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## **The end(s) of critique : data-behaviourism vs. due-process.**

*Antoinette Rouvroy*\*

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### **Introduction**

Operations of collection, processing and structuration of data for purposes<sup>1</sup> of datamining and profiling, helping individuals and organizations to cope with circumstances of uncertainty or relieving them from the burden of interpreting events and taking decision in routine, trivial situations have become crucial to public and private sectors' activities in domains as various as crime prevention, health management, marketing or even entertainment.<sup>2</sup>

The availability of new ICT interfaces running on algorithmically produced and refined profiles, indiscriminately allowing for both personalization (and the useful, safe and comfortable immersion of users in the digital world)<sup>3</sup> and pre-emption (rather than regulation) of individual and collective behaviours and trajectories appears providential to cope with the complexities of a world of massive flows of persons, objects and information, and to compensate for the difficulties of governing by the law in a complex, globalized world. The implicit belief accompanying the growth of 'big data' is that, provided one has access to massive amounts of raw data (and the world is actually submersed by astronomical amounts of digital data), one might become able to anticipate most phenomena (including human behaviours) of the physical and the digital worlds, thanks to relatively simple algorithms allowing, on a purely inductive statistic basis, to build models of behaviours or patterns, without having to consider either causes or intentions. I will call 'data behaviourism' this new way of producing knowledge about future preferences attitudes, behaviours or events without considering the subject's psychological motivations, speeches or narratives, but rather relying on *data*. The 'real time operability' of devices functioning on such algorithmic logic spares human actors the burden and responsibility to transcribe, interpret and evaluate the events of world. It spares them the meaning-making processes of transcription or representation, institutionalization, convention and symbolization.

The question whether the pre-emptive powers of algorithms are over-estimated, whether algorithms produce 'valid' predictions or not, or, in other words, whether 'it works or not' is not really crucial for what I am interested in here, which is to say that, never mind the validity of all this, what counts most is to identify the extent to which relying on the apparent operability of algorithms spares us a series of individual and collective perceptual, cognitive, evaluative, conventional, institutional, linguistic efforts or tasks, and, at what price.

The impacts of the computational turn on governmentality are far from trivial. The constant 'adaptation' of environments to individual and collective 'profiles' produced by 'data intelligence' – be it called 'personalization' or 'technology of security' – is an unprecedented mode of government.<sup>4</sup> The type of knowledge it consumes and produces, the modalities through which it impacts on individual and collective behaviours, the modes of individuation

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which may sway or resist algorithmic governmentality<sup>5</sup> deserve careful examination. The aim of this chapter is precisely to inaugurate such inquiry.

This chapter is thus about a vertiginous matter. Formulated as an inquiry about the state of knowledge, power and subjects after the computational turn, it turns out as a reformulation of the question of the possibility of critique, recalcitrance and subjectivation<sup>6</sup> in an epistemic and political universe gradually deserted by empirical experiment and deductive, causal logic, and with regard to a mode of government appearing to disregard the reflexive and discursive capabilities (as well as their ‘moral capabilities’) of human agents, in favour of computational, pre-emptive, context- and behaviour-sensitive management of risks and opportunities. In other words, I wonder whether it is still possible to practice critical thinking after a computational turn which, despite its pretences to ‘objectivity’, appears as a turning away from the ambitions of modern rationality anchored in empirical experiment and deductive – causal- logic, and, despite its promises of personalization and better taking into consideration of individual merits, needs, abilities, preferences, does not address individuals through their reflexive capabilities, nor through their inscription within collective structures, but merely through their ‘profiles’.

It will then be argued that what makes critique so difficult to practice vis-à-vis the computational turn we are now experiencing with the gradual and almost viral generalization of data-mining and profiling, is,

- first, the fact that it produces a zone where (constructed) reality and (background of) the world in all its spontaneity and uncertainty become indistinct;

- second, the fact that the transversal dimension – essential in the scientific, the judicial and even the existential domains - of ‘test’, ‘trial’, examination’, ‘assessment’ or ‘*épreuve*’, or even ‘experience’, is rendered obsolete by real time, pre-emptive production of algorithmic reality;

- third, the fact that algorithmic governmentality does not allow for subjectivation processes, and thus for recalcitrance, but rather bypasses and avoids any encounter with human reflexive subjects. Algorithmic governmentality is without subject: it operates with infra-individual data and supra-individual patterns without, at any moment, calling the subject to account for himself.

The chapter will thus present a defence of all these things which usually appear as the weaknesses of regulation by the law and adjudication by the judicial system – that is, of the legal construction of reality – compared to regulation by the algorithms: ineffectivity, inefficiency, belatedness etc. which are all ‘creating’ temporal space and (judicial) scene where meaning regains autonomy vis-à-vis the pure factuality of ‘data-behaviourism’, where norms can be negotiated and contested, where (legal) subjects can materialize, building their motivations and, calling each other into account through language, create occasions for individual and collective individuations which are always deviations from known patterns and profiles.

## **The algorithmic production of ‘reality’: data-behaviourism**

### ***Discovering a reality immanent to the data world***

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Each epoch has its own privileged ways to build evidence and to render the world meaningful. As Pierre Legendre explains, the world is not given to man. Man can access the world only through the mediation of language, and thus re-presentation (Legendre, 2001:17). On the basis of *what is present and available to human senses*, representation attests to the presence of what is not immediately available to our senses: the (hidden) *causes* of phenomena, the psychological *motivations* of actions, their *potential* to develop into or give birth to other phenomena or actions,... Boltanski (2009:93-94) states in this respect an interesting distinction between ‘reality’ (the result of re-presentation), and ‘the world’:

The question of the relationship between, on one side, that which appears to hold firm, to be consistent, and, on the other side, that which is fraught with uncertainty and opens the way to critique, can not be fully deployed if one situates oneself on the sole ground of reality. Indeed, in a two dimensional coordinate space, reality tends to be confused with what appears to stand in some way by its own strength, that is to say, with the order, and nothing then, allows to understand the challenges against this order, at least in its most radical forms (...) But talking of reality in these terms amounts to relativize its scope and thereby to suggest that it is detached from a distinct background that it does not exhaust. We will call this background the world, considered, to paraphrase Wittgenstein, as ‘whatever happens’. One may, in order to render this distinction between the ‘reality’ and the ‘world’ palpable, make an analogy with the way in which one can distinguish between risk and uncertainty. The risk, in so far as it is probabilizable, constitutes, precisely, one of the instruments invented in the XVIIIth century to construct reality. (...) But all events are not controllable in the risk logic, so that an unknown portion of radical uncertainty remains. And, just as one can make the project of knowing and representing reality, the aim of describing the world, in what would be its totality, is not within the reach of anyone. Yet, something of the world manifests itself precisely each time events or experiences whose possibility (...) or probability had not been inserted in the design of reality, arise in speech and/or surface in the field of individual or collective action.

The distance between ‘the world’ and ‘reality’, this ‘unknown part of radical uncertainty’ has always been a challenge for institutions and, at the same times, a precondition for the possibility of critique if, by critique we mean, like Foucault (1990): the virtue consisting in challenging the very categories through which one is predisposed to perceive and evaluate people and situations of the world, rather than merely judging them according to these very categories. Critique is:

a practice that suspends judgment and an opportunity to practice new values, precisely on the basis of that suspension. In this perspective, critique targets the construction of a field of occlusive categories themselves rather than on the subsumption of a particular case under a pre-constituted category.

Datamining and profiling, building on the factual availability of enormous amounts of raw digital data, instaurate a new ‘truth regime’ - which I call ‘data-behaviourism’ - creating the widest possible zone of indistinction between reality and the world, and eroding the ‘unknown part of radical uncertainty,’ thereby also reducing the scope of critique. The result of the resented need to automate the processes going from raw data to knowledge, results in the discovery of what ‘counts as real’ within the exponentially growing data-warehouses taken as the digital version of the world; it is a ‘pure factuality’ of the generated profiles, according to a process diagnosed by Alain Supiot (2010: 81) as the

metamorphosis of all singular quality into measurable quantity whereby we are bound in to a speculative loop in which the belief in these numerical images replaces the contact with the reality that these images are meant to represent.

As already suggested, profiles appear – to the general public at least - as a ‘spontaneous’ germination<sup>7</sup> from the digital transcription and statistical analysis of ‘reality’ (through predictive data mining), resisting characterization as either spontaneous or artefactual and

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bypassing human interpretation.<sup>8</sup> The use of data mining and profiling is usually justified by arguments of rationalization. ‘Crunching numbers’ appears as a victory of rational thought over emotionally, politically, racially biased human perception.<sup>9</sup> With the computational turn, our relation to *knowledge* seems indeed to be changing. In ‘Managing Information’, a special report published by *The Economist* on February 25<sup>th</sup> 2010, one reads that

epistemologically speaking, information is made up of a collection of data and knowledge is made up of different strands of information. But this special report uses ‘data’ and ‘information’ interchangeably because, as it will argue, the two are increasingly difficult to tell apart. Given enough raw data, today’s algorithms and powerful computers can reveal new insights that would previously have remained hidden. (Cukier: 2010)

Data, information, knowledge are thus more or less taken to be the same things. Such ‘knowledge’ thus does not appear as a ‘production of the mind’, with all the artificiality and cognitive and emotional biases unavoidably connoting mental productions, but as always already ‘given’, immanent to the (digitally recorded) world, in which it is merely automatically ‘discovered’, or from which it literally flourishes thanks to algorithmic operations rendering invisible correlations operational.

To what category of sign or signal do the raw ‘big data’ forming the texture of algorithmic rationality belong? What is their relation with the ‘things of the world’ of which they are taken to be a ‘sign’ or ‘signal’ of? Raw data do not resemble, nor keep even indirect physical bound with any thing of the world,<sup>10</sup> and they are not conventional symbols thereof either. It is, nevertheless, these massive amounts of raw data, this huge, constantly evolving, impersonal statistical data which today constitutes ‘the world’ in which algorithms ‘unveil’ what algorithmic governmentality takes for ‘the reality’. ‘Reality’ - that knowledge appearing to hold, doesn’t seem produced anymore, but always already there, immanent to the databases, waiting to be discovered by statistical algorithmic processes. Knowledge is not produced *about* the world anymore, but *from* the digital world. A kind of knowledge that is not tested-by nor testing the world it describes and emanates from: algorithmic reality is formed inside the digital reality without any direct contact with the world it is aimed at representing. Rather than the validity of its predictive models,<sup>11</sup> it is its operability, its plasticity, its contribution to the ‘fluidification’ of economic and social life (and thus of capitalism), its efficiency in sparing human agents time and efforts in the interpretation and evaluation of persons and events of the world that characterize the ‘intelligence’ of ‘big data’. Raw data function as de-territorialized signals,<sup>12</sup> inducing reflex responses in computer systems, rather than as signs carrying meanings and requiring interpretation. Everything goes as if meaning-making was not necessary anymore,<sup>13</sup> as if the world was already, absent any interpretation, saturated with meaning.<sup>14</sup>

‘We wouldn’t speak not because all would have been said, but would have been predicted, always already written, edicted, edited, but in a writing that would be the writing of things themselves. Not the signature of things, but rather the signs-things, and signosis, this disease of the nailed, fixed say, never removed from its eternity, stuck in a topos.’ (Neyrat: 2011)

### ***Atopy of algorithmic reality***

That immanent knowledge is also atopic, in the sense that it is not linked anymore to any temporal or geographical anchor. Blossoming from the eternal actuality of data-warehouses, fed by data recorded from heterogeneous contexts, the productions of data-behaviourism are

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at odds with the idea of ‘interested’ knowledge (Spinoza), or of knowledge as enactment and result of power relations (Foucault). Patterns discovered in data-warehouses have an aura of ‘pure’ knowledge, autonomous vis-à-vis both powers and affects. Refining itself in real time, building and re-building itself from within the huge ‘numerical memories’ where every bit, never mind when and where recorded and stored, floats on the flat surface of pure actuality and pure presence,<sup>15</sup> the statistical body seems to have expurgated every bit of obscurity: everything being always available, it perfectly fits an esthetics of full light and intemporal or a-chronological transparency. Therefore, the ‘information’ from which the new knowledge is produced will not be evaluated on the basis of traditional criteria of authenticity, historical coherence, or critical apperception, but merely on the merits of immediate operationality, plasticity, flexible adaptation to changing circumstances, and immediate availability.

This atopy sheds some doubts about the possibility of speaking of knowledge at all in this case if knowing, as Didi-Huberman, (2009:11) argues, requires ‘taking position’, that is,

situating oneself two times at least, on the two fronts at least that each position comprises as any position is, necessarily, relative. It goes, for example with affronting something, but, in front of that thing, one must also take into account everything one leaves aside, the off-frame that exists behind us, that one may refuse but which, for a substantial part, affects our movement itself, thus our position. It also implies to situate oneself over time. Taking position, it is desiring, requesting something, it is situating oneself in the present and aiming at a future.<sup>16</sup>

### *A distinct usage of statistics*

#### **Data behaviourism is different from statistical quantification**

‘Data behaviourism’ is very different from other ‘governmental’ strategies based on statistics, and which, most of the time, are systems of quantification, rendering heterogeneous situations and accomplishments *commensurable*. As explained by Desrosières (2010) benchmarking also contributes to reduce or manage uncertainty, but is aimed at building and negotiating spaces of commensurability by reaching agreements about measurement procedures and allowing for an arbitration of means and finalities. ‘Benchmarking’ translates otherwise incommensurable objects or situations into numbers. Such mechanism of quantification solves a series of difficulties of evaluation (of human actions and productions). Quantification is a manner to build objects with an (ideally) negotiated, conventional value. The quantification process binds individuals together within a given system of evaluation and constrains them to use the ‘language’ of quantification in comparing their respective merits, needs, etc. This makes of benchmarking a strategy perfectly articulated with the ideal of ‘due process’.

Quantification logics create epistemic communities and enable human evaluation processes, whereas algorithmic reason simply exempts from the burden of creating any type of community, of organizing interpretation or evaluation processes. The algorithmic rationality governing data-mining and profiling processes and the logic of ‘data-behaviourism’ carried thereby is simply at odds with the idea of (due) process or even, simply, with the idea of *appearance (in laboratory, in judicial court, ...)* of actual persons, situations, or objects. As will be developed further later on, algorithmic governmentality carefully avoids all types of confrontations, especially with those who are affected by its governmental effects. ‘Data-behaviourism’ *saves* the burden of testing, questioning, examining, evaluating actual facts and persons of flesh and blood, it avoids to make objects or persons *appear* in laboratories or in court in order to test or question their causes or intentions.

### **Data-behaviourism does not presuppose nor tests hypotheses about the world**

Unlike other uses of statistics – like uses in epidemiology – datamining does not presuppose nor reinforces or invalidates any hypothesis about the world<sup>17</sup> but merely appears as an agnostic, pragmatic, highly operational and effective manner to structure, in an anticipative way, the possible field of actions of ‘bodies’. This *agnosticism* contributes in making it appear both an *inoffensive* and a *universally valid* way of rendering the world meaningful. In particular, the ‘dropping’ of causality does not revive the deterministic metaphysics accompanying early uses of statistics, despite possible misinterpretations of the idea that in a data-rich environment such as ours, ‘anything can be predicted’ by ‘crunching numbers’ (Ayres: 2007). The computational turn is in no way a return to the deterministic metaphysics accompanying the advent of statistics in the nineteenth century and exhibited for example in the writings of Laplace (1814) - defending the idea that human actions, even those who seem to result from chance or human liberty, are in fact governed by laws as necessary as the laws governing phenomena in physics - or Quetelet (1835) - who constructed the idea of ‘the average man’. On the contrary, it is precisely *because* determinist thought does not appear plausible at all any more, and because human psychological motivations and singularities appear – maybe more than ever - incommensurable and unpredictable due to the complexification and massification of flows of persons, data and objects that algorithmic systems of statistical profiling appear so appealing today, relieving human beings from the harsh tasks of interpreting and evaluating facts in an epistemic universe devoid of common testing and evaluation criteria.

### ***The rate of intentionality, causality, experience and discourse have dropped***

Betraying the ambitions of modern, deductive, rationality linking observable phenomena (that is, phenomena pre-selected as objects of observation and assessment in view of explicit and determined interests) to their causes, the ‘algorithmic rationality’ follows an inductive logic. Indifferent to the causes of phenomena, ‘data behaviourism’ is anchored in the purely statistical observation of correlations (independent from any kind of logic) among data collected in a variety of heterogeneous contexts. This does not mean, of course, that the computational turn has a direct impact on the empirical (in)existence of causal interactions between phenomena or on the nature and degree of intentionality or rationality of human actions.<sup>18</sup> I merely suggest, parallel to what Benjamin (2000:115) noticed with regard to experience:

It is as if we had been deprived of a faculty of ours which seemed unalienable, the most ensured of all: the faculty to exchange experiences. One of the reasons of this phenomenon is obvious: the rate of experience has dropped. And it continues to fall indefinitely.<sup>19</sup>

Now, the *rates of causality and intentionality* – by ‘rate’ I mean our ability or willingness to *use* these categories to predict, regulate, and give account of phenomena - have dropped as well. Sometimes, ‘resources of meaning’ become unavailable. Walter Benjamin, back in 1933, identified the incapacity to transmit an experience, and thus the ‘weakness of experience’ as a consequence of the world war (survivors of battle fields came back mute, not enriched with experience they could share, but impoverished by the ‘irrepresentable’). The functioning of experience as resource for the production of meaning may also be impaired in situations where the ‘truth value’ attributed to experience or experiment decreases. Giorgio

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Agamben, for example, articulates the dropping of the rate of experience with the decline of the ‘authority to speak’:

Because experience finds its necessary correlate less in knowledge than in authority, that is, in speech and narrative, today no one seems to have enough authority to guarantee an experience; should one have it, one would not be touched by the idea of establishing an experience on the ground of that authority. That which characterizes present time is on the contrary that all authority is grounded on what cannot be experienced; to an authority that would be legitimated merely by an experience, no one would grant any credit. (Agamben, 2002: 26)<sup>20</sup>

In the context of data-mining and profiling, the same thing happens: patterns and profiles are not merely competing with testimony, expertise, discourses of authority or confession, they make linguistic modalities of ‘evidence’ appear obsolete compared to the operability, immediacy and objectivity of data-behaviourism. If, thus, the computational turn does not have any impact on the *phenomena* of causality and human agency and the reflexive capabilities it presupposes, and leaves them untouched, it nevertheless deflects concerns or attentions away from these previously privileged perspectives of causality and intentional agency or individual and collective ‘authority’ (that is, for our purpose, the capability to ‘author’ one’s actions, to have the ‘authority’ to give account of one’s actions meanings).

### ***The obsolescence of tests and challenges***

The ‘algorithmic reason’, immanent to the digitally recorded ‘real’, escapes the types of trials, tests, examinations, experiments, and other *épreuves* or challenges which usually appear essential to attest to the robustness, truth, validity or legitimacy of claims and hypothesis formulated about reality in the scientific, the judicial and even the existential domains (Ronell: 2005). Data-behaviourism simply appears to have rendered the *interpretive* time and space of *trial or process* irrelevant. It is a regime of truth evaluated against criteria of cost-effectiveness and operability. The computational turn thus attests to the decline of *interpretation* to the benefit of something much more immediate (and immediacy is one of the connotations usually attached to efficiency), which is statistical inference operated on the basis of correlations, while validation of patterns or profiles happen through a kind of ‘backward performativity’: anything that would happen and be recorded, never mind whether it fits a pre-existing pattern or profile or not, will contribute to the refinement and improvement of the ‘statistical body’, and ‘validate’<sup>21</sup> the methods of automatic interpretation or correlation to which they are subjected. This does not mean that systems are not checked at all, that they are not monitored as to ensure that they perform in function of what they are supposed to achieve: it is just that these kinds of checks and tests are confined to check the system’s operability. The operability, real-time character, plasticity of the ‘algorithmic reason’ are at odd with the interruption, the distance, the delays which are the pre-conditions for a critical appraisal of any kind of produced knowledge. If ‘predictive data mining’ does not re-present reality, its ‘real time’ operability, the fact that decisions are increasingly taken on the basis of profiles, the relative performativity of these profiles, leads, *de facto*, to a situation of quasi-indistinction between algorithmically produced ‘reality’, and the ‘world’ from which it is supposed to emanate from, whereas the *distinction*, the *non-coïncidence* of things and their re-presentations are necessary to leave open the space of critique.

This truth regime is often praised for its ‘objectivity’ not for the reason that it would have been ‘robust’ enough to pass the usual tests of scientific validity or political legitimacy. On the contrary, the ‘force’ of the knowledge produced by algorithms is proportional to the

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difficulty to submit it to any convention of quantification, or to any kind of test. The ‘force’ of algorithmic governmentality is thus proportional to its ‘non-robustness’ (if one takes robustness to be the capacity to sustain challenges and critiques). This ‘non-robustness’ is also what makes the esthetics of algorithmic governmentality: an esthetic of fluidity, continuity, real time adaptation, immediacy, dynamism, plasticity, non-obtrusiveness, seamlessness... Compared to such a powerful esthetics, human interpretation and subjective accounts of reality appear rather inesthetic (time-consuming, always belated, perhaps more authentic but less trustworthy, perhaps more critical but less operational, etc.).

## **Algorithmic governmentality**

The spread of ‘data behaviourism’ accompanying the deployment of data-mining and profiling systems in a diversity of applications inaugurates an unprecedented regime of power which I have previously called ‘algorithmic governmentality’.

### ***Algorithmic government is spectral***

The focus on anticipation and pre-emption shifts the target of ‘power’ from actuality, and from the present wilderness of facts, to potentiality, to the risks and opportunities (which are the *virtual* dimension of what is here and now, that is, the portion of irreducible uncertainty that one has renounced trying to render commensurable<sup>22</sup>), the future which it tries to tame through anticipative framing of informational and physical contexts. ‘Data-behaviourism’ is thus an anticipative coincidence with a ‘real’ which it is aimed at preventing and which, if the system works properly, will thus never happen<sup>23</sup> (this is the case when data-mining and profiling is are used in security scenarios) or with a ‘real’ with which it will entertain relations of backwards performativity (or feedback loop performativity). The ‘probabilistic subject’ is not the same as the actual, experiential, present and sentient subject.

The algorithmic government thus contrasts with what we know about a neoliberal mode of government which produces the subjects it needs. Through the ubiquitous injunction – and its internalization by subjects - of maximization of performance (production) and enjoyment (consumption), neoliberalism produces ‘hyper-subjects’ having, as their normative horizon, the continuously reiterated project of ‘becoming themselves’, and passionately engaged in ‘self-control’, ‘self-entrepreneurship’, ‘self-evaluation’.<sup>24</sup> Algorithmic governmentality does not produce any kind of subject. It affects, without addressing them, people in all situations of possible criminality, fraud, deception, consumption,... which are situations where they are not requested to ‘produce’ anything, and certainly not subjectivation. Rather, algorithmic governmentality bypasses consciousness and reflexivity, and operates on the mode of alerts and reflexes.

### ***Unlike government by the law, algorithmic government affects potentialities rather than actual persons and behaviours***

Classically, ‘governing’, that is, producing a certain ‘regularity’ of behaviours (among citizens, customers, patients, students, employees etc.) consists – at least in liberal countries –

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in inducing individuals to choose, in the range of things they may do or may abstain from doing, those things which best fit the interests of the community. In *Nomography, or the Art of Inditing Laws*, Bentham (1934) explains the process through which compliance with the Laws is produced:

(...) to be productive of any of the effects intended by it, the law of the legislator requires an appendage, which, for the production of its effects, is never needed by the head of a private family. With reference to the law just mentioned, this appendage may be styled the subsidiary law: of this subsidiary law, the business and object consist in the presenting to the party or parties subject, inducement directed to the purpose of producing on their parts compliance with the principal law.

And here, then, we have existing on each occasion, in necessary connexion with one another, two distinct species of law; namely, 1. The principal, or say the direction-giving; 2. The subsidiary, or say the inducement-giving law.

These distinct species of laws are addressed to two different classes of persons:—the direction-giving law is addressed to the person or persons at whose hands compliance is constantly looked for in the first instance;—addressed always to a person, or set of persons other than the above, is the subsidiary, or say inducement-giving law.

This person, or set of persons, is different, according as the inducement employed by the lawgiver is of the nature of evil or of the nature of good.

If it be of the nature of evil, the inducement is styled punishment; and the sort of person to whom this subsidiary law is addressed is the judge: and the act which he is calculated to perform, in the event of non-compliance with the will expressed by the principal law, is an act of punishment—an act to which exercise is given by producing evil, or say pain, on the part of him by whom compliance with the will expressed by the principal law has failed to be made.

Such inducements/disincentives do not affect in any way the *potentialities* (or *puissance d'agir*) of individuals, of the persons to which the first type of laws is addressed.<sup>25</sup> Describing the 'potentialities of the legal subject' - that is, to describe the field of immune possibilities, of what remains immune from attunements by the Law - would require a multi-level analysis. It should, on the one hand, describe how the operations of the law impact on individual conducts. Legal commandments deserve much more careful attention than the attention I can devote to the topic in the present chapter. Beyond the blunt statement that legal constraints are not the same as physical constraints or pre-conscious constraints – leaving individuals the ultimate choice to obey or disobey the law, be it at their own risks, distinctions exist in the Law between 'rights to' and 'rights not to'. That the (presumed) calculating selves obey the law because, after rational deliberation, they believe that the disadvantages ensuing from the risk of being punished for disobedience if caught outweighs the gains or advantages he may expect from disobeying<sup>26</sup> does not by itself impact (increase or decrease) the individual *faculty* to comply or not to comply with the law. In the liberal legal system, the integration of the norm by the subjects presupposes and relies on their reflexive capabilities and their capacities to balance the expected pleasures and pains ensuing from either compliance with or violations of the Laws. But choosing compliance does not affect their (theoretical and practical) faculty to breach the Law. This 'potentiality', which is, according to Giorgio Agamben, a 'faculty', something which does not need being actualized in order to exist but which does not disappear either in case of actualization,<sup>27</sup> may well be a crucial element to 'define' what subjectivity is about, in a perspective taking into account the inheritance of critical scholarship of the sixties and seventies. From then on, the 'subject' is not any more defined by his/her possibility of self-positioning, but by his/her capability to continuously and interactively discover a 'reality' in appropriate ways, a capability to be present in that reality, that is, to open and expose him/herself in it while maintaining him/herself as 'self', that is, as

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project to be and become him/herself (Haber, 2007: 213). This is what the ‘virtuality’ of the subject is about, and one sees that virtuality is indeed paradoxically *definitional* of the subject.<sup>28</sup>

In situations where there is a (private or public) need or wish of ‘government’,<sup>29</sup> the ‘success’ of ‘algorithmic reason’ is proportional to its ability to help public and private bureaucracies *anticipating* what bodies and persons *could do*<sup>30</sup> by allowing them to *perceive* (rather than to understand) that which is not (yet) perceptible to ordinary senses without having either to test, experiment, interrogate material (human or non-human) bodies<sup>31</sup> nor to rely on testimonies, confessions, expertise or other discourse of authority. The computational turn renders persons and situations immediately and operationally ‘meaningful’ through their automatic subsumption into (*future* opportunities or risk) patterns or profiles, without the interpretative detour of trial or process and even without concrete, material confrontation or encounter with the *actual* objects or persons concerned. These unprecedented algorithmic statistical practices combine with the contemporary dominance of new regulative principles (often inspired by a new set of fears of imminent ‘catastrophes’) such as precaution and risk minimization, privileging detection, classification, anticipative evaluation and prevention or pre-emption of what bodies could do, over topical efforts to remedy the causes of sub-optimal actual, present situations.<sup>32</sup> Unlike government by the law, the ‘force’ of algorithmic government consists in separating subjects from their ability to do or to not do certain things. Its target – as its focus on prediction and pre-emption attests – is *contingency as such*, the conditional mode of the formula ‘what a body *could do*’,<sup>33</sup> whereas this conditional mode is definitional of *agency* as such:

But what problems, what way of being, feeling and acting does the word *agency* sum up or signal? In what way could it help us? It could help us in suspending the metaphysical and scholastic opposition between liberty and necessity, in departing from the opposition between sociologies of determinism and philosophies of ‘miracle’, ‘act’ or ‘event’. It could help us to refuse to perceive liberty as the other of power or domination. To not presuppose that liberty has its source in an absolutely sovereign subject. To think of liberty as production and as relation, and, indissociably, to think of liberty as productivity: as practical capability to be affected and produce effects. To orient thought towards an empirical, pragmatic approach of the question of emancipation: an art of *agency*. (Vidal, 2008: 17-23).<sup>34</sup>

Algorithmic governmentality thus exhibits a new strategy of uncertainty management consisting in minimizing the uncertainty associated to human agency: the capacity humans have to *do or not to do* all they are physically capable of. Effected through the reconfiguration of informational and physical architectures and/or environments within which certain things become impossible or unthinkable, and throwing alerts or stimuli producing reflex responses rather than interpretation and reflection, it affects individuals in their agency that is, in their *inactual, virtual* dimension of potentiality and spontaneity (which legal inducements and dissuasions leave untouched), including with regard to potential disobedience.

Applications such as dynamic biometrics, intelligent video-surveillance, individualized recommendations systems, smart environments, ambient intelligence, and autonomic computing appear, primarily, as solutions to an epistemic governmental problem: the radical indeterminacy and incommensurability of contexts and behaviours. Yet, these new kinds of statistical treatment of raw data, not less than ‘classical’ statistics (Dosroisières, 2008), are at the same time ‘cognitive interfaces’ productive of specific kinds of ‘operational knowledge’ (in the case of data-mining and profiling, probabilistic knowledge about intentions, propensities, preferences, risks and opportunities carried either by individuals or situations) and instruments of ‘governmental’ channelling (rather than regulating or coordinating) social

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activities and of guiding public interventions. This ‘computational turn’ upsets traditional modalities of political, legal and social production and enforcement of norms. As such, the resulting norms (patterns or profiles) elude usual tests both of epistemic validity and of political legitimacy, despite having, when embedded in systems of detection, classification and anticipative evaluation of human behaviours, governmental effects in the various spheres where they apply. This ‘algorithmic governmentality’, and its self-enforcing, implicit, statistically established norms emanating, in real time, from digitalized reality, contrasts with ‘political governmentality’, and the imperfectly enforced, explicit, deliberated, character of laws resulting from time consuming political deliberation. Therefore, depending on the context and circumstances, the adjunction or substitution of algorithmic governmentality to political governmentality may be felt as a welcome, cost-effective objectivation and automatization of normative production and enforcement, or as a dangerous evolution towards further depolitization of normative production and as a threatening erosion of the protective and recursive role of the judicial process.

### **Subject matter(s): potency**

*Algorithmic governmentality avoids all kinds of confrontation with human subjects.*

The pre-emptive character of algorithmic governmentality, the fact that it operates often at a pre-conscious stage (framing conducts by ‘throwing alerts’ – and nothing is less intentional (in the sense of conscious direction of attention) than being ‘alerted’ or having one’s attention attracted by something) following the automatic and anticipative evaluation of what bodies could do (potentialities) rather than of what people are actually doing, the fact that profiling spares the burden of making persons appear as agents, leave no occasion for persons to become ‘subjects’ of algorithmic governmentality. Algorithmic governmentality does not allow for the process of subjectivation to happen, because it does not confront ‘subjects’ as moral agents (avoiding to question them about their preferences and intentions, about the reasons and motivations of their actions) but attunes their future informational and physical environment according to the predictions contained in the statistical body. The only ‘subject’ algorithmic governmentality needs is a unique, supra-individual, constantly reconfigured ‘statistical body’ made of the infra-individual digital traces of impersonal, disparate, heterogeneous, dividualized facets of daily life and interactions. This infra- and supra-individual statistical body carries a kind of ‘memory of the future’ whereas the strategy of algorithmic governmentality consists in either ensuring or preventing its actualization.

Algorithmic governmentality does not need to tame the wilderness of facts and behaviours, nor does it aim at producing docile subjects. One may even say – against part of the surveillance studies community – that algorithmic governmentality decreases the risks of anticipative conformity of behaviours or the chilling effects associated with ubiquitous surveillance. This is because, unlike ‘visible’, ‘scopic’ surveillance generating ‘norms’ which remain, broadly, intelligible to individuals, and available for them to compare and attune their behaviours, algorithmic governmentality carefully avoids any direct confrontation with and impact on flesh and blood persons. One may even say that algorithmic governmentality simply ignores the embodied individuals it affects and has as sole ‘subject’, a ‘statistical body’, that is, a constantly evolving ‘data-body’ or network of localizations in actuarial tables. In such a governmental context, the subjective singularities of individuals, their personal psychological motivations or intentions do not matter. What matters is the possibility to link

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any trivial information or data left behind or voluntarily disclosed by individuals with other data gathered in heterogeneous contexts and establish statistically meaningful correlations. The process bypasses individual consciousness and rationality (not only because operations of data-mining are invisible, but also because its results are unintelligible for the instruments of modern rationality), and produces their 'effects of government' by anticipatively 'adapting' the informational and physical environment of persons according to what these persons are susceptible to do or wish, not by adapting persons to the norms which are dominant in a given environment.

### ***Beyond the legal subject as functional fiction, rethinking the subject's potency***

I don't intend to rehabilitate the autonomous, unitary, perfectly intentional and rational subject, the fundamental unit of liberalism. As for the 'subject', or the 'person', I hypothesize that there has never been anything to be nostalgic about. The rational, liberal, individual subject, or the autonomous legal subject have never been anything else than useful or even necessary functional fictions without empirical, phenomenal correlates, despite their merits and the fact that, in a series of domains, they need to be presupposed. However, the legal subject must be presupposed by the law, even though this subject is in no way an empirical entity. This is powerfully explained by Cléro (2007: 76):

One may, for example, challenge the existence of the *I*, of *me*, challenge the characteristics one spontaneously or traditionally attach to *I* or *me*, that of being a substance, of being one, of existing individually and as a person, one may also refute the paralogisms which pretend to demonstrate its characters. And yet, one may use the fiction of the *me* in order to orient moral behaviours, finalize legal conducts, organize value systems. The person, challenged at the ontological level, is rehabilitated at the deontological level: is it reasonable? But, also: do we have the possibility to do otherwise? Could we, suddenly, reorganize our Law, our ethics, without the help of the notion of *person*, notwithstanding the weakness of its ontological value? Unable to operate such a change, I envision my life as the realization of my person, the life of others as worth promoting on the same ground or, at least, worthy of the same respect. Let's say that the notion of *person* is a fiction.

I thus happily endorse the anti-humanistic posture of Althusser (subjects are constituted through ideological interpellation, and do not pre-exist such interpellations) Butler (subjects constitute themselves by 'giving account of themselves', and it is this 'gesture' of 'giving account', not the 'truth' or 'falsity' of what they are telling, that constitutes the subjects), or – Derrida (1990)<sup>35</sup> according to whom the law presupposes and constructs the legal subject (one appears before the law with our will and imagination, but without the law we would not be subjects) or, more generally, in the only possible perspective taking into account the inheritance of the sixties and seventies' critique :

From now on, what we have to deal with is a subject defined not by the possibility of self-positing, but the continuous ability to interactively discover a reality, in ad hoc ways, and to be present in it while rendering this real present, or, said otherwise, to open and expose oneself in it while maintaining oneself as 'self', that is, as a project of being and becoming oneself. (Haber, 2007: 213)

These 'pragmatic' accounts understand the 'self' as a process rather than a phenomenon, a process happening *between* individuals, in a space that both presupposes and constitutes 'the common'.<sup>36</sup> The self – as processes of subjectivation and individuation - is an interstitial matter, and a contribution to the continuous, never achieved 'effort of individual and collective recomposition of the lost totality' - never mind the symbolic nature of such totality (Bourriaud:1994).

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Understanding that the target of algorithmic governmentality is the *inactual, potential* dimensions of human existence, its dimensions of virtuality, the conditional mode of what people ‘could’ do, their potency or agency, allows us to understand what is at stake here: a deprivation which does not have as its opposite, the possession of oneself.<sup>37</sup>

What we care about is certainly not a mythical transparency of the subject to himself, its pretended pre-existence, as a fixed entity, but rather the continuous processes through which *subjectivation and individuation occur* and thus the virtual and utopian dimensions of human existence.<sup>38</sup> Walter Benjamin described utopia as an excessive anticipation, or an anticipation always in excess, like the gesture of a child learning how to take things by throwing his hand towards the moon (Adensour, 2010: 99). These sorts of gestures in excess are *designs*. They give shape to our projects. They draw *motives*. By these gestures, we also take ‘position’ that is, we situate ourselves, despite the atopy of algorithmic governmentality, we take consistence (both as physical entities and auto-biographical trajectories) in an ‘outside’ opened by our gesture (or enunciation), as carriers of ‘events’ (which are nothing but the encounter of (unpredicted) circumstances and meaning making gestures). ‘Motivation’ is the drawing of ‘motive’, the singularity of design, beyond truth and falsity. Taking position, making such gesture, does not so much require ‘equal information’, privacy or transparency enhancing technologies etc. which keep us sealed inside the ‘algorithmic reality’, as it requires ‘outer’ spaces and time for heterogeneous modes of creation of reality.

Transparency enhancing technologies (TETs) and Privacy enhancing technologies (PETs) etc. pretend to empower individuals and allow for contestation but as they are operating ‘within’ algorithmic governmentality, they are disabled, because algorithmic governmentality is a mode of governmentality without negativity (no organization of questioning or challenge of either cognitive or normative productions). There is just no space nor time for contesting (even if one gets to the point where everything becomes transparent to everybody). Recalcitrance must come from outside, from ‘consistent’, that is, sentient bodies animated with a perceptive life (intensity) whose scope is not confined to the ‘infosphere’.

How do we find an ‘outside’, an excess of the world over reality, a space of recalcitrance from which to gain solidity and to practice critique?<sup>39</sup> Rather than resurrecting personological approaches (epitomized by the possessive individualism of data protection regimes) which would be both ill grounded and ineffective, we should realize that the fundamental stake – what has to be preserved as a resource antecedent to both the ‘subject’ and sociality, as excess of the world over the algorithmic reality, is ‘the common’, this ‘in between’, this space of common appearance (*comparution*) within which we are mutually addressed to each others. The mode of address that links us together is essentially linguistic.<sup>40</sup> Language is the polyphonic ‘shape’ of our togetherness, of our common projections of ‘becoming’. ‘But how could one come back to what has never been?’, Frédéric Neyrat asked in his beautiful book about Artaud and the ‘Western spell’.

‘Here, it is not / drawing / in the proper meaning of the word, of some incorporation / of reality in the drawing’,<sup>41</sup> it is not about incorporating a reality (the common), that would have been antecedent to the drawing, as this reality (of the common) is precisely that which is lacking. (Neyrat, 2009:54)<sup>42</sup>

To the extent that subjects have to give account of themselves despite the fact that they may not have mastered the circumstances which have made them act in a certain way, the ‘motive’ or ‘drawing’ they ‘make’, does not ‘re-present’ the antecedent reality as much as it opens new political possibilities at the very location where the limits of re-presentation and

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representability are exposed: in this interstice between ‘the world’ and ‘reality’, and this is the ‘outside’ we were looking for (Butler, 2000).

Here one perceives, at last, that ‘due process’, ‘subjectivation’ and ‘critique’ may well be three different names for a same exigency: we speak, precisely, because we are on the edge of the abyss, because no subject is antecedent his enunciation, and thus, to rejoin a ‘common’ that is crumbling under our words, that is never securely acquired, that happens only as unexpected fulguration. The exigency is this one: convening this impersonal form of the common through a language which gives us individual and collective consistence – at safe distance from both algorithmic profiling and neoliberal injunctions of performance and maximization of *jouissance*.

How then could we make use of the technologies of the information society so as to re-enchance the common? By making this re-enchancement of the common their primary goal, reconfiguring their design accordingly when needed, by protecting that goal by law, by pursuing that goal in our practices. ‘Putting man in the machine’, following Félix Guattari’s invitation, could mean just this: producing interstices in which the common may happen – even if these interstices should interrupt or grip the fluidity of our techno-capitalist reality, thereby really producing crisis, at last, allowing for a recomposition of what, for human beings, for the common, appears a humanely consistent reality.

These consistencies need, in order to happen, heterotopic spatio-temporal spaces interrupting digital and capitalistic flows – such as the judicial, theatrical, literary, laboratory scenes. These scenes guarantee a certain heterogeneity of the modes of construction of realities against the ubiquitous deployment of an operational but ‘neutralizing’ and meaningless algorithmic rationality.

## Conclusion

Algorithmic government, failing to acknowledge anything else than infra-individual data and supra-individual profiles, and avoiding confrontations with subjects either physically or linguistically (testimony, avowal, and other forms of biographical representation are becoming useless in the big data era), may be understood as the culmination of a process of dissipation of the institutional, spatial, temporal and linguistic conditions of subjectivation for the sake of the ‘objective’ and operational pre-emption of potential behaviours. An algorithmic government that frames the future, affecting individuals and groups on the mode of alert throwing and reflex responses but which never confront them nor exposes itself to be challenged by human liberty eradicates the conditions of critique, deprives human beings of their fundamental potency, which is their capacity to emerge as individual and collective subjects in a ‘common’ which is interstitial between the world and reality. The very fundamental differences between government by law and government by algorithms are certainly that:

- the law preserves individual and collective agencies or potencies, whereas the preemptive stance of algorithmic government and its affectation of individuals either at a pre-conscious stage or by reconfiguration of their environments so that certain courses of action become impracticable, does not preserve such agency or potency;
- because it organises the challenge of its own normative productions (through judicial process and legislative processes), the law opens time and spaces (with specific rituals etc.)

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interrupting the fluidity and real-time metabolism of algorithmic processes, and provides a series of scenes where norms can be made visible, intelligible and contestable, where individual and collective subjects may become consistent and give shape to the common.

- Maybe more fundamentally, because it requires people to talk, to make use of language, after the facts, to recall, re-present the facts, re-draw the motives of their acts; the law (just as theatre, or literature) – especially in the context of judicial process – provides a scene where subjects perform their ‘authorship’, with an authority to speak, to give account of themselves. Becoming subjects, people thereby re-historicize the time against the total synchronization of a digital world space of which all points are all immediately contemporaneous (Fischbach, 2011: 110-112) in a ‘real time’, depriving people from duration (‘real time’ is not a dimension of life, as life is always experienced over time and not as a juxtaposition of successive instances of ‘now’). They contribute to a legal construction of reality at odds with the algorithmic construction of ‘their’ profiles, as well as with neoliberal productivity and enjoyment maximizations injunctions. These privileged (judicial, legislative, theatrical, literary,...) scenes are threatened today not by technologies (they could as well be used to re-enchant the common, facilitate enunciations and emancipation), but by that of which the success of algorithmic governmentality is but a symptom ; a mode of government motivated almost exclusively by the goal of fluidification (or liquidation) of existences, requiring the suppression of all that would oppose the indistinctiveness of the world and a numerical, calculable reality. Realizing the magnitude of the phenomenon, and finding, collectively, new configurations between human existents, the law and technologies, this would be our tasks for the present and for the future, as there is no need of data mining to guess that these tasks are not meant to ever be achieved.

## Notes

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\* I wish to express all my gratitude to Mireille Hildebrandt for her thoughtful and stimulating comments to this chapter, as well as for earlier enlightening conversations.

<sup>1</sup> The term ‘purpose’ may appear counter-intuitive in this context, speaking of data-warehouses which, by definition, contain massive amounts of data collected in heterogeneous contexts, for a variety of initial purposes which, at the stage of storage in data-warehouses, have become irrelevant. Unlike traditional statistics – which were performed in view of confirming or infirming specific hypothesis about the ‘real’, or were performed by government officials in order for the State to gain specific and quantified knowledge of its human and material resources – the aim of data-mining is much less pre-oriented towards any specific end.

<sup>2</sup> The United States General Accounting Office, defines data-mining as ‘the application of database technology and techniques (such as statistical analysis and modelling) to uncover hidden patterns and subtle relationships in data and to infer rules that allow for the prediction of future results. As has been widely reported, many federal data mining efforts involve the use of personal information that is mined from databases maintained by public as well as private sector organizations’. The objectives of data-mining, according to the same report, include ‘improving service or performance; detecting fraud, waste, and abuse; analysing scientific and research information; managing human resources; detecting criminal activities or patterns; and analysing intelligence and detecting terrorist activities.’ (General Accounting Office: 2004)

<sup>3</sup> Farecast, for example, a part of Microsoft’s Bing search engine, advises users about the optimal time to buy their airplane tickets, predicting when the prices are the lowest, by examining 225 billion flight and price records.

<sup>4</sup> By ‘government’ I mean the practice of framing the fields of actions of others. ‘Government’ in this sense is not the monopoly of public authorities. Private actors – internet service providers, operators of search engines and social networks, or, more generally, marketers, employers, insurers, parents, school teachers etc., to the extent that they frame the possible field of perceptions and actions of others, govern.

<sup>5</sup> For a detailed description of algorithmic governmentality, see Rouvroy and Berns (2010).

<sup>6</sup> See for example Boltanski and Thévenot (2005)

<sup>7</sup> Despite the fact that human intervention is of course involved in the initial design, training (in the case of learning algorithms) and supervision of algorithms, the nature and extent of this human intervention gradually blurred with their growing 'autonomic' capabilities of algorithms.

<sup>8</sup> On interpretation as essential role or function of humanities, and on the absolute necessity of thinking of interpretation as essential step in the production of knowledge, see Citton (2010).

<sup>9</sup> See for example Zarsky (2011: 327): 'if data mining is accepted by the legislature, it might only require limited judicial review. This is as opposed to the use of profiles and field officer discretion, which calls for greater scrutiny.'

<sup>10</sup> Events of the physical world may leave *traces* (footsteps imprints in the sand, animals' or plants' pheromones left behind and acting as messages to the other individuals of the same species, photographic imprint of light on the photographic paper, ...). These traces may well then be translated into data, but the data themselves are in no way *traces* by themselves. They may re-present traces but are not in themselves an imprint of some event of the physical world on a reactive surface. Of course an objection could be raised on the ground that internet users 'leave traces' on the internet but here again, I would suggest that, because, from an algorithmic point-of-view, we don't exist *as subjects* in this context, but merely as *a trans-individual, continuously evolving network of data points*, the data we release on the internet, as soon as it is decontextualized, anonymized and aggregated with data released by others in a multitude of heterogeneous geographic and temporal contexts, *are not, individually, traces of us*, but function as pure 'signals' triggering different kinds of aggregations and re-constructions of operational meanings.

<sup>11</sup> 'Crunching numbers' may well be a 'new way to be smart' (Ian Ayres), but as crunching numbers merely provides a quantitative account of (potential) reality, the 'knowledge' it produces is unavoidably reductionist, 'only' taking into account aspects of the world which can be translated into data-signals, and enrolled in algorithmic calculation.

<sup>12</sup> Signals can be calculated quantitatively, independent from their meaning (Eco, 1976:20). See also Genosko (2008).

<sup>13</sup> My translation.

<sup>14</sup> Algorithmic governmentality, then, appears as the perfect embodiment of the capitalist world whose texture is made of liberated flows of deterritorialized, de-coded, neutralized signals. See Guattari (1977:264).

<sup>15</sup> This may even become truer in the era of cloud computing.

<sup>16</sup> My translation.

<sup>17</sup> 'Profiling in the European Union: a high-risk practice', *INEX policy brief*, N.10, June 2010: 'while more classical statistical approaches aim at validating or invalidating proposed correlations believed to be pertinent answers to existing questions, with profiling there are no preliminary questions. The correlations as such become the 'pertinent' information, triggering questions and suppositions.' (Gonzalez-Fuster, Gutwirth, Ellyne: 2010)

<sup>18</sup> And one may of course discuss whether causal relations do exist by themselves or are merely attributed by men, but this does not really matter for our current discussion, as the existence or inexistence of 'natural' causal relations is not affected by the computational turn.

<sup>19</sup> My translation.

<sup>20</sup> My translation.

<sup>21</sup> This is not a true 'validation' though. True validation presupposes some external point from which the evaluation is performed. Here, 'validation' is immanent to the system awaiting validation.

<sup>22</sup> Anything that is 'actual' is always surrounded by a cloud of virtual images. Pure actuality does not exist. (Deleuze and Parnet, 1996: 179).

<sup>23</sup> This does not mean that the system will not detect false positives. Yet, the proportion of such false positives will be impossible to assess.

<sup>24</sup> See Leblanc (2007).

<sup>25</sup> See Hohfeld (1913).

<sup>26</sup> There are of course many other reasons explaining compliance with the Law, including the coherence between the legal content and social norms and expectations, habits, deference to authority etc.

<sup>27</sup> See Agamben (2002).

<sup>28</sup> On the virtual dimension of the subject, and its relation with collective utopia, see Rouvroy (2011a).

<sup>29</sup> By 'government' I mean any action, performed by private or public agents, aimed at structuring or framing the possible field of actions of others, no matter for which specific purposes, and no matter the success or failure of such enterprise. Governing, thus, presupposes a certain amount of knowledge of what others 'could do', of what would deter them or incite them in behaving in certain ways or choosing certain trajectories rather than others. Alternatively, when such knowledge is unavailable – and it is increasingly unavailable given the dissipation of homogenous social microcosms and the correlative decline of implicit social norms – 'governing' requires the deployment of new logics, strategies and tactics. My hypothesis is that the computational turn contributes to the renewal of these logics, strategies and tactics of government.

<sup>30</sup> A project which would have seemed impossible to Spinoza. According to him, ‘one does not know what a body can do...’ See Spinoza (1990) and Deleuze (2003:28).

<sup>31</sup> In the context of machine learning, the ‘tests’ are not targeted at ‘bodies’ but at ‘data’.

<sup>32</sup> See, for example, Neyrat (2008).

<sup>33</sup> Deleuze and Guattari (1980: 318): ‘A body is only defined by longitude and latitude, that is, by the whole of material elements that belong to it under relations of movements and rest, speed and slowness (longitude), the whole of intensive affects it is capable of under a given power or degree of potency – or rather according to the limits of this degree.’ [My translation]

<sup>34</sup> My translation.

<sup>35</sup> See also Sarat (1995).

<sup>36</sup> For further elaboration of the idea that the common is both what is threatened by and the privileged resource for a critique of algorithmic rationality, Rouvroy (2012).

<sup>37</sup> The challenge also consists in finding a critical perspective after the decline of the concept of alienation. On this, see Haber (2007: 151).

<sup>38</sup> For further developments around this idea see Rouvroy (2011a).

<sup>39</sup> See Rouvroy (2011b).

<sup>40</sup> Nancy (2010: 12): ‘Le commun n’associe ni ne dissocie, il ne rassemble ni ne sépare, il n’est ni substance ni sujet. Le commun c’est que nous sommes – ce terme pris dans sa pleine teneur ontologique – dans le renvoi les uns aux autres (ici encore, laissons les autres existants). L’élément de ce renvoi est le langage. Celui-ci nous adresse les uns aux autres et nous adresse tous ensemble à ce qu’il fait essentiellement surgir : l’infini d’un sens que nulle signification ne remplit, et qui, cette fois disons-le, enveloppe avec les hommes la totalité du monde avec tous ses existants. (...) Le sens du monde n’est rien de garanti, ni de perdu d’avance : il se joue tout entier dans le commun renvoi qui nous est en quelque sorte proposé. Il n’est pas ‘sens’ en ce qu’il prendrait références, axiomes ou sémiologies hors du monde. Il se joue en ce que les existants – les parlants et les autres – y font circuler la possibilité d’une ouverture, d’une respiration, d’une adresse qui est proprement l’être-monde du monde.’

<sup>41</sup> Artaud (2004:16) cited by Neyrat (2009: 54).

<sup>42</sup> My translation.

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