing of the singularities in real-time.

As I mentioned in the introduction, it is clear that we have entered a new phase (of governmentality, of control, of machinic enslavement, of desubjectivation) that is incompatible with the categories previously established to describe it: the algorithmic governmentality of Rouvroy cannot be re-parsed as run-of-the-mill Foucauldian biopolitics without losing its relevance to the current conditions of life and control. Rouvroy herself believes that Foucault's biopower and biopolitics are rather obsolete as the new "regime of reliability," in its obsession with immanence and the real-time, wants to do away with the body and the bodily; it is «smooth, slippery, opaque, taut surface» (Deleuze & Guattari 1983: 2), pure "fluidity". With its apparent "oppression of

materiality", Rouvroy's Algorithmic Governmentality implies the abolishment of the older Foucauldian categories, i.e. *biopower* and *biopolitics*.

Despite the clear divergence of the "algorithmic governmentality" from the path set out in Foucault's last works, and despite what Rouvroy's disposition might be on the issue, I believe the set of governmental acts and ideologies that make up the algorithmic governmentality or what I call the cybernetic organon still qualify for the term "biopolitics". The cybernetic organon as manifested in recent new technologies and technical paradigms such as "Big-Data" is made up of the "infra-personal signals (not signs)" and in general targets the unreflecting, unconscious individual. As such they must be considered as able to plug into the domain of affects, the bodily (and in fact this is already happening in certain settings, such as the military), and to a greater or lesser extent recruit the sub-subjective body and the pre-reflective affects and desires in its calculations, both for data accumulation and the project of perfecting the I/O protocol for the human being qua black box.

Affect

The works of Rouvroy, Lazzarato, Bifo, etc. are important to any attempt at understanding the current forms of control and governmentality. They are, however, concerned solely with the noetic or rather the "nervous", as is apparent in terms used to describe their field ("psychopower", "noo-power", "neurototalitarianism"). There is in fact a prevalence of the conception of the new modes of social control as solely brain-directed. As a defence against these forms of control, these theories offer the body in its materiality; it is presented as a site of resistance, of heterogeneity:

> The video-electronic generation does not tolerate armpit or pubic hair. One needs perfect compatibility in order to interface corporeal surfaces in connection. Smooth generation. Conjunction finds its ways through hairs and the imperfections of exchange. It is capable of analogical reading, and heterogeneous bodies can understand each other even if they do not have an interfacing language. (Berardi 2005)

Starting from Deleuze (and Guattari), the affect has been claimed as a strictly bodily movement of intensity that supposedly escapes capture and rationalization, forever outside the subjective and therefore outside of the reach of control. Coupled with the analyses of psychopower, this view of body and affect *qua* emancipatory possibility has progressively invaded all sorts of thought, overshadowing the Foucauldian notions of biopolitics and finally declaring to have moved beyond it. Control of life is forgotten in favour of a control of thought from which "life itself" supposedly escapes unscathed.

In light of the (mainly correct) concepts of psychopower, Foucault's categories of

power might seem outdated and obsolete. I believe, however, that the notions of biopower and biopolitics are essential to an understanding of the nature of control in this time of digital technicity; in fact, a re-evaluation and reconsideration of biopolitics might be what the theories dealing with the noetic manifestations of the cybernetic organon need.

As inherently pre- or non-subjective, affects are not subject to reflective thought and judgment; for an economy of drives that aims at fluidity and control through the infrapersonal, affects represent the perfect ally. While at the level of the noetic the cybernetic organon acts almost exactly as Rouvroy describes it in her study of Algorithmic Governmentality, the immanence of cybernetic control extends to the bodily by way of affects. Consider Rouvroy's own example of the bulimic person being bombarded with ads for chocolate, based on her unconscious decision-making and infra-personal data-production as fed into intelligent recommendation algorithms: here bodily affects and algorithmic intelligence are linked together, short-circuiting the subjective between them.

Protevi's recent book is noteworthy in this respect: studying the manipulations of affect in military situations, he demonstrates how the sub-subjective can be used in processes that empty-out the subject in order to obtain certain predetermined behaviours. Through the manipulation of such affects as anger, the supra-subjective networks of power are linked to the sub-subjective, to the body itself, reducing the individual to an aggregate of behaviours. This is the cybernetic principle of making protocols, I/O tables ensuring efficiency of desired output-behaviours per input-commands.

Protevi then proceeds to make a rather important claim regarding subjectivity and the political. Seeing how the supra-subjective and the sub-subjective are sites of potential manipulation and extraction of desired behaviours and infra-personal data, Protevi assigns the possibility of political agency and action proper (in the sense used in Arendt (1998)) to the middle level, that is to the subjective. What was once considered as metaphysical patriarchal construction and illusory focus of agency by the deconstructive-structuralist critique of the 1960s-onwards, is slowly re-emerging to reveal new dimensions. Rouvroy too asserts the importance of *reflection* and knowledge-based judgment in the fight against algorithmic governmentality and cybernetic control.

In the preface to *Machine Learning*, the author includes, among other reasons for using machine learning, the tasks that humans carry out but in relation to which they are «unable to explain their expertise» (Alpaydin 2010: xxxi). This is a very clear demonstration of the shift from the Cartesian God to the cybernetic Organon as the cause of the unknown (including bodily) actions. Naturally, as the Occasionalist God, the cybernetic Organon must see to it that its domain extends and grows: with the miracle workers of behavioural neuroscience on the frontline, an all-out crusade to crown protocol as the chief (and sole) mode of science is being fought on the battleground of

the sciences.

Inspired by the work of Raymond Ruyer, Deleuze believes that by virtue of being (or getting) on the plane of immanence, the "Body without Organs", the pure monad of life, *bare life*, is forever out of the reach of control and technics, "organisms" or "organizations" ("judgments of God" (Deleuze & Guattari 1983)). However, the same fluidity and singularity, the same abhorrence and abolition of the fixed (the "grounded", the territorialized) which Ruyer had thought to reside solely in the vital monad, is also the defining feature of the cybernetic organon as it manifests itself in Wiener's projects and its ever growing throng of offspring. DeepMind's AI gamer is only the most recent and spectacular example of a long line of machines and control *dispositifs* that have emerged since WWII. In the transition from Wiener's Predictor to *PageRank* and *PredPol* we witness the *(epi)phylogenesis* of the cybernetic organ: by deploying the logical schema of the protocol into the previously Cartesian sciences and worldviews, and retrieving the resulting protocols *as data*, the newer generations are doubly efficient and doubly evacuative.

For Ruyer, there is something wrong with cybernetics because of its anti-monadic nature. He does, however, borrow the most essential aspect of Wiener's cybernetic discipline (feedback-driven adaptability qua change) but under the condition that it only occur in the living, in the monadic life of all things biological and alive, from atoms to animals to man: intelligence/consciousness (which are more or less undistinguishable for Ruyer) qua response to environment (Ruyer is not a very orthodox Leibnizian and his monads are precisely defined by their "windows" and their capacity to look through them onto the surrounding environment). He, and later Deleuze, glorify the monad or the Body without Organs for its generic indeterminacy which appears as creativity but also efficiency.

> The human body is scandalously inefficient. Instead of a mouth and an anus to get out of order why not have one all-purpose hole to eat and eliminate? We could seal up nose and mouth, fill in the stomach, make an air hole direct into the lungs where it should have been in the first place…
> BENWAY: "Why not one all-purpose blob?" (Burroughs 1992; Deleuze & Guattari 1987: 150)

Creativity qua the ability for self-regulation in response to change is crucial here. Compare the above excerpt from Burroughs's *Naked Lunch* (that has been also quoted several times by Deleuze and Guattari) with the following excerpt from Deleuze on life:

> The life of the individual gives way to an impersonal and yet singular life that releases a pure event freed from the accidents of internal and external life, that is, from the subjectivity and objectivity of what happens: a "*Homo Tantum*" with whom everyone empathizes and who attains a sort of beatitude. It is a haecceity no longer

of individuation but of singularization: a life of pure immanence, neutral, beyond good and evil, for it was only the subject that incarnated it in the midst of things that made it good or bad. The life of such individuality fades away in favour of the singular life immanent to a man who no longer has a name, though he can be mistaken for no other. A singular essence, a life (Deleuze 1997).

The life of the dying is worth saving precisely because near the moment of death every layer of subjectivity is stripped bare and what emerges is simply the potential of being anything and anyone, at once specifically singular and yet fully generic: "impersonal and yet singular" (Deleuze 2001). *Homo Tantum* is pure virtuality insofar as it is the core of life *qua* creativity, spontaneity, and self-regulation. The tick (Deleuze & Guattari 1987: 257) and the Proust-Spider (Deleuze & Guattari 1983: 68) are two of the more famous examples of Body without Organs that combines the generic state of rest with the milieu-induced specification/singularization Ruyer has a rather interesting thought experiment that further clarifies this position on life as monadic vitality.

> It is not literally true that Mr X. is without a body. He is reduced to a state of cellulary [sic] tissue, or even to a unicellular state. A unicellular organism is a body. An amoeba is a body. It is only a body without distinct technique, a body in which technique is improvised at every instant according to the need, like ideas in the brain; a body which transforms itself into a mouth, a stomach, limbs, directly, according to the themes of the activity in process; a body so close to the field in "absolute surface" that it is at the same time its own "soul", that is, the possibility of auto-guidance and thematic behaviour, dominating through what appears to the chemist as a network of delocalized liaisons, the "chain reaction" of the classical chemical phenomena used. (Ruyer 1980)

While the Leibnizian (or rather neo-Leibnizian) idea of the life-monad, a direct inspiration for Deleuze's Body without Organs, is explicitly praised, cybernetics remains offstage. By limiting consciousness to a perception, to the milieu and self-regulation /alteration in response to it, and by limiting this process to the living, Ruyer masks the cybernetic origin of these thoughts. It is the cybernetic idea of feedback as immanent to its milieu, with an eye towards efficiency that is behind the bio-technical experiment proposed here. An important point, which is going to be of great importance in subsequent parts, concerns the claim made by Ruyer regarding technique in relation to life in the above passage. For Ruyer, technique forever remains on the outside of life, or perhaps on the border/interface of a life-monad "without distinct technique". Technics becomes the "thought of outside", the responses of the life-monad to changes in its environment; it becomes a function of the outside, an interface. Technics is taken to be cut off from the pure core of life; it is apparently possible to shave it off.

It is imperative that we remember that the BwO must be achieved, constructed; but its production, in Deleuze's vital philosophy, presupposes its inherent pre-existence. The

vital monad is at first shackled by the organs and organisms that limit its creativity and the breadth of its virtualities; the construction of the BwO is a stripping away, a pairing of the body down to the vital monad (compare the example of the masochist in *A Thousand Plateaus* with Ruyer's Mr X). The construction of BwO is an un-learning of all habits-knowledge – effectively similar to Descartes' doubt yet on a more Nietzschean register where memory and the body are dissociable. It involves a de-singularization that *deterritorializes* the organism in its specificity and creates a transversal to the fully generic, or the absolutely deterritorialized. This generic blob of potentiality and pure creative force, placed in a given milieu, will *reterritorialize* certain organ-functions or re-purposes them to adapt to the help adaptation to changes in the milieu (e.g. the Proust spider, and the tick). In order to reach the BwO, we must «dismantl[e] our self». «The BwO is what remains when you take everything away» (Deleuze & Guattari 1987: 151).

Ruyer, Burroughs, Deleuze, and in a way, Simondon, are all fascinated with the idea of a core of life ("pure immanence") that, without any qualities or any subjectivity (or organs/organisms), is free to become any organ (or organ-function) as the need arises (the need arises as change in the milieu, it is a function of the outside). Deleuze's recital of the dying thief in a Dickens novel is interesting here in its depiction of that pure life that, in its immanence without subjectivity, has the chance to become anything: it is virtual, it is pure indeterminacy, and as such, it could be anyone, it could become anyone or anything; it is precious because of its indeterminacy, something that makes it generic in its very specific singularity. This transversal between the fully generic and the absolutely singular is the hallmark of the Cybernetic Organon. The immanence of the analogue compensator to the generator: this is Wiener's ingenous contribution to control.

Like I mentioned before regarding reaching a BwO that in a sense already exists, the process starts from a specific, singular human, and goes on to de-specify. It un-learns all habits and subjectivity, and what is left behind is the fully generic, the absolute potentiality/virtuality that is also singular for it immediately starts adapting to the new milieu, to new lessons and habits. This process is Deleuze (and Guattari)'s analogue of Descartes' method of radical doubt that seeks to produce a universal subject by stripping away all that is individual from the human being. The extent of the evacuation *qua* de-singularization differs considerably, of course, but the mechanism is unmistakable: from Deleuze, via Leibniz, to Descartes, «I will now shut my eyes, stop my ears, and withdraw all my senses» (Descartes 1984: 24).

Immanence takes on a fully literal meaning as it becomes the simultaneous perception of change in the environment and adaption/response thereto. Ruyer is not to be distanced too much from Deleuze on account of his "neo-Leibnizian" belief in the vital monad: Deleuze too is a vitalist, and when his continually referenced BwO is investigated in light of Ruyer, Leibnizian tendencies cannot be ignored.

Deleuze and Immanence

The cybernetic organ is essentially independent of its milieu, which it regards as a black box. It can tune into and adapt itself to an environment it is placed in, but it can also de-singularize, re-generalize, itself and re-adapt to a new milieu. In more recent examples of this tendency, we can name DeepMind's famous gamer AI, which used "deep learning" in order to adapt itself to the environment. It was given access to the controls, the screen, and the score, and an "instinct" to maximize its score, which is its efficiency measure. With no other programming it learned to play seven arcade games with at least human capability, three of which it could play to superhuman levels.

Regardless of the age-old questions of intelligence, programming and autonomous artificial behaviour, we must consider examples of the cybernetic tendency like this one in terms of a *mechanology* or rather an *organology* that takes into account the "technical object" in its own right (although using "technical object" to describe cybernetic machines is rather imprecise, given that Simondon's definition makes it confined to the industrial model). What is to be learnt from DeepMind, as a more recent and more obvious case of cybernetic organs, is the unique ability (gained from the principle of real-time feedback) of cybernetic organs to move from the absolutely generic to the absolutely singular without traversing the mediating universal-particular transition, the historical transition of individuation that Simondon designates with the term concretization.

«The subject invents; it is the maker of artifice» (Deleuze 1991: 86); the subject for Deleuze is «a habitus, a habit, a habit in a field of immanence». The similarity of Deleuzian philosophy to cybernetic philosophies and "Big-Data Ideology" is great. The subject is a singular pattern or trend in data, it is that which produces data (or data-bundles, or information), is that not what the Google Philosopher™ says? And if «Deleuze shifts the philosophical focus from determining a foundation of likeness amongst humans to revealing and celebrating the contingency, dissimilarity and variety of each individual life» (Parr 2005), so too do the advertising moguls and neoliberal institutions of all sorts.

Universals and transcendental schematizing are no longer of much value and efficiency in economic predictions, politico-military forward-looking, and pre-emptive decision-making. It *is* possible to pitch a fashion line for "homosexuals" (as a *universal concept*, which radical empiricism rejects), but it is much more efficient, manageable, automatable, and fail-proof to pitch to individual users based on their personal, differential, history of activity. It is this history of activity, of data-production and consumption-by-choice, this "profile" of you that is the very embodiment of radical empiricism. I must point out that my use of the term "radical empiricism" does not exactly coincide with William James' concept: it has more of Hume than James.

In terms of syllogistic logic, we could say that cybernetic logic as well as the results of cybernetic analyses of data has at least one defining feature and that is a lack of the minor premise. The latter, of course, links the subject to the new predicate, performing the role of individuation through the principle of identity. In some cases, especially in more recent scientific fields, such as Behavioural Science, there is also a lack of major premise: given that the field is relatively new, little if any general truth has been produced or established to serve as the major premise. In the extreme empiricism that is cybernetics, everything begins and ends with data; or rather it begins with molecular, singular data and ends with information qua molar, representational data.

Such sentences as "people are the sum of the information they produce" is the stronger version of an anti-essentialist theory perhaps best reflected by the later Wittgenstein in behavioural terms (the feeling S). The flattening of people into black boxes that only reveal themselves in communication, and reveal all that matters, and reveal *all that they are*, is an obvious offshoot of cybernetics and the logic of the Cybernetic Organon: DeLanda's "flat ontology" is among the more eminent ones. The abhorrence for essentialism, or rather the fear of essence, more than ever reinforced by a desire for immanence, to overcome any and all representation and transcendence, has lead everyone into the arms of the cybernetic organon.

DeLanda has built a rather vast conceptual apparatus at the heart of which lies the Deleuzian notion of absolute immanence *qua* the flat surface, the plane of consistency. His famous contribution to cybernetic philosophy is his concept of "flat ontology":

> while an ontology based on relations between general types and particular instances is hierarchical, each level representing a different ontological category (organism, species, genera), an approach in terms of interacting parts and emergent wholes leads to a flat ontology, one made exclusively of *unique, singular individuals* (DeLanda 2002).

DeLanda's ontology is pure surface-effects and nothing rises above the flows of experience or data or desire. Coupled to his empiricism is an uncompromising nominalism that would have nothing to do with kinds and abstractions, dealing only in "singular individuals".

Deleuze is a true philosopher of immanence in his own right, and his passion for the Stoics and Hume originates from his attempts at producing a fully immanent philosophy. He repeats Hume's verdict concerning the radical break of cause from effect: «The autonomy of the effect is thus defined initially by its difference in nature from the cause» (Deleuze 1990). For Deleuze the immanent world of effects is the domain of "sense". The world of effects, (and of «multiplicities [flattened] on a single plane of consistency» (Deleuze & Guattari 1987: 9), is a world without depth, a Flatland from which DeLanda gets the inspiration for his "flat ontology", a pure cybernetic philosophy if there ever was one: «an assemblage has neither base nor superstructure, neither deep structure nor

superficial structure; it flattens all of its dimensions onto a single plane of consistency» (Deleuze & Guattari 1987: 90).

Of course we can draw the philosophical lineage of the cybernetic organon much further back to greater philosophers, such as Hume, but the manifestations of cybernetics qua discipline and technology after WWII heralded a snow-balling set of ideas, practices, and technologies that keeps getting larger to this day; a second surge must be acknowledged, furthermore, around the late 1990s or perhaps the early 2000s. The surge in question refers to the extension of the cybernetic organon *qua* protocol to the ever-growing Internet. The same principle of feedback that enabled immanent control of individuals as black-boxed mechanisms or *sources of difference* in *real-time* is now applied to the "user", the blackboxed person, the cyborg, the cyberpunk, the whatever. Allowing both for singularized monitoring and the acquisition of massive data for statistical analyses, the protocol of cybernetics is the dream of biopolitics. Foucault himself identified two forms of power/knowledge relation and control in modern societies, disciplinary practices and biopower. The cybernetic Organon, which is uniquely able to move from the singular to the absolute (or vice-versa of course) without traversing the intermediate process of individuation (universal-particular), proves the ultimate biopolitical technique for its ability to tie the two forms of power into one another seamlessly.

Regarding the philosophical lineage of the ideas that form part of the cybernetic organon, I must place Hume in one of the more prominent positions. Whitehead was right (and much closer to the truth than he realized at the time) to say that Hume had declared science bankrupt in its entirety (Whitehead 1967). The famous admonitions against seeking causes above the effects is in some passages extended to the point that no effect can be drawn back to a cause, expecting the cause to determine the behaviour of another effect; we might as well start by randomly searching for the latter effect's behaviours and properties. The radical empiricism behind the Cybernetic Organon completely rejects science *qua* search for causes. The proliferation of non-causal methods in science is strongly related to cybernetic singularization, its rejection of universal laws: «causality connotes *law-like* necessity, whereas probabilities connote *exceptionality*... and *lack of regularity*» (Pearl 2009). Coupled with the empiricist principle of denying the existence or significance of "essence", the Humean conception will give rise to a completely new form of "science" (it might not be the best term to describe it), or rather to an Organon that substitutes the sciences with their results, or perhaps swaps the sciences with prediction and pre-emption. The Cybernetic Organ *qua* logic or "schema of intelligibility" (De Boever 2012: 1) rejects all questions of "why" and "what" and promotes the singular/generic prediction and pattern-recognition through data-analysis. This is not necessarily a phenomenon of the twenty-first century; the 1948 feedback devices designed by Wiener employ most of the principles of the Cybernetic Organon, blackboxing the source of data and extracting patterns or creating protocols to deal with its behaviour. The most important discipline among the sciences,

in the wake of the cybernetic revolution, is statistics, suited to newer forms of prediction and real-time control.

Already in Hume there appear traces of what will someday become the dominant form of science and production. He makes different cases for his empiricist argument, and then makes a retrospectively interesting generalization: «when an effect is supposed to depend upon an *intricate machinery or secret structure of parts*, we make no difficulty in attributing all our knowledge of it to experience» (Hume & Millican 2007).

For Whitehead, Hume's insistence on effects serves as the declaration of the "bankruptcy of objective knowledge [and science]". Whitehead rightly directs attention to a passage in Hume, seeing in it a statement of the "impossibility of science" (Whitehead 1967: 4):

> In a word, then, every effect is a distinct event from its cause. It could not, therefore, be discovered in the cause; and the first invention or conception of it, a priori, must be entirely arbitrary. (Hume & Millican 2007: 21)

These words have a striking similarity to the methodology of cybernetics; refuting the grounds (or efficiency) of objective knowledge gained from a study of causes, which Descartes described as the "most perfect scientific knowledge", Hume's theory suggests a "black box" approach of guess work and non-epistemic feedback-determination. The "arbitrary" first conception spoken of is the same as the random assignment of weights to neural networks, correcting them with further trial and error training. Needless to say, information gained as such is not in any way generalizable or applicable in other situations and as such, cybernetics satisfies the Humean objection to deductive reasoning, lacking any of the forms of "association" defined by Hume. Whitehead suggests that much like the philosophers, scientists too chose to forget this reasoning of Hume's and continue with their scientific endeavours, leaving these "theoretical" matters to epistemologists. But it seems the Humean spirit has returned for a haunting, first in the form of the cybernetic discipline, and now progressively possessing various domains of science and technology and of course human life, not to speak of huge portions of nature.

In a "regime of untruth" where reliability and risk-assessment prevail absolutely, the "problem of induction" no longer poses a problem, so to speak. The reign of sufficient reason, of grounding, causality, and explanation came to an end at the same time as the category of genus (or rather, the power of judgment qua individuation, transition between the individual and the universal qua means of reflection).

Hume's radical or "strong" empiricism has been constantly under attack (or suppression) as something non-pragmatic, non-scientific, not to be taken literally. But the truth of the matter is that time and cybernetics-inspired technics and disciplines have proven its superior *efficiency* and pragmatic nature; by abandoning the causal relation, the "obsession" with ground, the new disciplines have exceeded all that was

there before. Consider for example the case of marketing (as a derivative of behavioural sciences and Big-Data statistics) which has stopped thinking about consumer categories (if user's consumption pattern (singular) equals A (individual) then user is B (universal), all B's buy C, A will buy C, pitch C to A) and thinks in terms of trends and singular, user/consumer-specific targeting in real-time (user's consumption pattern coincides with other user's patterns on these points with a higher frequency; missing nodes of the user's pattern as compared with the frequency map will be pitched to user). There is no longer any need for a reflective consciousness, operating on grounding and individuation, to slow things down now that the automatable intelligence of Humean origin is at work. Hume must be counted among the first accelerationists.

Wittgenstein, especially in his later period, is cybernetic/empiricist or Humean in that he takes the human beings in his thought experiments as black-boxes who produce certain responses to certain questions or environments (Wittgenstein 2009). The object of such thought experiments is the confirmation of the validity of the (let's call them) *agents'* response in the future. He wants to know whether an agent can continue to produce valid results, and thus has to observe the current results and make predictions based on the said results. The main solution presented is the search for a "rule" that motivates the agent to come up with such results (we can just as well place an electronic device in the black box and use its signals as results); as such, this method is at the heart of empiricism (and perhaps transcendental empiricism) because it attempts to extract abstract rules (can we call them concepts, in certain situations, like the colours?) from data, that is the empirically given results of the black-box agent. So far, so good; just a variant of empiricism and not necessarily cybernetic. But then comes the "paradox" factor: it is here that Kripke rightly manages to trace the Humean heritage of Wittgenstein's paradox. Regardless of whether the sceptical solution is taken or not, the consequences for knowledge and science are the very same; and the ones that Hume had endorsed. It seems that the cybernetic organon in its manifestations in the sciences (Behavioural, Cognitive, and all Data-Driven sciences) *does* resolve the paradox with the sceptical solution and by that I don't mean that it pretends that rule-following has no effect on our lives and our knowledge-practices; on the contrary, I mean that they have abandoned the search for rules and operate only on a statistical basis of data obtained in validated instances to perform or predict other questions or tasks. This is of course recognizable as the essence of some of AI's core branches, especially machine learning, neural-networks, genetic-algorithms, etc. that are characterized by their rejection of "causation" and the black-boxing of the source of the data, whether it be by force of necessity or by choice.

BIBLIOGRAPHY

Alpaydin, E. (2010). *Introduction to machine learning* (2nd ed.). Cambridge, Mass.: MIT Press.

Arendt, H. (1998). *The human condition* (2nd ed.). Chicago: University of Chicago Press.

Ashby, W. R. (1956). *An introduction to cybernetics*. London: Chapman & Hall Ltd.

Broad, C. D. (1926). *The philosophy of Francis Bacon; an address delivered at Cambridge on the occasion of the Bacon Tercentenary, 5 October, 1926*. Cambridge: University press.

Burroughs, W. S. (1992). *Naked lunch* (1st evergreen ed.). New York: Grove Weidenfeld.

De Boever, A. (2012). *Gilbert Simondon: being and technology*. Edinburgh: Edinburgh University Press.

DeLanda M. (2002). *Intensive science and virtual philosophy*. New York: Continuum.

Deleuze, G. (1990). *The logic of sense*. New York: Columbia University Press.

Deleuze, G. (1991). *Empiricism and subjectivity: an essay on Hume's theory of human nature*. New York: Columbia University Press.

Deleuze, G. (1997). *Essays critical and clinical*. Minneapolis: University of Minnesota Press.

Deleuze, G. (2001). *Pure immanence: essays on a life*. New York: Urzone, Inc.

Deleuze, G., & Guattari, F. l. (1983). *Anti-Oedipus: capitalism and schizophrenia*. Minneapolis: University of Minnesota Press.

Deleuze, G., & Guattari, F. (1987). *A thousand plateaus: capitalism and schizophrenia*. Minneapolis: University of Minnesota Press.

Descartes R., (1984). *The philosophical writings of Descartes* (vol. 2). Cambridge: Cambridge University Press.

Foucault, M. (1981). Omnes et singulatim: toward a critique of political reason. In S. M. McMurrin (Ed.), *The Tanner lectures on human values* (pp. 223-254). Cambridge: Cambridge University Press.

Hildebrandt, M., & Rouvroy, A. (2011). *Law, human agency, and autonomic computing : the philosophy of law meets the philosophy of technology*. Milton Park, Abingdon, Oxon ; New York, NY: Routledge.

Hume, D., & Millican, P. F. (2007). *An enquiry concerning human understanding*. Oxford ; New York: Oxford University Press.

Husserl, E. (1970). *The crisis of European sciences and transcendental phenomenology; an introduction to phenomenological philosophy*. Evanston: Northwestern University Press.

Land, N. (2014). Teleoplexy: notes on acceleration. In R. Mackay & A. Avanessian (Eds.), *Accelerate: the accelerationist reader* (pp. 509-521). Falmouth, UK: Urbanomic.

Massumi B. (2002). *Parable for the virtual: movement, affect, sensation*. Durham and London: Duke University Press.

Parr, A. (2005). *The Deleuze dictionary*. New York: Columbia University Press.

Pearl J. (2009). *Causality: models, reasoning, and inference* (2nd ed.). Cambridge: Cambridge University Press.

Protevi, J. (2009). *Political affect: connecting the social and the somatic*. Minneapolis, MN: University of Minnesota Press.

Protevi, J. (2013). *Life, war, earth: Deleuze and the sciences*.

Ruyer, R. (1980). The Mystery of Reproduction and the Limits of Automatism, *Diogenes*(48), 53-69.

Stiegler, B. (2010). *For a new critique of political economy*. Cambridge: Polity.

Whitehead, A. N. (1967). *Science and the modern world*. New York,: Free Press.

Wittgenstein L. (2009). *Philosophical investigations* (4th ed.). London: Blackwell Publishing.