**Face abstraction!** **Biometric identities and authentic subjectivities in the truth practices of data**

**Olga Goriunova**

This is a post-peer-review, pre-copyedit version of an article published in *Subjectivity*, special issue ‘Digital Subjects’, ed. Olga Goriunova, accepted December 2018, forthcoming spring 2019. The final authenticated version is available online at: https://doi.org/10.1057/s41286-018-00066-1

**Abstract**

On social media, the face—and the body—act as sites of subjectivity, whose authenticity is anchored in the “truth” of verifiable identity. This claim to authentic subjectivity is grounded in the promise of access to the “real person” as a biologically unique identity. Establishing the supposed truth of such identities is often done through using techniques such as facial biometrics. I demonstrate how contemporary data modalities construct biologically unique identities and authentic subjectivities as two end poles connected through data practices. These practices seek to designate “reality” in order to establish their own validity and usefulness. Overall, I argue that current data practices designate the face and the body as “the real world” to generate further forms of abstraction that can be anchored upon the indexical promises of physical truths. These data practices then process the biological, the socio-political, the imaginary, layering and stitching abstractions together.

**Keywords:** subject, body, biopolitics, face, authenticity, identity, data analytics, biometrics, abstraction, truth

**Introduction**

In this article, I start with the human face. Further on, I discuss how the face is measured in biometric identification, and how notions of identity and subjectivity are updated to link with and fit new contemporary modes of abstraction grounded in what is offered as biological “truth” that can be extracted via computational means. But in the end, this is an article about how the body ends up promising the “truth” of life, which data practices, keen to capture the world, seek, in order to designate their reality and validate their procedures. I finish with a short discussion of how non-biometric phenomena, which operate at the level of symbolic expression and cultural tendencies, get layered upon biometric data procedures. This is part of the quest for data practices to become grounded, and to capture more than life: the world itself.

In four distinct sub-chapters, I introduce the face, then discuss identity as a biologically grounded claim of unique composition and subjectivity as a relational and non-unified complexity of lived experience, offer an analysis of facial biometrics as a computational practice constructing new version of identity, and then finish with soft biometrics and the life/world itself. These are all discussed in relation to the calculative data practices that abstract persons into digital subjects, the topic of this special issue. Although I write about subjects, I aim to arrive at the figure of life/world itself, as both an attempt to go beyond human exceptionalism and as an example of the lure that calculative data practices follow in their omnivorous processing of the world, which is not exclusively bound to humans.

**Face**

The face is a dynamic, multiple, distributed entity acting biologically, communicatively, emotionally, and psychologically (Black 2011). The face has been discussed as the site of exposition of “being” (Agamben 2000) and an ethical encounter with the other (Levinas 1969). The face takes part in the subjectification that proceeds partially through its functions as the site of communication. Black writes: “The very complexity of the process which creates our internalized conceptualizations of faces results from the fundamental irreconcilability of the living face with fixed, stable identity and representation” (2011, 18). Stabilising this “profoundly unstable phenomenon” and making it “the enduring marker of a particular, stable identity” requires tremendous effort, writes Black (2011, 20). Nevertheless, it is arguably this very effort that contemporary visual practices structured around social media platforms and digital infrastructures rely on, in order to affirm the face as the mark of a rich subjectivity that must be unique and true because it is linked to a particular, identifiable, and in this sense, truthful, biologically-inspired identity recorded as data.

The artist Hito Steyerl writes about the omnipresent “terror of total Dasein” that promises “unmediated communication” and “unalienated experience” and which culminates in truthful encounters between the individual and others (Steyerl 2015). This is achieved through the constant generation of presence—often the presence of the face, and thus subjectivity, through, for example, selfies and other images. But virtually no one would upload a “raw” unedited selfie or an unfortunate photograph. Pictures are pre-selected according to what they stand for, according to taste, conventions, and purposes, and are processed by “beautifying” apps and other image-editing filters built into social media platforms and camera apps. Clearly images offer an encounter with the make-believe, or invented faces, and subjectivities that are more hidden than exposed. Yet, these photos are still pictures of someone’s face, part of a mortal body, and they act as proof of a biologically unique, continued existence that will undoubtedly cease to be at a certain point in time. However posed or airbrushed the images are, they are factually biologically true (pictures of faces of living humans) in their technical and cultural fiction (the ways in which they are composed, presented, circulated, and perceived). Continuous generation of these visual forms therefore produces the type of authenticity that Steyerl refers to above, which rests on the biological principle: faces promise authenticity as they supposedly express complex subjectivities, but they do it by acting as identification documents, ensuring that the pictures and posts are of and by “real” living people.

Faces are captured by cameras, edited by apps, uploaded, liked, and circulated in networks. They operate in the “like economy,” accruing and losing capital (Gerlitz and Helmond 2013). Filters and apps, as well as the knowledge and application of the photographic apparatus in the act of photographing (scene, lighting, turn of the head), have become techno-cognitive infrastructures that every teenager is compelled to embrace. Therefore, a certain visual representation is born that is distant from the “true self”. And yet, the computational face can become the new fingerprint. Facial identification via documents such as biometric passports are combined here with automatic facial recognition. Having to present one’s unobscured face (in demonstrations, for example) is a technique of governance, where the face acts within an apparatus of capture. Thus, the face uploaded to the network is a two-faced site of algorithmic transformation. Continuous, generative, and future-oriented, it “authenticates” the expression of a complex subjectivity while acting as an extension of the documentary tradition: an analytics-ready passport photograph, an index of the truth of fixed identity.

The face therefore acts paradoxically as a site that allows for “improvement”—playful or painful dis-identification with the self or construction of alternatives—as well as a site of capture and absolute identification (with only one possible facial geometry and available identity). The first is clear in everyday visual social media practices and in art projects, such as Zach Blas’ *Facial Weaponisation Suite* (2012)*.* The latter is exemplified by Facebook’s enforcement of one identity and Google’s practices of identification, personalisation, and profiling, positing a tightly integrated individual who, despite scattered interests and radically inter-subjectival experiences, coalesces upon one particular face and body fixed in space and time.

The requirement to create an authentic subjective presence, to put oneself out there and always be online, is a demand for a certain truth. The experiential truths of subjectivities, the visual truths of the eyes, where the “eyes are the windows to the soul,” are extended into computational networks. The factual truth of verification that the person who claims they are who they say they are through techniques of identification or computer vision is distinct from the truth of the presence of subjectivity—and yet these truths get linked and are called upon together within computational society. Moreover, one grounds and sustains another. The factual truth of identity verification promises the fictional truth of “real life” being visible; the presence (or the performance) of fiction-rich subjective life is guaranteed by the factual presence of the “real person”.

All of these notions—subjectivity, identity, authenticity, and the real world—are re-defined and re-entangled today as they are computationally designated, produced, and valued. A certain “truthfulness” of the face as a fixed identity, a unique biological life, offers anchors of verification for data analytics.[1] Moreover, the face is the anchor in the specially construed “life” that data practices require to designate realities and establish forms of valuation, verifying the data modality itself. Algorithmic identity verification underwrites the authenticity of subjectivity while the latter renders the factual truths of data analytics useful and insight-rich. The next section explores identity and subjectivity constructed in this way.

**Identity and subjectivity in the context of computational data**

The premise of networked interaction is that every effort is made to protect the identity of data subjects. But what does identity mean in this context? It is partially derived from scientific identity: the identity of material as determined by its unique composition. Periodic tables designed by Dmitry Mendeleev supply the “identity” of a chemical element according to the number of protons in its nucleus and its electron configuration. The notion that identity is a “unique composition” is extended into biology in the form of species identity (for instance, how the performance of species in an ecology influences the ecological balance) and further into the world of people with the same desire for biological concreteness, where identity presupposes a birth date, address, name, gender, ethnicity, and so on.

To construct people as units in these terms borrows from the scientific arrangement of the world, grounding humans in the biology of ageing, bodily certitudes, and predispositions to certain medical disorders. Throughout the last century there has been a substantial amount of work arguing that race or gender are “social codes” rather than biological certitudes, a fact that, Jennifer Gonzalez writes, “is still to transform the social functions of race in the maintenance of uneven power relations” (Gonzalez 2009, 5). “Scientifically inspired” notions of identity still proliferate, often through metonymy, a figure of speech in which one part is taken to stand in for the whole or one quality is used to refer to something characterised by that quality. For example, the biological certitude of being born is metonymically transposed and inscribed as a certitude of being born of a certain gender, race, nationality—categories often recorded on birth certificates.

Furthermore, identity has been historically described through “ownership”. Both Bibikhin in his lecture course *Property, The Philosophy of One’s Own* and Balibar in *Identity and Difference: John Locke and the Invention of Consciousness* write about becoming self as “owning”, where ownership is linked both to property and propriety (becoming truthfully of one self) (Bibikhin 2012, 99, 133; Balibar 2013; Fuller and Goriunova 2019). My birthday, my name, my organs that I agree to donate in case of a fatal accident—all the data recorded on my driving license linked to my house address, which is mortgaged in my and my partner’s names—a loan obtained under an obligation to provide truthful information about myself, a promise to pay in full and at least partially based on an expectation that our partnership lasts and will meet our financial as well as emotional needs. In such a list, it is easy to see how biological facts about my birth date are tightly linked with elements of my identity (name, sex, citizenship), and further intertwined with what would be called a subjectivity (a “complexity of experiences possessing a non-derivative ontology,” “a complexity of experiences of being a subject”; in this case, my ethical positions stemming from experiences from birth, upon which the forms of obligation I am willing to enter are at least partially based, as well my romantic and existential experiences and desires) (Henriques et al. 1984; Blackman et al. 2008). “Looking for oneself” and “being true to oneself” (Bibikhin 2012) are related less to the biological truth of birth and more to the notion of authenticity, which is used as an equivalent of “truth” in the domain of subjectivity, and which is more open to aesthetic forms of engagement with the world.

Thus, uniqueness and authenticity are the two end-points of the identity-subjectivity continuum. In the context of data protection, they are often mixed up. Data subjects’ identities are deemed protectable, although their subjectivities are exactly what is being assessed, abstracted, modelled, and made predictions about. The truth of identities is protected by law, while the authenticity of subjectivities is seen as a valuable resource for marketing, surveillance, and other forms of speculation.

This dynamic of the relationship between the biological concreteness of identity pinned to the body and the authentic, dynamically developing subjectivity is precisely the relationship described in the previous section. That is: the relationship between the fact principle of identification of “real life” individuals grounded in “real bodies” and the fiction-rich production of subjectivities in terms of emotions, images, videos, and data, gathering and circulating in digital infrastructures.

Two things follow from here. First, there is a computational update on the old dilemma of the body as site of the unthinkable real, of a certain authenticity of subjectivity, which in its other forms (those subjected to power, discipline, discursive regimes) exists in the realm of ideas. In this special issue, Kolozova—following Laruelle—has criticised certain strands of critical theory for generating the paradox of the body (that is capable of dying) as the last refuge of the real that grounds, in her opinion, entirely ideational subjectivity. This, she thinks, is a product of the tradition of dualistic thinking about matter versus idea. A completely different approach to this problem is offered in the article that launched the *Subjectivity* journal in 2008, which addresses the discontinuity between the subject position and the experience of subjectivity. It does this partly through tracing the role of the body in various accounts of subjecthood and identity construction. It explores the problematics in accounting for the body without turning it into an object, a mere conceptualisation, or only a process of inscription (Blackman et al. 2008).

Secondly, I maintain that this same paradox is successfully recruited and built into certain structures of data capitalism in the very precise form that interlinks bodies and life, singular and collective experience, artistic imagery, poetic utterances, network apparatuses, and data infrastructures. But far from arguing, like Kolozova, for a human that in the last instance is the real and one (Kolozova 2014), I argue that our data condition points to the processes of disaggregation, objectification, re-arrangement and re-packaging of ideas and matter, capacities and relations into data entities under a rubric of usefulness and productivity.

Identity and subjectivity are privileges that become resources to be valued, managed, and traded. In fact, they have to be carefully arranged, constructed around proposed or assumed points of intersection of the biologically concrete and truthful, the legally and economically imperative, on one hand, and, on the other hand, the poetically painful, aesthetically authentic, and symbolically desirable. Such points of intersection and interlinking include data-specific gestures of categorising, comparing, and storing; they rely on the forms of lists, models, profiles, and predictions, but also the services and methods of technical authentication and authorisation infrastructure, and the set of legal practices and human-technical cultures. The techno-scientific processes of producing useful results, which often include guessing, patchwork, tinkering, and trial and error, and whose processes are often obscure to the people managing them, rely, in some fundamental way, on the points of connection between faces, bodies, “life itself,” and the psychological, the poetic, and the subjective. These connections are no longer indexical (one’s profile is not oneself), though the promise of indexicality is still there.

**Biometrics and identity**

Data indexicality looms upon us, creating individual subjects out of our own and others’ data, models and projections, because modernity calls upon individuals. Because of this training from birth, one responds to being hailed, being called upon as a subject by algorithms. Both N. Katherine Hayles and Ronald Day speak about the call of modernity in this way, and Day speaks of the Althusserian hailing that allows for the mapping of disperse data profiling onto the person, which is nonetheless never at the scale of the individual (Day 2014, Hayles 2014). I engage elsewhere in detail with the tricky process through which personal data, aggregates of data, profiles, and other people’s data become abstracted and operative as digital subjects of me, which, in turn, act on me, but don’t map onto me—that is, they neither fully result from me or are linked to me indexically (Goriunova 2018).

In this article, my concern is different. As causality in models gives way to analogies, as continuous measurement and the production of sets of cases become dominant over determining causes, the validity of a model is established by its usefulness (Lin 2015). While it does disassemble the regime of objectivity characteristic of science (a claim made by philosopher Antoinette Rouvroy and *Wired* magazine’s editor Chris Anderson alike (Rouvroy 2013, Anderson 2008)), data analytics is currently generating a variety of new modes of apprehending, capturing, and explaining the world, and establishing the real. According to Isabelle Stengers, “For each practice, it is on the basis of the definition of what is designated as ‘reality’ and what will be asserted as ‘value’ that the scope, implications, and problems of requirements and obligations can be specified” (Stengers 2010, 53). It has become somewhat of a commonplace for computer scientists, especially in relation to the field of artificial intelligence, to say that they are not sure how something works, and more specifically, how, for instance, an output of the work of a neural network model results from the set of original problems and data inputs (Knight 2017). Here, it is a question of what the reality is that a given neural network has worked on and how its resulting output works in relation to this reality.

Given such complexity, calculative digital infrastructures need to create their own versions of mapping and generating the world and systems of validation in which the points of connection and modes of referentiality between the world, input data, and data outputs can be established. Governance in terms of probability and prediction relies on the continuous translation of things into information computers can understand—in turn producing these pieces of information as linchpins of the “real world” through designation (assigning a person the identity of a terrorist, for instance). The shift to profiling and probability necessitates a grounding: a re-establishment and re-affirmation of a certain reality that must be constructed anew with these new mechanisms available and in these new frameworks. Such reality is not necessarily a morally or statistically normative real world, and its construction is far from complete. For the limited scope of this article, I would like to explore one area where this capturing of the “real world” happens, and in the context of which claims to the value of calculations on capture are made: biometric data, and specifically, facial recognition technology. Biometric data is one of the sites assigned the status of the “real world” that act as guarantors, pegs on which other data abstractions can hang. Facial biometrics links back to the previous section of the article, where I explored biological certitudes and their extrapolation into identities and subjectivities. In this section, I offer a close reading of some biometric algorithms to further explore the linkages between the biological, the subjective, and the cultural, with their emphasis on uniqueness, as well as the problems of such valuations.

Biometric analysis promises to extract truth from the body. Biometrics include physiological biometrics (facial geometry, the shape of ear, the vein structure of a hand, iris structure, retina (blood vessel structure), DNA), behavioural biometrics (the measurement of phenomena such as typing cadence, voice, gait) and, more recently, cognitive biometrics (the brain’s unique response to various stimuli). Identification does not only happen through biometrics: IP identification, personalisation, and profiling all also try to identify and then construct subjects and persons. But in biometrics, the body acts as the guarantor and limit of the “real world”. The body is always political: it always only makes sense in a particular infrastructure. So what is this new data infrastructure doing with it?

The process of identification works as follows. First, during enrolment, the user generates a data sample; multiple samples are obtained. When a predefined number of samples are collected, various features of the face are derived and classified, i.e. *extracted*, to generate a biometric template (a mathematical representation of the extracted features). A user profile is then calculated (a user can have a few profiles for different purposes). When identification takes place, another sample will be recorded. From these samples, necessary features are also extracted and serve as comparisons between the input sample and the existing template. The result of the comparison is expressed as a match rate of similarity in percentages. If a given match rate is higher than that pre-defined by the system, the user will be successfully verified or authenticated. This technique claims to establish one-to-one correspondence between an individual and a piece of data. Authentication here “proves” the truth of the presence of the person because it claims to measure the feature that is unique to the individual in question.

What is interesting in this process is that in order to create a useful template, the system can also make use of so-called attacker data. Attacker data comprises samples of other users. When such samples are used together with the data of the person being identified, the profile clearly differentiates between an individual and others. Certain features can be weighted stronger or weaker, depending on attacker data. The security threshold for claiming a successful match can be pre-determined.

Facial recognition currently uses a few techniques for automatic identification. One of them is called the Eigen face method. The Eigen face method is based on comparing different parts of the face with a fixed set of 100 to 150 Eigen faces. The face is assigned a degree of match to each of the Eigen faces. This technique is similar to photorobotic technology used by police forces, and it is generally claimed that only a few dozen Eigen faces are needed to reconstruct the target face with a high degree of accuracy.

It could be argued that the ontological claim these examples make contradicts the promise of biological uniqueness that the system is founded on. The identity formed here is definitely not the sample. It is not even the template that is itself a result of comparison with the samples with an acceptable degree of probability of error. Identity is a process of calculating various user profiles in relation to other users or abstracted faces. The assignation of the identity is the successful matching between a sample and a template, which includes matching against others. Thus, identity here is not about absolute biological uniqueness or some raw authenticity that processes of subjectification have left on the face, but a non-occurrence of the same or similar enough among the measured.

Identity as a computational process starts with an input sample and ends with a match rate higher than the security threshold. It is not a particular number or percentage, nor the mathematical representation stored as a template. It is the processual dynamic of a technical practice requiring the presence of the individual, the database, the data stored, specific image conditions (light, turn of the head, etc), enrolment technology, and many other elements. Identity here is assigned through an epistemology, rendered as a technique to measure, store, retrieve, compare, and calculate data. It is an identity that works well enough as a match within a given technical practice.

This identity is not located within the person as a biologically unique animal or an ontologically authentic subjectivity, but is a process that links biologically unique and computationally discrete. It links the face as one’s visual experience of oneself and one’s facial features, extracted, stored, and retrieved. Importantly, more than that, identity is a process that connects someone’s cheekbones to one’s own, or to a set of imagined cheekbones, and inserts them, as evaluated data entries, ready for computation, into a networked system. Here, everything is prepared for those cheekbones to be airbrushed a lighter skin colour as seen on other faces. Paradoxically, such uniqueness is reliant on a high degree of similarity, where technical measurement in relation to others is not far from cultural expectations to be like others.

In biometric analysis, facial features need to be at once universal, unique, and permanent. This universality is not the prior universalism of modernity, but one based upon frequency of occurrence. This uniqueness is not the ancient uniqueness determined by essence, specificity of authentic subjects, or biological unrepeatability, but a numerical one calculated along a vector of probability. This permanence is in fact the capacity for variation that the profile can accommodate, supported by the correlative weighting of certain parameters.

Edouard Glissant wrote that identity is not about permanence but about the capacity for variation, which in the case of computational infrastructure is articulated in the dynamism of computational abstraction (Glissant 2007, 141). It could be said that Glissant’s figuration of identity as it comes into being in digital infrastructures today is a networked probability prepped for a variety of uses within a regime of guaranteed calculation. Through biometric data, and by a multitude of other means, data practices designate reality in their own new way, where the capacity for variation is contained within the calculation of occurrences of similarity that are managed by the tightening of the model. This process, with its points of verification, calculated in percentages of probabilities, establishes referentiality between reality and the outcomes of calculations. But because the probability is abstracted, it repeatedly establishes “truths” at the moments of successful identification. It is then that the real world is designated and a thing/human is authenticated as identical to itself, as real and ready for the layering of other abstractions, derived from cultural, social, political and imaginary forms of knowledge and action.

It is clear from the above that the allocation of truth is not a singular event or a clear occurrence. A lot of things and processes become aligned to make a truth claim. It is impossible to say whether any specific thing functions as the absolute point of truth. The claim itself sounds cacophonic; processes do not always converge. But as it is not a claim about the nature of a substance, but about a processual set of relations, its cacophony may become quieted inside other claims and logics.

As mentioned above, ontological thought does not function here; the notion of “one’s own”, discussed above, becomes a set of patterns that are put into relations with each other. From the management of samples and templates to a specific designation as real, the claim to legitimacy is computationally processed, through layering and mapping data onto people. But how the real world, including subjects, is reconstructed in a computational modality is in the process of being invented. The data modality is speculative and assigns the status of truth to specific constructions that could anchor and validate further networks of data production and processing in their claims to efficiency and usefulness. The unique, which rests on the biologically concrete, spills over into the authenticity of relations within a community or a subsection of population (as with attacker data, for example) only in the context of biometrics. As soon as the realm of computer vision is considered, with its recognition of emotion, “beauty”, social and celebrity status, geometric forms, the status of objects, and other qualities, the interplay between and construction of uniqueness and authenticity, layered onto each other and updated as permanence, frequency of occurrence, and probability, become more evident.

It has been widely shown by scholars, such as Shoshana Magnet and others in feminist surveillance studies, how such “uniqueness” and “authenticity” are often modelled in ways that are normative, discriminatory, and exclusionary (Magnet 2014). Biometrics, which has been described as a reductive encapsulation into the normative, is the bridge into and a designation of the “real world” that data practices, calculating the desirability of the product by analysing facial expressions or bodily language, may use to establish their own validity. As long as “real” humans have “real” emotions, wrapped in aesthetic figures, mundane communication, and crafted imagery, further data abstractions can be built, interlinking the politics of skin colour or a fingerprint with the aesthetic of the landscape, with the emotional intensity of a heartbreak, with desire, economic propensity, and a history of looking for oneself.

**Soft biometrics all the way up**

The idea of biological identity as fixed and reliably retrievable from the “truthful” body has been extensively criticised. Donna Haraway has called it “corporeal fetishism,” and Shoshana Magnet, in the context of biometric identification, has described it as something false, based on a belief that the “human body [is] a stable, unchanging repository of personal information from which we can collect data about identity” (Haraway 1997; Magnet 2014, 4). Relying on Haraway, Magnet argues that fetish logic is operative in biometric technical practices, whereby a form of representation comes to be understood as a techno-scientific truth.

Magnet’s main argument is against the understanding of the biological body as something that can be formalized as an enduring digital document. Her argument is part of the long tradition that believes that any such formalisation process involves a reduction in complexity. The designation of subjectivity—whose complexity is reduced and at some point pinned to verification, and thus inescapably linked to an identity derived from the “biological container” of the body—is a technology that creates the reality it is mediating or tries to represent through the very method of representation or mediation. This data is not a recording, nor a representation, but a new kind of designation: perhaps not exclusively of the subject of modernity as discussed in the previous section, but a capturing of the living that is abstracted and is designated the role of the real world. These abstractions become units and procedures to be operated upon and within certain data routines in the processing of the world, routines which ground data practices. As the “real” is established through a configured capture of the living, it becomes possible for other abstractions to be layered on top of such designated realities.

Magnet investigates so-called soft biometrics (attempts to inscribe race or gender into the biological and read them as biological categories) as routine propositions in contemporary research in biometrics. But such inscriptions, mobilisations, and operationalisations happen “all the way up”: what is nested onto the bodily, on top of the physical, biological, and affective, are cultural, aesthetic, and socio-political judgments, propositions, and figures. They all become part of the order of soft biometrics. For example, the rapidly developing field of computer vision searches for categories, metadata strategies, and data analysis techniques for the visual content of the web. Some freely available web-based tools today can analyse a user-uploaded photograph of a face, evaluating, in percentages, the smile, yawn, or mood—as well as something called “beauty”. Such basic apps can recognise celebrities and cats, identify brands, detect scenes, and perform many other analyses. None of them are of the order of soft biometrics in the sense employed by Magnet, but their propositions are layered upon the certitude of faces, bodies, and landscapes acting as the reality anchor that, in turn, sustain their propositional force in all its constructedness.

It can be argued, as a part of a long tradition, that current technologies try to extract the truth from the body and capture life itself (Rose 2007) in a mode of contemporary biopolitics (Foucault 2004). Rose, among other scholars, created a systematic overview of the biopolitical condition at the turn of the century, arguing that the new and technologically updated human is framed as an even more biological creature within a regime of biopower, which requires both maximizing the body’s own fitness and “fitting” it into “the body of society” (Rose 2007, 20). The management of life itself as a political doctrine creates subjects as creatures that go on a biological journey, where bodies can be framed in terms of biocapital. It is no wonder that a data modality continues mobilising bodies as discrete data objects that can enter the data economy and circulate in quest of higher value.

More recently, ecology and life have reappeared in critical debates as the denaturalisation of ecology and the naturalisation of thought. The denaturalisation of ecology allows for re-thinking nature/mind/technology not as separate domains outside of each other, bound to different teleologies and internal organisation (Hoerl 2017). Proposing the paradigm of a General Ecology, Hoerl writes: “Ecology (with or without nature) has started to designate the collaboration of a multiplicity of human and nonhuman agents: it is something like a cipher of togetherness and of a great cooperation of entities and forces” (2017, 3). The denaturalisation (of ecology) is paralleled by the re-naturalisation (of theory): Huffer argues that re-privileging nature and the biosphere in contemporary feminist thought, in a return to metaphysics, generates life as a new ground, some kind of new universal—the engine for the production of the new and precarious, though irrepressible, force (Huffer 2017). Recent materialist thought, argues Huffer, articulates posthuman ontology and epistemology though life. Whereas Foucault’s biopolitics sparked the first appearance of the principles of “life itself” (a product, he argued, as much as “man”, of nineteenth century thought), his “life” is an object of regularising governmentality, that recruited statistics and various forms of calculation in the management of the population’s biological processes. Today, life is re-thought as a principle of matter in the work of scholars as different as Grosz and Butler (Grosz 2011, Butler 2004). Whether in terms of the denaturalisation of general ecologies or the reprivileging of nature, life and ecology have been proposed as a new framework for thought.

In this matrix of life and ecology, “the world itself” becomes the new field of operation for data practices. Life and its representations, symbols, metaphors, figures, clichés, biases—whatever is produced, via engineering, drawing, photographing, scribbling down, disciplining, categorising, or making up—is gathered, abstracted, and analysed. But it is not anymore only a question of the management of the living, the organic, the vital, and everything that grows and changes, but of the non-organic too. Extracting truth or value from the body is a grounding gesture, but one that sweeps under its wing not just biological life, but the climate and the expanses of the Earth’s terrains, concepts, styles, symbols and geological formations alike: life and its representations as well as non-life and its expressions. It is not anymore exclusively bound to the logic of sovereignty and control over the body of its populace. Now Earth itself is the playground.

Anecdotally, Google Art is not interested in embedding films or articles about artworks into its 3D models of art museums. This is in direct contradiction to how the Web was imagined—as a Memex (Bush, 1945), or a dynamic hypertext system that a human could use to make instant and boundless associations and connections between all kinds of material, enhancing knowledge. While one cannot link books, films, or projects to the artworks in Google Art, there is still the possibility of importing data into Google Earth. Here, knowledge updates are welcome for the environments processing the physicality of the “real world”—cities and valleys presented in Google Earth. Google’s current interest is apparently in self-driving cars rather than Google Art. In a self-driving car, human behaviour—as well as light, electricity, lightposts, built environment, roads, chance, terrain, weather, chaos—all become a part of the world to be processed.

Google Mars, Google Ocean and Virtual Time (where one can track the disappearance of glaciers) are anecdotal evidence of a new era that is not so exclusively concerned with the human anymore. While states may be confined to the governance of population with corresponding data practices, and “internationally managed” democracies are subtly massaged for desired outcomes, global corporations aim to capture and work not only on the living or life, but on the world, the Earth itself, if not the solar system.

In the politics of Earth itself, data worlds are layered on top of each other, stitched together and interlinked—or they may still remain in conflictual conditions, waiting to be recruited by a wide variety of interests. Because value is the commanding principle, analytical models and imaginary orders are layered onto points of value; data operations are the new medium determining the order of the real, of the imaginary, of the fixed and the dynamic, of the physical and the symbolic. The operations of abstracting the living and processing the real require the coexistence of multiple logics. The mode of integration here is not vertical (a classical Fordist production), but multiplexed; it is one of hyperdimensional variation.

**Conclusion**

Mark Zuckerberg’s recent mission statement on Facebook’s vision of the future included highlights such as this: “There have been terribly tragic events—like suicides, some live streamed—that perhaps could have been prevented if someone had realized what was happening and reported them sooner. Artificial intelligence can help provide a better approach. We are researching systems that can look at photos and videos to flag content our team should review. It’s worth noting that major advances in AI are required to understand text, photos and videos to judge whether they contain hate speech, graphic violence, sexually explicit content, and more” (Zuckerberg 2017).

Here, the promise is that the authenticity of subjective presence in relation to the identifiable single-identity individual is determined by artificial intelligence. It is by establishing the truthfulness of life’s events that AI and Facebook will justify other operations, which are coming to be layered and intersliced into these promised initial foci. The threat of death and the biological limit of a living human body is evoked to deal with the play of subjectivities on Facebook, with the techno-cultural practices and operations of bots and trolls, fake reports, and second profiles. The true identity promised (and demanded) by Facebook is defined by the biological limit. A digital identity, itself a stitched quilt, is disciplined by the attempt to streamline life. The truth of such identity and the authenticity of subjectivity are intertwined, interlayered, invoked, and made dependent on each other.

Identification, as shown in this article, is by no means a transparent or neutral process, and the truths it produces are constructed in a very specific and limited way. Truth promised through the possibility of identification uses the body as a site of rootedness. Such a construction links things of different orders and dimensions and sustains multiple political and social operations that are increasingly coming to rely on digital infrastructures. As a new reality is designated through these procedures, it is not entirely circulatory and speculative. Designating certain processes as productive of truth through verification, the data-based capturing of the world produces specific realities. What are they? By whom, how, and when are claims to truth made? On whose behalf? How are these truths multiplied and recruited as authenticities into further data analytic practices?

The redrafting of physicality, which coalesces identity—and subjectivity—around a biological axis, is not exclusively a return to eugenics or cultural forms of discrimination. Certainly, technical processes are recruited to serve dominant forms of power and manage populations and persons, reinforcing, now more invisibly and in a black-box manner, discrimination, inequality, and oppression. But there is also something different that comes out of data, models, and neural networks, a process of formation from within itself, of its own technical frameworks and horizons of possibility, which generates new modes of stabilising the data modality. As it extends from biometrics to AI, such as in the example of Facebook, which is keen to determine the true events of the world, we cannot only look at already existing techno-social practices to make conceptual sense of these new computational paradigms. The computational capturing of the world requires analyses that are as case-based, speculative, inventive, and dynamic as these technologies are.

**Notes**

1. Such truths also go back to Darwin’s *The Expression of the Emotions in Man and Animals*. Darwinian accounts of emotions and the face became grounded within psychology and were later generalised as the basic emotion paradigm in the work of Paul Ekman. Ekman’s work serves as a foundation for, for instance, much criticised USA Transportation Security Administration’s SPOT technologies (Screening Passengers by Observation Techniques) (See Ruth Leys, “How Did Fear Become a Scientific Object and What Kind of Object Is It?**”** *Representations*, Vol. 110, No. 1 (Spring 2010), pp. 66-104).

**Bibliography**

# Agamben, G. (2000) The Face. In: Means without End: Notes on Politics, trans. Vincenzo Binetti and Cesare Casarino. Minneapolis: University of Minnesota Press.

# Agre, P. (1994) Surveillance and Capture: Two Models of Privacy. The Information Society, Volume 10.

Anderson, C. (2008) The End of Theory. The Data Deluge Makes the Scientific Method Obsolete. The Wired, 23.06. https://www.wired.com/2008/06/pb-theory/ retrieved 28.07.2018.

# Balibar, É. (2013) Identity and Difference: John Locke and the Invention of Consciousness. London: Verso.

# Bibikhin, V.V. (2012) Property (Ownership), The Philosophy of One's Own. St. Petersburg: Nauka. A lecture course initially read in 1993-1994 and reworked in 1995 [in Russian].

# Black, D. (2011) What is a Face? Body & Society, Vol. 17(4): 1–25.

Blackman, L., Cromby, J., Hook, D. et al. (2008) Creating Subjectivities. Subjectivity, 22: 1. doi:10.1057/sub.2008.8

# Blas, Z. (2016). Opacities: An Introduction + Biometrics and Opacity: A Conversation. Practice: Opacities, Camera Obscura: Feminism, Culture, and Media Studies, Volume 31, Number 2 92, ed. Zach Blas, Durham: Duke University Press

Bush, V. (1945) As We May Think. The Atlantic Monthly. July. 176(1)

Butler, J. (2004) Precarious Life: The Powers of Mourning and Violence. London: Verso.

Day, Ronald E. (2014) Indexing It All: The Subject in the Age of Documentation, Information and Data. Cambridge, MA: MIT Press. Foucault, M

Glissant, E. (2007). The Poetics of Relation. Ann Arbor: University of Michigan Press.

Foucault, M. (2004) The Birth of Biopolitics. Lectures at the College de France 1978-1979. London: Palgrave MacmillanFuller, M. and Goriunova O. (2019) Bleak Joys. Minneapolis: University of Minnesota Press.

Gerlitz, C. and Helmond A. (2013) The Like Economy: Social Buttons and

the Data-intensive Web. New Media & Society (February 4).

Gonzalez, J. (2009) The Face and the Public: Race, Secrecy and Digital Art Practice, Camera Obscura 70 Vol.24 (1), 37-65.

Goriunova, O. (2018) The Digital Subject: People as Data as Persons. Theory, Culture and Society, special issue: Posthumanities (forthcoming).

Grosz, E. (2011) Becoming Undone: Darwinian Reflections on Life, Politics, and Art.Durham: Duke University Press.

Haraway, D. (1997) Modest\_Witness@Second\_Millenium.FemaleMan Meets\_OncoMouse. London: Routledge.

Hayles, K.N. (2014) Cognition Everywhere: The Rise of the Cognitive Nonconscious and the Costs of Consciousness. New Literary History45.2 Henriques, J., Hollway, W., Urwin, C., Venn, C. and Walkerdine, V. (1984)Changing the Subject: Psychology, Social Regulation and Subjectivity. London: Methuen.

Hoerl, E. ed., with Burton J. General Ecology, The New Ecological Paradigm. London: Bloomsbury, 2017.

Huffer, L. Foucault’s Fossils: Life Itself and the Return to Nature in Feminist Philosophy. In Grusin, R. ed., Anthropocene Feminism. Minneapolis, University of Minnesota Press, 2017.

Knight, W. (2017) The Dark Secret at the Heart of AI. MIT Technology Review. April 11. https://www.technologyreview.com/s/604087/the-dark-secret-at-the-heart-of-ai/ retrieved 28.07.2018

Kolozova, K. (2014) Cut of the Real. Subjectivity in Poststructuralist Philosophy. NY: Columbia University Press.

Levinas, E. (1969) Totality and Infinity: An Essay on Exteriority. trans. Alphonse Lingus. Pittsburgh, PA: Duquesne University Press. Lin, J. (2015) On Building Better Mousetraps and Understanding Human Condition: Reflections on Big Data in the Social Sciences. The Annals of the American Academy*,* 659, May.

Magnet, Sh. (2011) When Biometrics Fail. Gender, Race and the Technology of Identity. Durham: Duke University Press.

Rose, N. (2007). The Politics of Life Itself. Biomedicine, Power, and Subjectivity in the Twenty-First Century. Princeton: Princeton University Press.

Rouvroy, A. (2013) The End(s) of Critique: Data Behaviourism Versus Due Process. In Hildebrandt, M. and de Vries, K., eds. Privacy, Due Process and the Computational Turn. London, New York: Routledge.

Steyerl, H. (2015) The Terror of Total Dasein. Economies of Presence in the Art Field. DisMagazine, http://dismagazine.com/discussion/78352/the-terror-of-total-dasein-hito-steyerl/, accessed 3 May 2017.

Stengers, I. (2010) Cosmopolitics I*.* Minneapolis: The University of Minnesota Press.

Zuckerberg, M. (2017). Alex Hern: Mark Zuckerberg’s letter annotated: what he said and what he didn’t. Guardian. 17 February. https://www.theguardian.com/technology/ng-interactive/2017/feb/17/mark-zuckerberg-facebook-letter-annotated-what-he-said-what-he-didnt, accessed 3 May 2017.