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Inhuman Hermeneutics of the Self: Biopolitics in the Age of Big Data

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ABSTRACT. In this paper, I present a Foucauldian reflection on our datafied present. Following others, I characterize this present as a condition of “digital capitalism” and proceed to explore whether and how digital conditions present an important change of *episteme* and, accordingly, an importantly different mode of subjectivity. I answer both of these concerns affirmatively. In the process, I engage with Colin Koopman’s recent work on infopower and argue that, despite changes in *episteme* and modes of subjectivity, the digital capitalist present is continuous with biopolitics as Foucault understood it, though it does raise serious worries about the possibility of transgressive resistance.

Keywords: Algorithms, surveillance, digital, capitalism, infopower, philosophy of technology, risk.

I. THE CRITIQUE OF THE PRESENT

To what extent is Foucault our contemporary? For some philosophers, this question is not particularly important; it does not matter that Plato is not our contemporary for his work to be valuable and worth engaging with and learning from. But Foucault, at least in his genealogical work, was often quite explicit that he was writing a “history of the present,” and that this differed from writing a “history of the past in terms of the present.”¹ That is, Foucault is not simply interested in giving us an account of the career of the objects, techniques, and strategies of power that confront us but rather in laying bare the conditions by which they have, precisely, become present, that is, how they have been able to emerge, take form, and become operative in our lives here and now.

And whether or not we are Foucault’s contemporaries has, at the very least, long been treated as an open question. Indeed, it was, for some of his more prominent peers, an open

¹ Michel Foucault, *Discipline & Punish: The Birth of the Prison* [1975] (1995), 31

question during his lifetime; in 1977, Baudrillard published *Forget Foucault*, arguing that Foucault's genealogies of power were no longer relevant to a virtual world of consumers and simulacra. Similarly, in 1990, just a few years after Foucault's death, Gilles Deleuze took explicit issue with Foucault's concept of discipline, arguing that our society is now more deeply shaped by modular forms of "control". In each case, the point is that Foucault no longer correctly diagnoses our time. If Foucault is no longer our contemporary, it is no longer clear that his work is the history of *our* present or of the modalities of power that *we* encounter, and its practical importance is, at best, attenuated. This worry should be amplified as we increasingly encounter *prima facie* new modes of power variously described as digital, informational, or datafied; about which more below.

But forms of power do not exhaust the objects of Foucault's inquiries. Part of the novelty and power of Foucault's work is the way in which it demonstrates the entanglement not only of power, as the capacity to shape the agency of subjects, and of knowledge, as the normative constitution of objects of knowledge, but of the acting and knowing subject. Todd May discusses both Baudrillard's and Deleuze's objections at length in the final chapter of *The Philosophy of Foucault*, tellingly entitled "Are We Still Who Foucault Says We Are?"² May recognizes - and I agree - that Foucault's histories do not merely tell us what has happened to make the forms of power we encounter possible but tell us how we have become *who we are*, and that it is who we are that is at the heart of Foucault's critical concern.

I will not be dealing with these canonical criticisms of Foucault. For one thing, it is not clear that our own times are any more Baudrillard's or Deleuze's than Foucault's. Rather, I will be exploring whether or not Foucault's concepts remain fruitful for our own present, that is, for who we are now. In doing so, I will be taking guidance from Foucault's own explicit reflections on the relations between his philosophical practice and his present.³ This is precisely the question that he addresses in the last essay he approved for publication before his death, an interrogation of his Kantian inheritance, namely, "What is Enlightenment?"

In that text, Foucault straightforwardly claims that his work is an inquiry into "who we are," which he characterizes as, variously, a "historical" and "critical" "ontology of ourselves."⁴ In related work discussing the same Kantian/Enlightenment problematic, he describes this ontology of ourselves as being, crucially, also an "ontology of the present" and "ontology of actuality."⁵ That is to say, for Foucault the investigation of the self is at the same time an investigation of its time; in its very being, the self is historical, and to understand the self one must interrogate the present it inhabits *as* the present. Foucault

² May, *The Philosophy of Foucault* (2006).

³ For more work emphasizing the centrality of Foucault's "Enlightenment" writings for understanding his relation to the present, see Judith Revel, "What Are We at the Present Time? Foucault and the Question of the Present," in *Foucault and the History of Our Present*, ed. Sophie Fuggle, Yari Lanci, and Martina Tazzioli (2015), 13-25.

⁴ Michel Foucault, *Discipline & Punish*, 113-115; 117-118.

⁵ Michel Foucault, "What is Revolution?" [1986] in *The Politics of Truth*, ed. Sylvère Lotringer (2007), 95.

implies that the key question, from which the very specific Enlightenment attitude or *ethos* with which he identifies springs, is “What has just happened to us?” In other words, the question is not how subjects manage to persevere through time and different circumstances but how a concrete history of power and knowledge produces distinctly different modes of subjectivity. According to Foucault, for example, we are biopolitical subjects, subjects of sexuality and desire, but we are so because we have come to be concerned about ourselves, and we thus know and conduct ourselves and others in particular ways and in response to particular problems.

But this dual ontology, of both ourselves and our present, is not the reward of a disinterested or neutral stance towards the present time. As Foucault notes throughout his Enlightenment writings, it is motivated and shaped by a particular attitude, one which *rejects* the forms of power, knowledge, and selfhood that have shaped us, and which searches out the contingencies of the present as a prolegomenon to self-transformation; he calls this a “decision-making will not to be governed” as we have been governed and, alternatively, the “work of freedom” of “no longer being, doing or thinking what we are, do, and think.”⁶ The Foucauldian critique of the present aims to disclose opportunities to cultivate new forms of subjectivity, new ways of subjecting ourselves to knowledge, of governing ourselves and others.

So, I take it, in terms of his critique of the present, Foucault may, or may not, be our contemporary in at least two different ways. First, the forms of power, knowledge, and selfhood that he analyzed, the cracks and contingencies of which he attempted to probe, may be, in at least broad strokes, the same that constitute us here and now. In the decades since Foucault’s death, there have been any number of events and phenomena about which one might reasonably ask “What just happened?” and, more pressingly, “Who are we now, then?”⁷ Are we still, then, who we have been for the last half-century? For our purposes, this is to ask, “are we still, first and foremost, *biopolitical* subjects?” And, in either case, how might we be otherwise?

Arguably, the most immediately visible, drastic development of the past 40 years has been the rise of pervasive digital information and communication technologies: artefacts and networks from massive computer mainframes to iPhones, from DARPA-net to Web 2.0 to the IoT. Now, these changes are too widespread, complex, and varied to plausibly demand a single unified explanation. So, for this article, I will focus on the rise of so-called “Big Data” and its impact on practices of the self and technologies of domination. I will be arguing that, appearances to the contrary, the forms of power and knowledge characteristic of Big Data, predominantly in the practices of digital capitalism, can be fairly described as biopolitical in the ways in which they constitute us as subjects. Not only that,

⁶ Michel Foucault, “What is Critique?” [1990], in *The Politics of Truth*, ed. Sylvère Lotringer (2007), 67; Michel Foucault, “What is Enlightenment?” [1984], in *The Politics of Truth*, ed. Sylvère Lotringer (2007), 114.

⁷ Perhaps surprisingly, many of these events seemed to confirm Foucault’s genealogical intimations from generations ago; the increasing exceptional powers of the security state post-9/11 led to an explosion of research into biopolitics, and the increasingly austere and severe government of global capital following the Great Recession has led to renewed critical engagements with neoliberalism.

but they can, in fact, help shed light on the very notion of biopolitics in Foucault, which, despite its immense theoretical productivity, remains elusive and lacks explicit development in his work. So, in this sense, Foucault's moment remains ours.

But there is another way in which Foucault may or may not be our contemporary, namely, with respect to the Enlightenment attitude of critique. The critique of the present as the historical ontology of ourselves was to outline the points, the dimensions of ourselves, that might be otherwise. I will suggest – though a full accounting would go beyond the space I have here – that the intensification of biopolitics through digital capitalism and what has been called “the data episteme” may signal the exhaustion of the possibilities of subjectivity, at least on a common understanding of it. In that sense, our present may be quite unlike Foucault's.

To briefly preview, in §2 I give an overview of what has been variously described as “digital,” “data” and “surveillance” capitalism. The point here is to give a sense of the distinctive, salient features of our present for a genealogy of the power of data. In §3, I engage with Colin Koopman's work on “infopower.” Koopman, as I understand him, argues that we are no longer the biopolitical selves that Foucault took us to be. Rather, through the workings of infopower, we are now “informational selves.” I argue, against Koopman, that, under the conditions of digital capitalism, we remain biopolitical selves. After outlining the ways in which the rise of Big Data has altered our conceptions of what it is to know, and the *ethos* of knowing in §4, I try to show in §§5-6 that the imperative to collect ever increasing digital data is part and parcel of the genealogy of biopolitics presented by Foucault. Finally, in §§7-8, I try to demonstrate how, given the epistemic dimensions of Big Data, we are facing a striking new form of veridiction which has troubling ramifications for the sorts of selves we are and for the possibility of transformation and resistance.⁸

II. BIG DATA AND DIGITAL CAPITALISM

This idea of the “rise of ‘Big Data’” or the “datafication of society” requires a bit of clarification. First of all, it is important to distinguish several different, if related, concepts. By “data” I do not necessarily mean “information.” A datafied or “data-driven” society emphasizes different features than an “information society.” This, of course, should be obvious: the terms “information society” and “information” or “knowledge economy” are decades old, and precursor terms like “postindustrial society” date back even further.⁹ If whatever these older terms capture is all we mean by our newer, data-centric descriptions of society and selfhood, then it is a form of society that existed before Foucault's mature writings or, at the very least, came of age at the same time. And he certainly was not naive

⁸ Each of these sections is a sketch and could (and both should and, I hope, will) be expanded upon in further essays. Nevertheless, I think it is important to provide a synoptic view of how these phenomena fit together before filling in the details.

⁹ Ronald Kline, *The Cybernetics Moment, Or Why We Call Our Age the Information Age* (2015), 202.

about the role of communications technology. So, to the extent that we live in the “Information Age,” we still inhabit Foucault’s present. But what is meant by the rise of “Big Data” is something slightly more specific.

Much of what I have in mind here has already been articulated through the concepts of “surveillance capitalism,” “digital capitalism,” or “data colonialism”.¹⁰ In broad strokes, the critics of digital/surveillance capitalism and data colonialism are concerned about the coupling of increasingly comprehensive collection, storage, and processing of data, with the aim of transforming this data into profit. By amassing data and using sophisticated data analytics, generally powered by machine learning algorithms, corporate agents can discover important correlations in user-generated data which, combined with new insights in the behavioral sciences, themselves increasingly fueled by big data, can allow for a distinctive kind of *intervention* in target consumer’s lives through nudging.¹¹ In turn, these nudges can incite consumers into patterns of behavior and engagement with technology in both a positive feedback loop and vicious circle.

Hopefully, this helps distinguish the rise of Big Data from broader notions like the “Information Age,” “network society,” and so on. While it is true that data, and the information that can be produced from it, have become both foundational resources and most precious commodities, what needs to be stressed here is that this is about *more* than just data as such. After all, in the wake of the “information revolution” that accompanied the development of the computer, and has only expanded with the development of the personal computer, the internet, and mobile and ubiquitous computing, historians have taken it upon themselves to illuminate the often-decisive role that information - and, thus, the data that constitutes it - has played throughout the past.¹² In contrast, Big Data has arisen (and, in a sense, could only arise) in connection with new kinds of algorithms, namely, machine learning.

Machine learning is sometimes referred to as the “new AI”. In brief, the expansion of computing along with sensor technologies, combined with the notion that all information can be represented numerically or syntactically, and hence can be computed, unleashed a flood. Whereas early computer algorithms simply embodied the directions of a programmer, machine learning algorithms are *trained* on massive amounts of data, and successful outcomes are reinforced: “Data starts to drive the operation; it is not the programmers

¹⁰ Shoshanna Zuboff, *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power* (2019); Jathan Sadowski, *Too Smart: How Digital Capitalism is Extracting Data, Controlling Our Lives, and Taking Over the World* (2020); Nick Couldry and Ulises A. Mejias, *The Costs of Connection: How Data is Colonizing Human Life and Appropriating It for Capitalism* (2019).

¹¹ Helbing et. al., “Will Democracy Survive Big Data and Artificial Intelligence?” in *Towards Digital Enlightenment: Essays on the Dark and Light Sides of the Digital Revolution*, ed. Dirk Helbing (2019), 73-98; Helbing, “Machine Intelligence: Blessing or Curse? It Depends on Us!” in *Towards Digital Enlightenment: Essays on the Dark and Light Sides of the Digital Revolution*, ed. Dirk Helbing (2019), 25-40.

¹² E.g., Daniel R. Headrick, *When Information Came of Age: Technologies of Knowledge in the Age of Reason and Revolution* (2000); Blair et al (eds.), *Information: A Historical Companion* (2021). Of course, there are those who take an opposing position, e.g., Ronald E. Day, *The Modern Invention of Information: Discourse, History, and Power* (2001).

anymore but the data itself that defines what to do next.”¹³ Certain forms of machine learning, namely, deep learning, are themselves modelled on the structure and activity of the human brain, and they often produce successful predictions on the basis of incredibly complex, detailed, and abundant data. Perhaps the most famous example is AlphaGo, a deep learning algorithm that was able to successfully beat human players in the game Go, a board game many orders of magnitude more complex than chess. But the point here is that we have to think about the rise of “Big Data” not merely as a result of the widespread adoption of personal computers or the explosion of social media and so on; the age of Big Data is not *merely* the digital age but an age of autonomous algorithms. Data and AI fit together.

And this makes sense; the digital condition transforms our use of data because, with the dawn of the computer, all data could be represented digitally and, by the same token, whatever can be registered digitally can become data. Any differential input, whether it be manual or through sensors, can be stored and tracked. This is, in part, how digital or surveillance capitalism is able to produce and exploit what Shoshana Zuboff calls “behavioural surplus”.¹⁴ That is, to the extent that our mere *behavior* is perceptible to sensors or other inputs, and legible to an algorithm, it produces data that can be used to predict, intervene in, and produce our behavior.

Clearly, the digital capitalist pursuit of profit can, and often does, result in heightened forms of social control. This cycle of nudging and behavior modification is perhaps a particularly insidious one, but there are also modes that remain clear-cut even if invisible. This is exacerbated as our devices continue to become “smart,” that is, connected to the so-called Internet of Things (IoT). The development of the IoT works hand-in-hand with an imperative to collect greater and greater amounts of data and provide a responsive, predictive milieu for our activity. Smart devices, no less than dumb ones, afford us the possibility of new actions and foreclose others. So, for example, Jathan Sadowski gives the example of services that are retracted and goods remotely repossessed mid-use for failure to comply with terms; e.g., cars who cease to function in traffic for a late payment.¹⁵ These sorts of failsafes on the part of vendors and insurers are instances of what Zuboff calls the “uncontract,” a form of social relation established between consumers and corporations under the conditions of surveillance capitalism that vitiates more traditional agreements between autonomous agents insofar as it demolishes the background of uncertainty and demand for trust against which the contract, and the broader need for promises as a means of self-regulation and behavior modification, made social sense.

Beyond these, and similarly straightforward moral and political worries about digital capitalism, such as AI bias or the explosion of “fake news” or misinformation through algorithms that aim at fostering engagement, are other, arguably deeper or more radical,

¹³ Ethem Alpaydin, *Machine Learning* (2021), 12.

¹⁴ Zuboff, *The Age of Surveillance Capitalism*, 416-423

¹⁵ Sadowski, *Too Smart*, 75.

criticisms of digital capitalism.¹⁶ Data mining, combined with algorithms that are designed to provide us with content with the aim of maximizing engagement and attention and thus producing ever more data, can undermine our ability to *step back* and *reflect*; by taking advantage of the effects of nudging, we are deprived of the possibility of disconnecting, cultivating new passions, interests, plans, and so on. We are being cognitively hacked in ways that might have deleterious effects on the possibility of genuine democracy, insofar as genuine democracy demands that citizens actually exercise some control in the formation of their wills, that is, the shaping and ordering of their desires.

Nothing of the preceding summary is original; these points have been made at greater length and in finer detail by others possessed of much keener insight. I think they are largely correct and indisputably worth thinking about. What I hope to do in the remainder of this essay is bring a Foucauldian lens to these issues. As is well known, during his lifetime he maintained a deeply ambiguous relationship to the Marxist Left, and unlike almost all of his peers amongst the French intelligentsia, none of his major works can be considered particularly critical of capitalism as such. Indeed, many have (quite wrong-headedly) thought that the critical interrogation of liberalism in his lectures of the late 1970s are actually endorsements.¹⁷ And so it is not particularly surprising to find that there are few distinctively Foucauldian engagements with digital capitalism.¹⁸ But I think that there must be, if we are to understand who we are now.

Before continuing, it is important to lay out some important caveats. First, though Zuboff, Sadowski, and others tend to foreground “surveillance” and cognate terms like “dataveillance,” and thus evoke broadly Foucauldian anxieties about the panoptical character of disciplinary power, mere surveillance is not itself the key to either Foucault’s concerns or to contemporary concerns about dataveillance or digital capitalism. What matters, with respect to the panopticon, is not that we are always being surveilled but that we always *could* be surveilled, and we thus *modify ourselves* through our conduct. Actual surveillance is not the issue but rather the mode of being, or form of life, that general observability provides. Panopticism constructs a certain kind of subject through transparency: a moderation of conduct by a self holding itself to norms. Anecdotally, it does not seem that the dataveillance of digital capitalism has the same effect or, at least, it does not seem to be the most obvious one. Rather, it is often shocking how little people are concerned with the consequences or optics of disclosing a great deal of otherwise intimate and occasionally transgressive information online. Publicity, in this sense, does not moderate or regulate the subject in the same way as it might have under a disciplinary regime. Second, insofar as such terms aim to designate a new *economic* reality, and a new form of value extraction, that is, a genuinely *new form* of capitalism, we might think that it therefore designates a new form of subjectivity and a new mode of power. After all, Foucault

¹⁶ James Williams, *Stand Out of Our Light: Freedom and Resistance in the Attention Economy* (2018), Ch. 9; Couldry and Mejias, *The Costs of Connection*, Ch. 5.

¹⁷ Cf. Daniel Zamora and Mitchell Dean, *The Last Man Takes LSD: Foucault and the End of Revolution* (2021).

¹⁸ The work of Gordon Hull and Bernard Harcourt stand out here as important exceptions.

suggests that the rise of neoliberalism coincides with or constitutes a new form of subject, an “entrepreneur of the self,” whose conduct is governed by new structures and practices of power.¹⁹ So, does the rise of surveillance capitalism by nature lead to a new form of subjectivity; a new mode of self-relation? Perhaps, but not by necessity. Consider Foucault’s remarks on Marx in *The Order of Things*; on his view, the idea of a new form of proletarian subjectivity shaped by industrial capitalism is simply an artefact of the broader 19th-century *episteme*.²⁰ Similarly, in *The Birth of Biopolitics*, he notes that socialism as an economic regime is still bound to liberal modes of governmentality and, hence, to liberal forms of subjectivity.²¹ In other words, there is no clear-cut connection between economic regimes and forms of subjectivity. Following Foucault’s methodological clues in his Enlightenment writings, it appears that the *episteme* at work in surveillance capitalism, and the forms of power sustaining it, still require interrogation.

III. INFOPOWER OR BIOPOLITICS?

A. How have we become our data?

At first blush, one might think that this digital capitalist present is drastically different from Foucault’s, and that we are thus very different sorts of selves. Colin Koopman’s recent work on “infopower,” for example, presents a distinctively Foucauldian account of our datafied present and argues, explicitly and at length, that this mode of power cannot be reduced to biopower. Thus, we are in a very important sense no longer who Foucault says we are. In this section, I engage with Koopman on infopower in some depth.

Given that I take the rise of Big Data and digital capitalism to constitute a particularly worrisome intensification of biopolitics, Koopman presents the most sophisticated opposing viewpoint. Further, his writing is exemplary both for its methodological rigor and the depth of its insight. Koopman does the difficult genealogical work of revealing the history of decisions that have shaped several contemporary archives of data and their effects. I agree strongly with Koopman’s insistence that any political reckoning with the explosion of Big Data and artificial intelligence cannot rest content with a focus on the power of *algorithms*; the algorithms that govern so much of our lives do not operate in a vacuum but operate on data structured in particular ways, gathered by particular technologies according to specific imperatives, and thus it is crucial to expand critical attention from algorithms to data structures that comprise both formats and algorithms.²² And yet, further still, I emphatically support Koopman’s suggestion that, rather than political theories of communication, a critical politics of information technologies calls for a “politicized

¹⁹ Michel Foucault, *The Birth of Biopolitics: Lectures at the Collège de France, 1978-1979* [2004] (2008), 226-230.

²⁰ Michel Foucault, *The Order of Things: An Archaeology of the Human Sciences* [1966] (2002), 284-285.

²¹ Foucault, *The Birth of Biopolitics*, 91-92.

²² Cf. Colin Koopman, “The Political Theory of Data: Institutions, Algorithms, and Formats in Racial Redlining” *Political Theory* 50:2 (2021), 337-361

technics” that actually engages engineers, technicians, and others in the work of making.²³ Indeed, it is because I find so much of value in Koopman’s work that exploring our points of disagreement can be particularly productive. I will, thus, contrast my views with his at various points throughout the following sections as well. In this section, I do so to illuminate our different approaches to distinguishing forms of power.

In *How We Became Our Data: A Genealogy of the Informational Person*, Koopman presents us with a genealogical account of what he sees as three key moments or dimensions of modern data (in the United States): the establishment of standardized birth registration, the development of “personality traits” as an early, crucial instance of the datafication of psychology and, finally, the intake of racial data and its impact on credit during the professionalization of realty: transforming phenotypical differences into an informatics of race, enabling the infamous practices of “redlining,” and contributing to the “racial data revolution”. Taken together, these map onto the structure of data processing: input (birth registration indexing an individual to an incipient body of data), processing/algorithm (the construction of personality from measurable traits), and output (racial segregation and continuing forms of discrimination). Koopman’s genealogies are full of fascinating detail and force us to view these apparently mundane practices, and their consequences, through a new lens.

Further, *How We Became Our Data* has the virtue of focusing its genealogical eye on the interwar US, expanding our understanding of the deep roots of our datafied present, much of the historical scholarship on which has been concerned with the post-WWII period and excavating the history of the Cold War sciences. In this regard, Koopman’s genealogy is a particularly valuable contribution, demonstrating how anodyne practices of formatting have made possible, and actual, our datafied, digital present by “fastening” us to our identities and comprehending those identities in terms of traits that can be recorded in tables and on cards, which, despite a veneer of algorithmic neutrality, can have outsized effects on our lives.

Indeed, it is this “fastening,” both in the dual senses of binding us tightly to an identity and at the same time speeding up our passage through the machinery of social life, that Koopman takes to be distinctive of a new and irreducible modality of power, namely, “infopower.” I think it is clear how this fastening takes place in the studies he presents of standardized birth registration, the psychology of personality traits, and the algorithmic racialization of real estate through racial data. These employ genuinely new strategies and techniques of power. Moreover, on the face of it they seem to be correlated with a new mode of subjectivity: what Koopman calls the “data self,” which, he insists, is precisely not merely a “double” or representation in and through its data.²⁴ So, it seems, on Koopman’s view, there is a very real sense in which we are not Foucault’s contemporaries. Our selves are no longer the same, our knowledge is no longer the same, the power that

²³ Colin Koopman, *How We Became Our Data: A Genealogy of the Informational Person* (2019), 191-193.

²⁴ Koopman, *How We Became Our Data*, 170.

shapes us is no longer the same. Today has introduced a difference, and our present is no longer Foucault's.

B. Analytic, concepts, powers

To understand why I disagree with Koopman on this point, I need to place his account of infopower in a slightly broader context. In a series of earlier articles, Koopman (and occasional coauthors) comes to distinguish between Foucault's "concepts" and his "analytics" or "method."²⁵ In the crudest terms, Foucault's "concepts" denote the forms and technologies of power and subjectivity that constitute the *content* of his diagnoses of the present: so, e.g., "discipline," "biopower," "biopolitics," the subject as "entrepreneur of the self," etc. On the other hand, his "analytics" or methods, rather than being the *result* of inquiry, *structure* the inquiry, e.g., the "episteme," "power/knowledge," and even archaeology and genealogy themselves.²⁶ It is fair to say that Koopman is far more interested in Foucault's analytics, that is, in actually carrying out the work of an historical ontology of our selves. The stabilization of the content and concepts that result from these inquiries is a sign of the fruitfulness of those analytics and methods. It is too easy simply to take those concepts and algorithmically apply them to new cases, e.g., to find new instances of discipline or governmentality; rather, they should themselves become the object of further investigation. Indeed, Koopman is particularly critical of the "biopower-hunting" that he finds, e.g., in Agamben's work.²⁷ Doing so sacrifices the empirical specificity that makes Foucault's work so compelling and gives it its unique diagnostic force.

So, in giving us a genealogy of data as it informs infopower, Koopman is trying to give us a history of *our* present, of the kind of self we are, and the sorts of power that have made us that way that is empirically specific. It is important, then, that he show that infopower, in its peculiar mode of fastening, really is distinct from discipline and biopower. I will not here address the differences between infopower and discipline; I take it as granted that however power structures our contemporary form of life, it no longer does so in the same way as the disciplinary society that Foucault tracks in *Discipline & Punish*, a book that even Foucault admits "must serve as historical background" to further studies of the forms of power and knowledge-production at work in our lives and milieus.²⁸ This, of course, does not mean that disciplinary techniques and forms are not at work in those lives and milieus but rather that they can be integrated into broader strategies of, e.g., biopower without losing their distinctive character. Koopman is subtle here. He correctly

²⁵ See Colin Koopman and Tomas Matza, "Putting Foucault to Work: Concept and Analytic in Foucaultian Inquiry," *Critical Inquiry* 39:4 (2013), 817-840; "Two Uses of Michel Foucault in Political Theory: Concepts and Methods in Giorgio Agamben and Ian Hacking," *Constellations* 22:4 (2015), 571-585; Morar and Koopman, "The Birth of the Concept of Biopolitics – A Critical Notice of Lemke's *Biopolitics*," *Theory & Event* 15:4 (2012); and Colin Koopman, "Michel Foucault's Critical Empiricism Today: Concepts and Analytics in the Critique of Biopower and Infopower," in *Foucault Now: Current Perspectives in Foucault Studies*, ed. James D. Faubion (2014), 88-111.

²⁶ Koopman, "Two Uses of Michel Foucault in Political Theory," 576.

²⁷ "Two Uses of Michel Foucault in Political Theory," 576.

²⁸ *Discipline & Punish*, 308.

recognizes that it would be a mistake to think of a particular form of power – whether infopower or discipline or biopolitics – as “dominating” a particular era; there is no “disciplinary epoch” that is then superseded by a “biopolitical epoch.”²⁹ He suggests instead that infopower is “layered” on different mechanisms of biopower, just as techniques of biopower were layered upon the disciplinary, often integrating, adapting, and transforming them. I do not dispute that the technologies and practices that Koopman identifies and whose histories he uncovers – birth certificates, personality metrics, racial categorization in real estate – can be layered on other technologies of power and other histories. Rather, I am not entirely convinced that “infopower” really designates a distinctive form of “power” in the Foucauldian sense of the term.

In part my criticism is motivated by a concern that mirrors Koopman’s own about biopower-hunting and the irresponsible extension or expansion of Foucauldian concepts, namely, a concern with what could be called an “explosion of powers.” The strength of Foucault’s concepts, their capacity to render our situations legible or intelligible beyond the conditions from which they were derived, are precisely the evidence we have that Foucauldian analytics or methods are fruitful and worthwhile. If the concepts are, on the other hand, relatively limited - if Foucault’s present was only a brief moment - then it is not clear how helpful the analytics are. Perhaps we understood biopolitics or biopower just as it was already on the verge of receding from dominance but not nearly in time to challenge it to any significant degree, and we are already governed by infopower. In Foucault’s Enlightenment, the present is illuminated by its salience: in our “decision-making will not to be governed” in the same ways we have been. But this decision-making will might be overwhelmed by the explosion of different modalities of power that have been proposed in the literature. Koopman distinguishes his own view from “soft biopolitics,” “communication biopower,” “psycho-power,” “datapower,” “metric power,” “expository power,” and “#datapolitik” among the various candidates for the sort of power exerted over us and our actions by information and communication technologies.³⁰ If we look beyond ICTs to the broader landscape of critical theory, we can find discussions of, *inter alia*, “onto-power” and “geontopower” succeeding biopower, or “necropolitics” and “psychopolitics” transforming biopolitics, and governmentality shading into “environmentality.”³¹

Analyses of all of these different modes, tactics, techniques, and strategies of power, of course, provide insights. But if every novelty in technique, aim, objective or rationality is taken to produce a new mode of power and new form of subjectivity, then - it seems to me - “power” and “subjectivity” just do not mean what one might have thought they meant in Foucault’s writings. So, for example, it is certainly true that email has

²⁹ *How We Became Our Data*, 171-172.

³⁰ *How We Became Our Data*, 169.

³¹ See Brian Massumi, *Ontopower: War, Powers, and the State of Perception* (2015); Elizabeth Povinelli, *Geontologies: A Requiem to Late Liberalism* (2016); Achille Mbembe, *Necropolitics* (2019); Byung-Chul Han, *Psychopolitics: Neoliberalism and New Technologies of Power*, trans. Erik Butler (2017); Thomas Lemke, *The Government of Things: Foucault and the New Materialisms* (2021).

transformed the ways in which we can communicate with each other, our possibilities of action and our relations to authority, and one could give a detailed genealogy of the ways in which email has become possible. But it does not seem, for all this, that we are confronting something like “mailpower”; to think so would risk trivializing the analysis of power. Similarly, though the advent of birth certificates and the intake of racial data in real estate intensified and extended relations of power and possibilities of action, that is, they are new technologies, it is not clear that, as a whole, the “fastening” they perform is a new kind of power.

Rather, a form or mode of power in the Foucauldian sense is distinguished in that it involves interrelated forms or modes both of *knowing* and of *selfhood*, *episteme* and subjectivity. Koopman does suggest that there is indeed a specific sort of self produced by infopower, namely, an “informational self”. He uses the example of a social media profile as an “emblem” of this sort of self; the idea, it seems, is that these profiles force us into, and fasten us to, the kinds of categories and formats that tech corporations, designers, and engineers have prefabricated for us.³² But all social interaction, electronic or not, provides certain affordances for self-expression and self-understanding; employing categories and identities that make some actions possible while preventing others. And larger patterns of such interactions constitute a self. It is hard to see how the “informational self” is something novel. I think that the problem here is that Koopman explicitly wants to distinguish “data” from the “digital” and focus his critical energies on the former.³³ For my part, I think that data, as we understand it, is essentially digital; in §§7-8 I explore new, specifically digital, forms of veridiction and the sort of self that these produce.

And, while no one can say everything in a single text, and should not be expected to, Koopman largely avoids any discussion of the epistemology of data. I think that this is particularly important for understanding the power embodied in the rise of Big Data, and so, in the following section, I briefly outline what I take to be its most important epistemic dimensions to set the stage for the subsequent sketch of the imbrication of Big Data and biopolitics.

IV. DATA AND THE ETHICS OF KNOWING

In speaking of Big data and Datafication, surveillance and digital capitalism, and especially in order to understand the epistemic dimensions of these, we need to ask, “What are data?” “Data” is often used interchangeably with “information,” but they are not the same thing, insofar as not all data informs. A common way of thinking about data is as part of a “hierarchy,” often referred to as the “DIKW” or “Data-Information-Knowledge-Wisdom” hierarchy. On this and related views, data are referred to as the basic “units” of information. It might make more sense, and be less contentious, to refer to it as a basic *constituent* of information, in the same way that words and phrases are constituents of

³² *How We Became Our Data*, 13.

³³ *How We Became Our Data*, 170.

sentences but are not themselves bearers of truth or falsity. So, for example, data might refer to what a philosopher would call properties or predicates, such as “8 years old” or “young,” and structured assertions or propositions, just as “Sabrina is 8 years old” or “Sabrina is young” would count as information.³⁴ In the same way, despite colloquial use, data are not the same things as “facts,” if we understand facts as what Hacking calls “compact, robust, down to earth, bite sized” judgments or representations of reality that happen to be veridical, that is, as *true* pieces of information.³⁵ So, it is important to note, the collection and storage of data (especially *digital* data) is not the same as the collection and storage of facts.

Another major feature of data, often connected to their alleged (if mistaken) equivalence to “facts,” is that they are supposed to be *objective*.³⁶ This is an interesting point. Consider the role that data was supposed to serve in “sense-data” types of empiricist theories of knowledge or meaning. Sense-data were supposed to provide a realm of *certainty*, or incorrigibility, from which to build back a bridge to an external world. While I might not know that there is a red wall in front of me, I can certainly know that some sort of redness is appearing to me. Perhaps I go astray in making further judgments, but this basic element, which impresses itself upon me, is not the sort of thing I can be wrong about. On such views, however, the indubitable elements of knowledge are consigned to the realm of *subjectivity*. Classically, these were referred to as “secondary qualities,” and there is an unfortunate exchange between certitude and objectivity, in that “primary properties,” the quantitative, measurable properties that can be attributed to objects themselves, do not appear to us to have the same certainty: the cost of being connected to the world is assuredness. Data aims to bridge that gap by making the simple detection of traces - impact on sensors, for example - both indubitable and certain. Part of the rise of “Big Data” and its place in our theoretical and practical imaginaries, then, is a transformed conception of “objectivity.”

Lorraine Daston and Peter Galison have demonstrated the way in which epistemic ideals of objectivity change over time and the corresponding moral ideals they demand from scientists and knowers.³⁷ I focus on this idea, in this section, insofar as what I am ultimately interested in is how the sort of knowledge that Big Data provides has implications for our ethical formation, as both subjects and objects, and knowledge. In their words, they provide a tentative history of “the scientific self” over the last few centuries. Using the example of objectivity in scientific images and illustrations collected in scientific

³⁴ Longbing Cao, *Data Science Thinking: The Next Scientific, Technological, and Economic Revolution*, (2018), 31.

³⁵ Ian Hacking, “Historical Ontology,” in *The Scope of Logic, Methodology and Philosophy of Science*, ed. Peter Gärdenfors, Jan Wolenski, and Katarzyna Kijania-Placek (2002), 583-600.

³⁶ Cao, *Data Science Thinking*, 31.

³⁷ Cf. Lorraine Daston and Peter Galison, *Objectivity* (2007), 35-42. Fittingly, Daston and Galison’s work is often described as a form of “historical epistemology,” deriving at least in part from a French tradition in the history of science exemplified by Bachelard, Canguilhem, and Foucault, and which Ian Hacking sees as similar to his own project of “historical ontology,” explicitly inheriting Foucault’s project from his Enlightenment essays.

atlases, they demonstrate three different ideals of objectivity: “truth to nature,” “mechanical objectivity,” and “trained judgment”. The former, a dominant if often implicit ideal in 18th and 19th century science, demands of the scientist *intervention* in the process of scientific representation. Not merely an artifact of the shortcomings of imaging techniques, the ideal of objectivity as truth to nature is not quite an ideal of accuracy, or of precision, on its own but a correlate of a particular scientific ontology of universals. The scientific genius must be able to discard all the messy particularities that prevent nature’s universals from presenting themselves for representation; in this way, the process of knowing objectively involves an important contribution on the part of subjectivity by selecting and synthesizing among elements. On the other hand, in pursuing the ideal of mechanical objectivity, scientists came to see the intrusion of subjectivity as a danger to objectivity; the proper objects of scientific investigation were not universal kinds or essences to be discovered amidst nature’s particulars but those very particulars themselves. Scientific representation must then simply present the mess - what we might call, now, just the “facts” - that we observe or produce through a purely mechanical transfer of images. Finally, the ideal of “trained judgment” speaks to the *institutionalization* of science in the 20th century, where the formation of a scientist through education and apprenticeship gives them the expertise to manipulate representation not to produce the truth of a universal essence in nature but, rather, the salient commonalities or “family resemblances”; as Daston and Galison put it, the scientific expert aims at *pattern recognition*.³⁸

Daston and Galison note that these epistemic ideals require a certain ethic on the part of the knower; a kind of restraint or asceticism in the case of mechanical objectivity, for example. In this, they provide an example of the sort of inquiry that Foucault characterizes as “the historical ontology of ourselves... which will... address the questions systematized as follows: How are we constituted as subjects of our own knowledge? How are we constituted as subjects who exercise or submit to power relations? How are we constituted as moral subjects of our own actions?”³⁹ As we saw, his investigation into our present is an interrogation of both the forms of knowledge we can have and the ways in which these forms of knowledge are related to both systems of domination and ethical modes of self-formation. If the rise of digital capitalism and big data involves a new central epistemic concept, “data,” we need to ask after a change in our ethical self-formation as knowers, that is, to again ask, after Foucault, “How have certain kinds of interdictions required the price of certain kinds of knowledge about oneself? What must one know about oneself in order to be willing to renounce anything?”⁴⁰

If we now see “data” as objective - indeed, as something like the paradigm of objectivity - it is in part because the sense of objectivity has once again changed, and thus the ethical

³⁸ A quick summary of these points, along with a systematic presentation, can be found in Daston & Galison, *Objectivity*, 31.

³⁹ “What is Enlightenment?” 117.

⁴⁰ Michel Foucault, “Technologies of the Self” [1988], in *Ethics: Subjectivity and Truth: Essential Works of Michel Foucault 1954-1984*, ed. Paul Rabinow (1997), 224.

ideal of knowing will also be altered. And, Galison suggests, contemporary “algorists” see in the conjunction of Big Data and machine learning a new and more powerful ideal of objectivity.⁴¹ In a world of Big Data, aided by machine learning algorithms, we are well aware that much of the task of pattern recognition, the aim of trained judgment, exceeds human capacity. We still aim to grasp real patterns, but our models and representations are limited. The task of pattern formation is left to machine learning algorithms, which are often proprietary or, even if they are not, can remain opaque to us, both because most people lack the technical expertise to understand how they work and because in many cases the connections and correlations made by them, and the steps they take to arrive at them, are radically different from our usual ways of drawing inferences, to the point of unintelligibility.⁴² Even more extremely, some have argued that Big Data transforms the project of knowing so thoroughly that we can dispense with “theory,” and “explanation,” entirely. So, for example, Chris Anderson suggests that the sheer amount of data, and the ability to produce predictions based on it without the intermediary of theory and hypothesis, shifts knowledge entirely to manipulation and predictive control.⁴³ While this stronger thesis has been subject to continuous critique, the ideal it embodies still guides the practices of digital capitalism. At the very least, it expresses a powerful point: the cost of this algorithmic objectivity, and accompanying increases in predictive power and control, is one’s understanding.⁴⁴

This, of course, does not mean that the objectivity of data is simply mechanical objectivity and that the data scientist simply aims to erase the traces of their subjectivity. As Rob Kitchin has pointed out, a better name for “data” might be “capta,” insofar as data do not simply come prepackaged and perfectly formatted but are *captured*. They are not the sense-data that the empiricist passively receives. Technicians and engineers design sensors and instruments, select units and frequency of measurement, and correct for noise through the application of smoothing algorithms.⁴⁵ But, of course, this is not a matter of the “truth-to-nature” ideal, of detecting natural universals by way of the wisdom of the scientist-sage; what the researcher does is use their judgment to make decisions that will make the data legible to algorithms, machines and programs while remaining opaque to us. In stark contrast to the sort of Enlightenment ethos of knowing advocated by Kant

⁴¹ Cf. “Algorists Dream of Objectivity,” in *Possible Minds: 25 Ways of Looking at AI*, ed. John Brockman (2019), 231-239.

⁴² See Jenna Burrell, “How the Machine ‘Thinks’: Understanding Opacity in Machine Learning Algorithms,” *Big Data & Society* 3:1 (2016), 1-12.

⁴³ Chris Anderson, “The End of Theory: The Data Deluge Makes the Scientific Method Obsolete.” *Wired* 16:1 (2008). <https://www.wired.com/2008/06/pb-theory/>

⁴⁴ For criticisms, see, e.g., Rob Kitchin, “Big Data, New Epistemologies and Paradigm Shifts,” *Big Data & Society* 1:1 (2014), 1-12; (Geoffrey Bowker, “The Theory/Data Thing: Commentary,” *International Journal of Communication* 8 (2014), 1795-1800; F. Mazzocchi, “Could Big Data Be the End of Theory in Science?” *EMBO Rep* 16 (2015), 1250-1255; and Cabrera, “The Fate of Explanatory Reasoning in the Age of Big Data,” *Philosophy and Technology* 34:3 (2021), 645-665.

⁴⁵ Rob Kitchin, *The Data Revolution: Big Data, Open Data, Data Infrastructures and Their Consequences* (2014), 29-30; see also Rob Kitchin, *Data Lives: How Data Are Made and Shape Our World* (2021), 17-22.

and, in his way, by Foucault, that we “dare to know” - *sapere aude!* - if there is an ethos of knowing correlative to the rise of Big Data, it is an ethos of submission: the objectivity of data will reveal its secrets through the application of algorithms, the true engines of knowledge, independent not only of human interpretation but of human sensibility, which we merely serve by preparing and formatting inputs.

The point to be made, here, is that the changes in knowing in the age of Big Data have repercussions both for the knower and the known. More importantly, the structure of *knowing ourselves* has changed. To *be known*, we must leave as many digital traces as possible to make possible predictions of our behavior; *who* we are, beyond this, remains opaque. To *know*, we must entrust these traces – free from our interpretation – to the algorithms. In the remaining sections, we will see how this transformation has been made possible through the history of biopolitics.

V. DATA AND THE UNFINISHED HISTORY OF BIOPOLITICS

In order to show how biopolitics incorporates Big Data and information into its workings, it is important to get as much of a grasp on biopolitics as possible. This is somewhat difficult to do because Foucault’s characterizations of biopolitics are never particularly developed, collected in a single piece, or (perhaps) even ultimately consistent. The idea is first presented - under the title of “biopower” rather than biopolitics, though (again) the difference, if there is one, is unclear - in the introductory volume of Foucault’s *History of Sexuality* (hereafter *HS1*) project. In that work, it seems that biopolitics is primarily distinguished from disciplinary power in that it is not focused on the *correction* of individuals or individual bodies functioning to accord with some sense of normalcy (whether social or statistical) but is rather concerned with the *regulation* of *populations as a whole*.⁴⁶ Moreover, what distinguishes biopower from sovereign power is its positivity: expanding upon Foucault’s more pithy slogan, the sovereign power to “let live or make die,” by refraining from intervention or issuing a legitimate penalty of death, recedes in the face of biopower’s imperative and prerogative to “make live or let die.”⁴⁷

At first, it seems that biopower is concerned exclusively with the biological life of the population or, rather, that the “population” is fundamentally a biological object rather than a social, civil, or cultural one. Foucault suggests as much when he claims that a society’s “threshold of modernity” is crossed when the very life of the species is an object of political calculation and the stakes of political strategy.⁴⁸ And this association with biological life is, explicitly, part of the reason why Koopman takes infopower or infopolitics to be irreducible to biopower or biopolitics; on his reading, biopower acts only on

⁴⁶ Michel Foucault, *The History of Sexuality Volume 1: An Introduction* [1976] (1978), 13.

⁴⁷ Michel Foucault, “*Society Must Be Defended*”: *Lectures at the Collège de France, 1975-1976* [1997] (2003), 247.

⁴⁸ Michel Foucault, *History of Sexuality Volume 1*, 143.

populations as non-individuated sets of organisms.⁴⁹ But I think that this is at best a partial, and misleading, account of what biopolitics was, is, and might be.

I do not think that I am simply expanding or inflating the concepts of biopolitics or biopower when I note that it has not only been malleable in contemporary theory but in Foucault's thought as well. For example, the concept as originally described in the concluding sections of *HS1*, as well as the highly similar closing of the "*Society Must Be Defended*" lectures, is not particularly fleshed out. It is in those brief discussions that Foucault seems most committed to the thesis that biopolitics works solely on its object and subjects strictly *qua* biological or organic beings. But much of what he says in these places - including and especially his well-known if abbreviated genealogy of "state racism" that transforms older forms of racial thinking into biological racism - is not actually explicating biopolitics *as such*. In *HS1* he is primarily concerned with how biopolitical strategies have become entangled with the goals of sovereign power; in the lectures he is, among other things, exploring how the discourse of "race war" became, through a series of contingencies, a model for Hegelian and Marxist dialectics and, in turn, for Nazi and Soviet racial politics. What biopower or biopolitics amounts to, in itself, remains unclear.

And it is never particularly clarified. In his lectures of the following years, Foucault attempts to draw out the particular histories of various "biopolitical" imperatives. So, for example, he traces the imperative to produce a healthier and stronger population - to "make life live" - to the peculiar political rationality that emerged in the wake of the imperial dreams of the Middle Ages, namely, *raison d'État*. Governing in accord with *raison d'État*, the "police" transformed into a constant, overarching presence that aimed, precisely, at the management and wellbeing of both the population and the individuals that comprise it. In the same course, however, he discusses how the techniques of government were developed not just by the police but as a "pastoral" power, drawn from the history of Christianity, that exerts a constant power over the lives of individuals *qua* living individuals. As he puts it in his Tanner lectures from 1979, where he perhaps most explicitly connects the pastorate and the police:

Political rationality has grown and imposed itself all throughout the histories of Western societies. It first took its stand on the idea of pastoral power, then on that of reason of state. Its inevitable effects are both individualization and totalization.⁵⁰

⁴⁹ *How We Became Our Data*, 164.

⁵⁰ Michel Foucault, "Omnes et Singulatim: Toward a Critique of Political Reason" [1981], in *Power: Essential Works of Michel Foucault 1954-1984*, ed. James D. Faubion (1997), 325. Emphasis mine. While in this lecture Foucault does not refer to biopolitics by name, it is eminently plausible to think he is talking about it. The Tanner Lectures, on which the text is based, took place six months after the close of two years-worth of lectures at the Collège de France on "biopolitics," namely, the courses on *Security, Territory, Population* and *The Birth of Biopolitics*. They are almost entirely focused on material covered in those lectures as part of the genealogy of biopolitics, namely, the transformations wrought in the West by the adoption of the techniques of Christian "pastoral power" into wider political contexts. And it makes sense that he might not use the term "biopolitics" in a brief lecture to an American audience; at the time it was a technical term, appearing

So, whatever Foucault is after with his conception of biopolitics, it concerns the individual as well. There does not seem to be just one way that biopolitics works or one kind of target. It does not seem quite right to think that Foucault is simply expanding the concept here and losing track of its empirical specificity. The charitable reading, I think, is that these writings and lectures are all part of Foucault's tentative account to explain "the difference today introduces," that is, to clarify and articulate what forms of power and modes of subjectivity are at work in our shared present.

The workings of digital data seem to be an important part of that shared present, as can be seen more clearly if we consider two key aspects of Foucault's later developments of biopolitics. In the lectures of 1977/1978, Foucault traces biopolitics beyond the police state to the vastly different *laissez-faire* world of liberalism and its more ambiguous neoliberal successors. In doing so, he thematizes the manner in which biopolitics functions through (a) the government of risk and (b) the transformation of the market into a site of veridiction. We will see how these set the stage for the contemporary age of Big Data and digital capitalism in the following sections, while at the same time, perhaps, providing a troubling glimpse of the edges of the biopolitical present.

VI. RISKY LIVES AND THE DATA IMPERATIVE

Koopman distinguishes infopower from other contemporary, Foucault-inflected accounts of data-driven or informational power, and especially Bernard Harcourt's "expository power," in part because he rejects the centrality of the *digital* in favor of *data as such* in thinking about contemporary forms of domination.⁵¹ For Koopman, among other things, focusing too closely on our contemporary digital condition risks obscuring the empirical facts, namely, the "scale at which we have been invested by information for more than a century".⁵²

But I think it is possible to both stress that the power that works on us most deeply today is fundamentally digital, an ensemble of Big Data practices and machine-learning-driven algorithmic decisions, while also appreciating the long history of this process. To do so, it is helpful to understand the "digital" beyond the merely electronic and "digital data" more broadly than simply what is stored in servers and clouds. The digital is the numeric, and the digital revolution is, among other things, made possible by the realization that any piece of *data* can be represented numerically or purely syntactically and, hence, can be computed. That is, digital data, as opposed to information (recall §4 above), represented numerically, is what makes possible the economic and epistemic conditions in which we find ourselves. *This* is a difference that makes a difference in the present; if we obscure it, it is not clear what distinguishes the "data" comprising the contents of 19th

in Foucault's works only in the concluding section of *HS1*, which had only been translated into English the year before.

⁵¹ *How We Became Our Data*, 170

⁵² *How We Became Our Data*, 169

and early 20th-century spreadsheets, card catalogues, tables, and charts from simple “facts”. And it is not at all clear that the centrality of facts to our lives represents either a historical novelty or, *on its own*, is the relevantly significant precursor to data, as it functions in our own lives, as the material on which quantitative and statistical analyses can be run.⁵³

We know that biopower, historically, has been associated with the “avalanche of printed numbers” that marked the birth of statistics and the modern, quantitative social sciences.⁵⁴ But I do not mean to simply conflate the birth of digital or numerical data with biopolitics as such; to do so really would be to ignore its empirical and historical specificity. The rise of biopolitics coincides with an explosion of demographic data about the population, but this does not capture the way in which we are, as Foucault says, subject to “both individualization and totalization.” So, how have we, as individuals, become numbered, digitized, and datafied?

In his continuing exploration of biopolitics, its character and history, Foucault ultimately comes to believe that “only when we know what... liberalism was, will we be able to grasp what biopolitics is”. In contrast to reason of state, liberalism is a form of government that eschews the constant, guiding presence of police and pastoral power in favor of indirect incentives to action: a “government of things” that allows individuals to freely pursue their desires. But it shares the same foundations as *raison d’État*, even if fundamentally modifying them: the goal of “making life live,” of promoting above all the “wellbeing” of the “population,” even if what wellbeing amounts to has expanded beyond the merely biological.

In order to allow this *laissez-faire* approach to the pursuit of wellbeing to function, liberalism as a form of power or mode of government works by *managing freedom*:

The new art of government therefore appears as the management of freedom, not in the sense of the imperative: “be free,” with the immediate contradiction that this imperative may contain. The formula of liberalism is not “be free.” Liberalism formulates simply the following: I am going to produce what you need to be free. I am going to see to it that you are free to be free. And so, if this liberalism is not so much the imperative of freedom as the management and organization of the conditions in which one can be free, it is clear that at the heart of this liberal practice is an always different and mobile problematic relationship between the production of freedom and that which in the production of freedom risks limiting and destroying it... Liberalism must produce freedom,

⁵³ Cf. Lorraine Daston, “Marvelous Facts and Miraculous Evidence in Early Modern Europe,” *Critical Inquiry* 18:1 (1991), 93-124; Mary Poovey, *A History of the Modern Fact: Problems of Knowledge in the Sciences of Wealth and Society* (1998); Barbara Shapiro, *A Culture of Fact: 1550-1720* (2000). More work needs to be done to distinguish these concepts. One sees precisely the sort of “data-gathering” through surveys and tests referred to as “facts” (e.g., Lam, *A Passion for Facts: Social Surveys and the Construction of the Chinese Nation-state, 1900-1949* (2011)), and - at the same time - simple facts construed as information (e.g., James Cortada, *All the Facts: A History of Information in the United States Since 1870* (2016)).

⁵⁴ See Hacking, “Biopower and the Avalanche of Printed Numbers,” in *Biopower: Foucault and Beyond*, ed. Nicolae Morar and Vernon W. Cisney (2015), 5-80.

but this very act entails the establishment of limitations, controls, forms of coercion, and obligations relying on threats, etcetera.⁵⁵

Biopolitics in its liberal mode, then, shifts from a biological to an *economical* approach to the promotion of wellbeing, now construed as something like “satisfaction of subjective preferences,” pursued freely by individuals. The exercise of power will then be over the conditions in and through which that freedom is exercised. This will crucially involve the management of *risk*.

Foucault discusses the centrality of risk management to the formation of liberal biopolitics at some length in his discussion of the formation of German ordoliberalism. The basic idea is that, in order to provide the conditions in which individuals are “free to be free,” there must be basically stable conditions and provisions for when things go awry, when one incurs loss or injury, both through one’s own action and, especially, through no fault at all. The question is how these risks will be managed. In the ordoliberal case, the ultimate aim is a privatized social policy in which the State will not bear responsibility for these risks but rather a system of private insurance.⁵⁶ The ultimate aim of social policy must, thus, be economic growth and increased wellbeing, which will allow all access to this insurance and hence a guarantee against excessive risk. This is later contrasted with the English and French approaches to insurance and risk, though with the proviso that throughout the 1970s the French “socialized” approach to risk would come under challenge. But the basic point remains that the question of figuring out how to manage risks, both economic and vital, is central to a Foucauldian conception of biopolitics.⁵⁷ This makes sense, given the central importance of “security” in his first developments of the concept; insurance is a specific transformation of security offered by both private firms and the state.

Risk and insurance are, similarly, central to the practices of digital capitalism in the age of Big Data. Kieran Healy and Marion Fourcade have argued, convincingly, to my mind, that the “data imperative” that most firms and organizations are subject to, to collect as much data as possible even in advance of any clear sense of its value, is in the service of deeper imperatives to score and rank individuals in terms of risk in order both to evaluate and extract value from them.⁵⁸ This makes sense because, as Daniel Bouk has similarly shown, the drive for massive amounts of individualizing numerical data, and the techniques and formats for standardizing and storing it, were in large part inventions and refinements by insurance providers and agencies: what Bouk calls “risk-makers,” who

⁵⁵ *The Birth of Biopolitics*, 63-64.

⁵⁶ *The Birth of Biopolitics*, 143-145.

⁵⁷ Indeed, on Foucault’s view, the making legible of life in terms of risk is perhaps an important link between the biological and economic dimensions or phases of biopolitics. As he stresses, “one of the current interests in the application of genetics to human populations is to make it possible to recognize individuals at risk and the type of risk individuals incur throughout their life.” (*The Birth of Biopolitics*, 227)

⁵⁸ Fourcade, Marion, and Kieran Healy, “Seeing like a market,” *Socio-economic Review* 15:1 (2017), 14-16; see also Steffen Mau, *The Metric Society: On the Quantification of the Social* (2019), esp. Ch. 3&4.

had the task of making the individual legible as a bearer of risk.⁵⁹ These were the early major actors in the construction of the “statistical individual,” i.e., the quantified person. So, Koopman is correct that we have been informed and invested by data for well over a century by those who sought to manage, minimize, and profit from the risks we face. But the meaning of that investment is different than he believes: not primarily a matter of categorization but rather the digitization or, better, numeration of individuals.

I cannot summarize here all the details, the grand strategies and small narratives, that Bouk presents, but I want to note four important points. First, the construction or constitution of the “statistical individual,” that is, the individual about whom a great mass of individual and individuating numerical data is collected, was riven through by a tension between two tendencies on the part of the risk-makers, namely, between “classing” and “smoothing.” The former aims to provide increasingly precise and refined assessments of individuals by placing them in ever more fine-grained classes, ideally resulting in an entirely individualized or personalized evaluation of risk, while the latter aims to reduce individual differences by aggregating larger and larger groups to find overarching regularities. Neither was perfectible, and both enjoyed substantial support, so the techniques of each played a role in the construction of the statistical individual. In other words, the quantification of the individual was both “totalizing and individualizing,” in the sense that Foucault described in his Tanner Lectures. Second, while risk-makers originally aimed at the precise measurement of risks in order to predict mortality accurately, while assessing these in terms of longevity, these processes ultimately led to the possibility of providing an *economic* value for individual human lives, even if amassing the relevant information proved a struggle. The infusion of the biological with the economic that Foucault sees in liberal biopolitics was performed, in part, in the quantification and evaluation of risk.⁶⁰ Third, risk-makers eventually extended their interest from merely evaluating and predicting mortality (and the subsequent loss of economic value) to *avoiding and controlling it*, that is, extending life through medical intervention and public health measures. In this, the work of gathering data and governing risk become the privileged tools of the helping professions through which much of the biopolitical work of “making life live” takes place.⁶¹ Fourth, these techniques and formats for formulating risks laid the groundwork, in the US, for the establishment of Social Security and thus for the indexing of the individual by the State, along with their economic evaluation.⁶² In all of this, the gathering of precise quantitative information or data about individuals, through a range of means, played a role in the development of biopolitics.

⁵⁹ Dan Bouk, *How Our Days Became Numbered: Risk and the Rise of the Statistical Individual* (2015), 115.

⁶⁰ Bouk, *How Our Days Became Numbered*, Ch. 4; cf. p. 219.

⁶¹ *How Our Days Became Numbered*, 157-8; 172-177; 217; 225-227.

⁶² *How Our Days Became Numbered* 207.

VII. FROM THE INFORMATION-PROCESSING MARKET TO DIGITAL VERIDICTION

Foucault's "historical ontology of our selves" concerns itself with the ways in which we have been formed, as expressed in our thought and actions, in order that those thoughts and actions might be transformed: "no longer being, doing, or thinking what we are, do, or think".⁶³ That is to say, it is a particular type of experimental reflection on the self. Despite Foucault's insistence that the Socratic injunction to know oneself needs to be contextualized in a broader cultural imperative to care for oneself, the task of knowing oneself cannot simply be ignored. And it is in reflecting on what it is to know the self, today, that the themes from the preceding sections will finally come together. We have already discussed, at some length, how the data episteme inculcates a new ethos for us as knowers; we need to explore further what it now means to know oneself.

What transformations take place as biopolitics becomes a matter of *economic* government, of the production of wellbeing through neoliberal means? As others have noted, one of the major - if not the central - defining features of neoliberalism is a set of *epistemic* commitments.⁶⁴ And Foucault is well aware of this, famously claiming that, in the context of the turn to neoliberal economic governance, "Economics is an atheistic discipline; economics is a discipline without God."⁶⁵ What he means is that, for the neoliberal, there is no possible way to grasp all the interests, motivations, and desires of all individuals, such that a single sovereign ruler could appeal to them, governing through incentives; any rule that presumes such knowledge will, inevitably, be intolerably coercive because ignorant. Rather, information about the individuals in society, while never accessible to any individual in its totality, is processed by the market. Indeed, for Hayek, this processing is modelled explicitly on the neural networks that would inspire subsequent digital computing and research into artificial intelligence.⁶⁶

As Foucault puts it, the market becomes a "site of veridiction".⁶⁷ It produces, or speaks, the relevant truths by which (neo)liberal biopolitics can govern. Veridiction is contrasted with jurisdiction, the speaking or production of deep normative truths with the simple speaking and production of judgment: the question "who are you" replaces the question "what have you done?"⁶⁸ The market tells us *who we are* because the deep normative truths that the market produces, and that allow us to be effectively and economically governed, are our *desires*.

⁶³ "What is Enlightenment," 114

⁶⁴ Philip Mirowski, "Postface: Defining Neoliberalism" in *The Road from Mont Pèlerin: The Making of the Neoliberal Thought Collective*, ed. Philip Mirowski and Dieter Plehwe (2009), 417.

⁶⁵ *The Birth of Biopolitics*, 282.

⁶⁶ Mirowski, "Postface: Defining Neoliberalism," 435; see also Matteo Pasquinelli, "How to Make a Class: Hayek's Neoliberalism and the Origins of Connectionism," *Qui Parle* 30:1 (2021), 159-184.

⁶⁷ *The Birth of Biopolitics*, 33.

⁶⁸ *The Birth of Biopolitics*, 34-35.

Foucault's interest in veridiction, in a "critical history of truth-telling," was, if not the same thing as the critical ontology of ourselves, also a constant theme over the last decade of his life.⁶⁹ In one of his most sustained discussions of the topic in 1982, he uses the example of Leuret's distinctive "moral" method of eliciting avowals of madness from psychiatric patients and claims that the case inspired his interest in the history of the relation between the techniques, practices, and rituals of "truth-telling" and the formation of subjectivity through subjection to certain norms, ideals, and so on.⁷⁰ Leuret obviously appears in *The History of Madness*, but the specific example Foucault gives is detailed most thoroughly in his lectures on *Psychiatric Power* in 1973-1974.⁷¹ This gives us license, I think, to see Foucault's long investigation of biopolitics through the interrogation of sexuality, biopolitics, and ancient practices of the self as, importantly, about veridiction. We see it play out in the attention given to the importance of confession in classical penal regimes, along with the centrality of "examination" in modern regimes, in the explosion of discourse around the "deployment" of sexuality, and in Foucault's late fascination with *parrhesia*. All these ways of telling the truth about ourselves expose us to power. But beyond the simple - if various - injunctions to speak the truth about oneself, this history also concerns the ways in which we have been *dispossessed* of that truth. That is, Foucault charts a history where our control over the *meaning* of the important truths about ourselves, their significance for making sense of our lives and making practical decisions, is handed over to new epistemic authorities. While much more research needs to be done here, this pattern can be traced in broad strokes from the "crisis of democratic *parrhesia*" in classical Athens, over whether and how qualified individuals could speak frankly in democratic assembly, to the rise of the philosopher figure as spiritual guide, the history of confessional power in the pastorate, the psychoanalyst interpreting and deciphering the dreams and fantasies of the patient, and - in the biopolitical present - to the "artificial intelligence" of the information-processing market.

This is part of what Foucault is after when he pursues the questions: "How have certain kinds of interdictions required the price of certain kinds of knowledge about ourselves? What must one know about oneself in order to be willing to renounce anything?"⁷² As I mentioned above, the truth about ourselves demanded of us under the rule of liberal biopolitics is the truth of our desire, which has become central to the way in which we are governed.⁷³ While Foucault does trace the long history of "desiring man," in the context

⁶⁹ Stuart Elden construes Foucault's central concern during this period as the "problem of confession," but I think that confession is one specific modality of veridiction or truth-telling. Cf. Stuart Elden, "The Problem of Confession: The Productive failure of Foucault's History of Sexuality," *Journal for Cultural Research* 9:1 (2005), 23-41.

⁷⁰ Michel Foucault, *Wrong-Doing, Truth-Telling: The Function of Avowal in Justice* [2012] (2014), 12-14.

⁷¹ Michel Foucault, *Psychiatric Power: Lectures at the Collège de France, 1973-1974* [2003] (2006). Leuret is a near-constant presence, but see especially the lectures of 5 and 19 December 1973 and 9 January 1974.

⁷² "Technologies of the Self," 224.

⁷³ I have discussed this at some length elsewhere. Cf. Patrick Gamez, "The Place of the Iranian Revolution in the History of Truth: Foucault on neoliberalism, spirituality, and Enlightenment," *Philosophy and Social*

of his history of sexuality, to both pagan and Christian practices in classical and late antiquity, what it is to “desire” neither remains constant nor plays the same role in the way we are governed.⁷⁴ So, for example, it is not clear that the experience of sex in classical antiquity was the experience of *desire* as opposed to the exploration of pleasures; the Platonic imposition of *eros* is still not the same as the Christian experience of a “flesh” that needs deciphering in our thoughts, inclinations, and agitations, and it is different yet from sexuality as articulated in psychoanalysis and other human sciences. Nevertheless, they are related, and it is relatively easy to see how our desires have become central to our self-understanding. After all, on the dominant philosophical model of practical rationality, the Humean theory, human motivation basically boils down to “belief + desire”, and to *act* is to be motivated thusly.

Hume, of course, shows up in Foucault’s genealogy of biopolitics to the extent that he represents a crucial theoretical articulation of the “subject of interest,” that is, the subject of desire or *homo oeconomicus*. *Homo oeconomicus* represents an irreducibly new subject of governance, motivated fully by its interests, and governed by norms of efficiency.⁷⁵ It is these subjects, taken as a totality, who elude the knowledge of the sovereign and whose truth must be revealed, or produced, by the market: on the assumption of a more or less perfectly efficient ideal of rationality, their market behavior discloses preferences and priorities; the information needed to incentivize them and to score and rank their risks.

And while we know that there is no perfectly economically rational subject, this is not a problem in principle; there are extant theories of bounded rationality, for example, and we can view individuals as satisficers rather than perfectly rational optimizers. The empirical and philosophical inadequacies of *homo oeconomicus* do not, in fact, undermine the foundations of liberal biopolitics. But, nevertheless, we now have a more powerful alternative in digital data produced and gathered through an emerging Internet of Things; the tension between the rational agent and the subject of desire whose motives escape reflection or awareness may be resolved.

Once the market is seen as an information processor that transcended the limited knowledge of the sovereign, it seems possible - and is quickly becoming actual - that a superior information processor takes its place. As I pointed out above, a hugely important feature of our current age of Big Data is that our data is now digital. All data can be encoded numerically or, even more simply, as a binary trace, and, by the same token, anything that can leave a binary trace can provide data. This is a condition of the possibility of Zuboff’s “behavioral surplus.” As, for example, users interact with online platforms and smart devices, their behavior leaves traces which can then be subject to analysis.

Criticism 45:1 (2019), 107-111. Also see Miguel De Beistegui, *The Government of Desire: A Genealogy of the Liberal Subject* (2018).

⁷⁴ On the “history of desiring man,” see Michel Foucault, *The History of Sexuality vol. 2: The Use of Pleasure, The History of Sexuality Volume 2: The Use of Pleasure* [1984] (1990), 5-6. For an example of this sort of transformation of desire, see also *The History of Sexuality vol. 4: The Confessions of the Flesh*, [2018] (2021), especially Part II, Ch. 3, on the “libidization of sex” in Augustine.

⁷⁵ *The Birth of Biopolitics*, 271-273.

Among the earliest purposes to which this data was put was to predict consumer behavior, precisely to reveal our desires in order to predict our actions and, at the same time, score and rank the risks we present, thereby allowing those with access to the relevant analytics to reshape our choice architecture or “nudge” us into kinds of further behavior.⁷⁶ As Zuboff reports, the explicit aim is to turn “sensors into actuators” in an “economy of action”⁷⁷. As she puts it, while “it is still possible to imagine automated behavioral modification without surveillance capitalism, it is not possible to imagine surveillance capitalism without the marriage of behavior modification and the technological means to automate its application”⁷⁸. Every instance of our behavior becomes a site or opportunity for veridiction. Now, however, as I noted above, the epistemic authority that can interpret what veridiction reveals is no longer the political economist or the psychoanalyst. Rather, epistemic authority belongs to the opaque algorithm that can discern the correlations of the traces we leave, and the “ethic” of self-understanding will demand our submission to the algorithm.

We have already discussed, in §4, that the shift in the ethos of knowing in the digital world amounts to submission to complicated programs that can detect patterns in data that are foreign to ordinary human understanding. Because of the sheer amount of online activity and the range of sensors embedded in our lives, the sorts of data that comprise the truth about ourselves are not the sorts of social demographics that we might have thought; rather, the truth is revealed in arcane details, such as how long a cursor hovers over a word on a webpage or the number of steps one walks before noon. Indeed, the relevant data might not even be our “own,” so to speak; the activities of the people I know, and their interactions with strangers, may also reveal my desires and predict my behaviors in ways I cannot possibly know. Nevertheless, my truth is revealed; the occult profile built from my behavior is *me*, my truth, every bit as much as, at one point, one might have thought that one’s sexuality or faith constituted one’s true self.

As subjects of knowledge, the production of our selves – of the *truth* about ourselves – involves, to a large degree, the renunciation of interpretation and submission to algorithmic prediction. What about our position as objects of knowledge in the age of data?

VIII. THE INHUMAN HERMENEUTICS OF THE BEHAVING SELF

For Foucault, the Enlightenment project of taking stock of the present involved relating oneself to an “event,” that is, to the emergence of an interrelated complex of ways of knowing, objects of knowledge, forms and norms of power, and the kind of subjectivity

⁷⁶ Fourcade and Healy use the term “automated veridiction” to refer to the way in which radically individualized, Big Data-driven profiles might be seen to reveal the “truth” of the individual in terms of their risk scores; to my mind, the more crucial dimension is that the epistemic material, so to speak, becomes something new, namely, digital traces of behavior – or data. This is our truth, from which our desire and risk can be read. See Fourcade and Healy, “Seeing like a market,” 20-21.

⁷⁷ *The Age of Surveillance Capitalism*, 560

⁷⁸ *The Age of Surveillance Capitalism*, 567-568

induced by them. But there is no absolute way of doing so; all history is a “history of the present,” and the appearance and salience of each of these factors depends on our attitudes now; on our “decision-making will to be governed” or our aim of “no longer being, thinking, or doing” as we are, think, and do. In Foucault’s work, this was ultimately an attempt to no longer be governed by categories of sexuality, the economic imperatives of liberalism, or biopolitical demands for maximum wellbeing. These aims made particular transformations of knowledge, power, and self in his day salient, even if he still traced these histories back, in some cases, millennia.

On the one hand, as I have tried to show, the workings of Big Data in our lives are still very much biopolitical. The demands placed on us are, at least in broad strokes, the same that Foucault faced, even if they are intensified and accelerated in many respects. In this regard, Foucault remains very much our contemporary.

On the other hand, there are signs that we are nearing the end of biopolitics or, perhaps, its closure. So, for example, Foucault characterized biopower as both “totalizing” and radically “individualizing.” In part, I take it, that is because of technical limitations; so, for example, as we saw in §6, risk-makers had to make use of both “smoothing” (or totalizing) and “classing” (or individualizing) techniques to evaluate human lives and predict human deaths. But Big Data both allows and aims for progressively more individual or personalized knowledge and control; totalization seems to be an increasingly obsolete artifact of previous technical limitations as we trend towards absolutely personalized insurance, for example, or medicine.⁷⁹

The move towards understanding, predicting, and interpreting the individual in completely individual or singular terms, of course, is bound to have cultural and social effects. Social categories and demographics were once thought to have an *explanatory* role; I might explain my actions as being caused, at least in part, by the fact that I am Canadian, or a male, or whatever. The patterns detected amongst the digital traces of our behavior by a machine learning algorithm, however, might not be explanatory at all; whatever understanding of our selves they might provide is utterly inhuman, and mediating categories are unnecessary for the “post-social” individual.⁸⁰

The gratuitousness of such mediating or explanatory categories, one might worry, could threaten our very sense of ourselves as *agents*; we no longer need to *act*, in intelligible ways, out of some combination of belief and desire, but merely to behave. Indeed, just as liberal biopolitics shaped subjects as “entrepreneurs of the self,” extending competitive market transactions across all of society, we are now induced to simply *stay engaged*, keep behaving, keep paying attention, keep generating traces, and keep fueling the attention

⁷⁹ “Seeing like a market,” 23; see also Andreas Reckwitz, *The Society of Singularities* [2017] (2020). Some have challenged the desirability and feasibility of such radically individualized profiles in insurance, but even the challenge demonstrates the force of the ideal. Cf. Laurence Barry and Arthur Charpentier, “Personalization as a Promise: Can Big Data Change the Practice of Insurance?” *Big Data & Society* 7:1 (2020), 1-12.

⁸⁰ This, of course, needs to be developed further. For a starting point, see Eran Fisher and Yoav Mehozay, “How Algorithms See Their Audience: Media Epistemes and the Changing Conception of the Individual,” *Media, Culture & Society* 41:8 (2019), 1187-1189.

economy. The Christian flesh and contemporary sexuality differ greatly, but they are both deep interior truths that require one's participation, which one has agency in producing, and can provide grounds for resistance. In the same way, the "desires" that are revealed in my sheer, brute behavior can predict my behavior. But there is no longer a need for interiority or to see our actions as the expression of an inner truth; the correlation of traces is all that is needed to predict our behavior to a frightening degree. If our behavior is now our truth, it is difficult to deny one so superficial yet so effective.

Foucault thought that the historical ontology of the present would be an "experimental" and practical one; a "possible transgression." The politics of truth embodied in Enlightenment was an art of intractability, yes, but also creativity. He held out hope that we could articulate *new* truths about ourselves, establish new forms of life that would express different norms, values, and ideals; that we could affirm for ourselves. It is difficult, upon sober reflection, to see how one might challenge the new forms of subjectivity on the horizon which demand only that we continue to behave. That is, it is not clear how one could establish a "decision-making will not to be governed" when the resources for willing and decision-making, like attention and self-understanding, are in short supply. One struggles to articulate what it would even mean to transgress against such a power. But if Foucault is still our contemporary, our task must be to establish the conditions under which our Enlightenment remains possible.

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