Dialektik des Dataismus; or, a Critical Examination of the "Dataist" Moment

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Inception

This essay was originally written in winter 2019 for Dr. Matthew Flisfeder's class, "Critical Studies of Social Media," in the Department of Rhetoric, Writing, and Communications.

Abstract

In this essay, I will assess what many have termed the "Dataist" moment. I argue that Dataism,[1] as a social sciences discourse, presents itself as an instantiation of unveiling, or enlightenment,[2] which confronts many of the challenges encountered by previous instances of Enlightenment. I will, in order to present a critique of Dataism, draw upon some of the arguments put forth by the 20th-century German philosophers Theodor W. Adorno and Max Horkheimer in their *Dialectic of Enlightenment* (1947). Finally, I will consider how Adorno and Horkheimer's framework, as

[1] Dataism, to be sure, is not a coherent or unified body of thought. It is, rather, a term that has acquired popular currency in the last two decades. I use it here to refer to a distinctive way of thinking about the relation between Big Data practices and society. A more nuanced definition is provided below.

[2] When I employ the term enlightenment, I use it in the sense implied by Adorno and Horkheimer in their *Dialectic of Enlightenment* (1947). Enlightenment, for them, does not refer only to the European Enlightenment as a specific historical moment, but more broadly to all those intellectual and practical currents of thought that see themselves as disenchanting some mythical or religious representation of the world. It is to this sense that I refer when I employ the term with a small 'e', and to the European Enlightenment when I capitalize the 'E'.

representative of the Frankfurt School of thought, may be a valuable resource for staging a critical confrontation with Dataist dogma.

"Dataism"

According to several commentators (Harari, Anderson), our present moment is characterized by the emergence of the ideology of "Dataism." Assessments of the Dataist moment have been myriad. They have ranged from triumphalist narratives relinquishing theory and ideology to a benighted past (Anderson); to descriptive accounts of the rise of a new religion whose supreme value is information flow (Harari 380); and, finally, to conceptions of "Dataism" as a fundamental constituent of an emerging neoliberal technology of power that threatens to foreclose any possibility of human agency (Chul-Han, *Psychopolitics* 112). It is worth, therefore, defining the term in the sense in which I intend to use it henceforth. I propose that "Dataism" is a discourse that makes three distinct, albeit related, claims: one ontological, one epistemological, and one political. In ontological terms, Dataism is founded upon what David Golumbia and Ed Finn identify as "computationalism." Computationalism is the view that all complex systems—from cultural processes to the human mind to the universe itself—are, at bottom, computational (Finn, *What Algorithms Want* 21). This view, as Finn suggests, has its origin in the inception of the Universal Turing Machine, a computational model conceived by mathematician Alan Turing that is capable of completing any finite calculation; and the concomitant Church-Turing thesis, which suggests that a calculation is calculable only if it may be computed by a Turing machine. These proofs are the basis of a computational ontology that sees in mathematics the substrate of reality, and assigns to data and code a privileged position in rendering intelligible the computational rules that underlie the complexity of the universe.

The epistemological component of Dataism is founded upon this ontological presupposition. Epistemologically, Dataism suggests

that the manipulation of Big Data—that is, data sets characterized by high variety, high volume, and high velocity (Resnyansky 2)—by computational tools such as algorithms accedes to a higher plane of information and knowledge until recently (2013) inaccessible to human beings (Boyd 663). Big Data practices are characterized not only by a quantitative difference from preceding methods of inquiry—for instance, by offering larger data sets—but also by a profound *qualitative* shift in terms of epistemology. Indeed, rather than employing data structured by models for the sake of scientific analysis, Big Data practices tend to manipulate data organized by algorithms, premised on the emergence of an aggregate pattern, or "clustering" (Törnberg 3). As a consequence of this methodological rupture, the knowledge and information generated by Big Data practices acquire an ostensibly unprecedented aura of truth, objectivity, and accuracy (Boyd 663).

Finally, Dataism's political affiliations are tethered to its supreme value: the freedom of information (Harari 380). Generally, this commitment manifests itself in calls for *transparency*. Indeed, "transparency" has become a buzzword of sorts in liberal democratic societies in the past two decades, invoked as it is by State and non-State actors alike as a panacea for some of the most intractable problems of the present, such as economic sluggishness, the influence of lobbyists on American policy, and even climate change (Birchall, "Transparency, Interrupted" 60). As Fred Turner argues, these political beliefs have their origin in cybernetics, particularly the work of mathematician, Norbert Wiener. Wiener, in his work *The Human Use of Human Beings*, argued that modern society operates in a homologous manner to a data processing system. In order that the system function in a stable manner, the flow of data must be facilitated computationally so as to provide political leaders with better information faster. Consequent to this is a disavowal of the political as a terrain of ideological and material contestation and a techno-utopian faith in the power of engineering to alleviate the ills of society (Turner).

These three claims are related insofar as they presuppose each other—for instance, political calls for transparency hinge on the epistemological conviction that data represents a pellucid medium that "filters out emotionalism and ideology" (Brooks) —and also because they are united by a broader metaphor of *unveiling*. Indeed, Dataism presents itself in the first instance as a movement that *unveils* what was previously unintelligible or occluded to, or misconstrued by, human beings, such as the true nature of the universe and the mind, the production of objective knowledge, and the functioning of our esteemed political institutions.

Dataism and Enlightenment

It is my contention that the movement of "unveiling" synonymous with Dataism may be conceived as one of *disenchantment* and, by extension, as an instantiation of enlightenment. Here, I employ the term enlightenment in the sense in which Adorno and Horkheimer define it in their *Dialectic of Enlightenment*. Against Kant, who conceived Enlightenment as a particular historical moment marking "man's emergence from his self-imposed immaturity" (1), Adorno and Horkheimer employ the term to designate an intellectual and practical program that presents itself as disenchanting some mythical, religious or magical representation of the world (Schechter 25). There are, nonetheless, unmistakable affinities between Dataism and the project of the European Enlightenment, such as the notion of "effective computability." Effective computability is premised on the Datatist ontology of computationalism discussed above, and sees everything from the brain to the universe as computational systems, which may one day be rendered calculable and intelligible. Finn argues that there is a direct lineage between effective computability and Leibniz's high rationalist dream of a *mathesis universalis*—that is, "a universal language built on mathematics for describing the scientific universe" (Finn 23). Likewise, Birchall perceives a homology between today's data-

driven rhetoric of transparency and Kant's ideal of open government and publicity ("Transparency, Interrupted" 61).

What I believe is the most important distinction to be made between the Dataist moment and the European Enlightenment, however, is the object of disenchantment. Where the Enlightenment wished to do away with all those illusions standing in between the human subject and *his*[3] reality, Dataism has little need for the self-willing, autonomous subject of the Enlightenment, or even the human as such. Indeed, Dataism wishes precisely to disenchant by "de-subjectivizing" it—that is, by emancipating reality, knowledge, and society from subjective arbitrariness. As Harari writes, "according to Dataism, human experiences are not sacred and *homo sapiens* isn't the apex of creation or a precursor of some future *homo deus*. Humans are merely tools for creating the internet-of-all-things, which may eventually spread out from planet Earth to cover the whole galaxy and even the whole universe" (381). I propose that the Dataist project of disenchantment has encountered, and will continue to encounter, similar challenges to that of the European Enlightenment, and that the framework put forth by Adorno and Horkheimer in *Dialectic of Enlightenment* may be applied to the Dataist moment in order to lay bare some of its limitations and contradictions.

Dialektik der Aufklärung

Adorno and Horkheimer open their text with two theses: "myth is already enlightenment, and enlightenment reverts to mythology" (xviii). If, as established above, *enlightenment* refers to the disenchantment of mythical, magical or religious representations of the world for Adorno and Horkheimer, then *myth* designates those representations by which human beings narrate, record, and explain

[3] I use the gendered pronoun, here, to allude to the masculinized presuppositions of much Enlightenment thought. On this topic, see Brown 152-165.

their reality, as well as the processes by which they act upon it by means of ritual or magic. When Adorno and Horkheimer insist upon the dialectical entanglement of myth and enlightenment, they are not wholly rejecting the Enlightenment project; rather, they are pointing to how both movements derive from the same desire: the extirpation of the fear of nature by rendering reality wholly knowable. Nature, here, refers at once to arbitrary fate (for instance, sudden death or unaccountable power) and freedom as *mimesis*,[4] in the form of individual spontaneity and sensual cognition. Enlightenment, on this view, seeks to subsume all of nature under one single representational schema and to thereby establish men's sovereignty over nature (2).

However, by subordinating all things to a *scientia universalis* and thereby reducing thought to a mathematical formalism, Enlightenment reverts to fate by confirming the actual as inevitable: "The actual is validated, knowledge confines itself to repeating it, thought makes itself mere tautology. The more completely the machinery of thought subjugates existence, the more blindly it is satisfied with reproducing it" (20). Fate, then, is not eradicated, but rather institutionalized in the functioning of the economic and social apparatus, just as mythology reinscribed fate by upholding the cyclical nature of the universe. A further reason for which Adorno and Horkheimer find Enlightenment thought so disquieting owes to its tendency to extinguish individuality, difference, and sensuous particularity by postulating the universal interchangeability of all things. Consequent to Enlightenment's insistence upon the fungibility of all things, including human beings, is their subjection to an instrumental rationality, according to which their value is

[4] Mimesis is a rather troubling concept in Adorno and Horkheimer's thought. In a word, it suggests the means through which humanity is to be reconciled with nature in a way that is not conducive to domination. Against Enlightenment thought that sees nature as something to be mastered, mimesis is a mode of being that allows nature to speak for itself, in some sense. For an in-depth discussion of this concept, see Miller, 9-28.

determined by their function within a broader teleology—i.e., the quest to render all things knowable or the accumulation of capital. As such, Adorno and Horkheimer write: “The identity of everything with everything is bought at the cost that nothing can at the same time be identical to itself” (8).

Dialektik des Dataismus; or, the contradictions of “Dataism”

Adorno and Horkheimer’s critical framework may be applied to the three claims of Dataism outlined above. Dataism, and the computational ontology upon which it is founded, makes the hard claim that all of reality is, at bottom, quantifiable. Indeed, as Golumbia argues, the fundamental principle of computation is the conviction that mathematical calculation may be applied to propositions that are themselves not mathematical, but must still adhere to mathematical rules (14). In striking similarity, Stephen Wolfram, one of the foremost exponents of computationalism, argues that the staggering complexity of nature owes to its adherence to a set of mathematical principles that originate in the “computational universe.” As Adorno and Horkheimer remark, the danger of such an identification of reality with mathematics lies in its tendency to elevate the latter into an absolute authority, thereby assimilating even the unassimilable into mathematical theorems. Far from representing a merely factual error regarding the nature of reality, Adorno and Horkheimer see in such developments a veritable degeneration of thought—one that calls into question its ability to critique the world in which it is situated in a meaningful manner, which represents for them the precondition for the reorganization of social reality. This argument may be brought to bear on the epistemological aspect of Dataism. Because, on this model, data is taken to merely *encode* the mathematical substrate of reality, the epistemology of Dataism tends toward *naturalizing* its findings.

As Törnberg notes, this is particularly perilous in the domain of the human and social sciences, where the ostensible "rawness" and "neutrality" of Big Data—owing to the fact that its findings are algorithmically generated, and therefore not structured by human cognitive biases and distortions—lend it a veneer of inevitability and naturalness, thereby reifying social reality rather than providing meaningful opportunities for critique (8). Törnberg adds that such developments have led to a "renewed naturalism" within which the formal methods of the natural sciences are increasingly brought to bear on the analysis of the social, echoing Adorno and Horkheimer's conviction that Enlightenment thinking reverts to nature (88). Enlightenment thinking, for them, reverts to nature by virtue of its embrace of the classification and calculation of what is given at the expense of the negation of immediacy, which represents for them the veritable task of cognition (27). With this elevation of immediacy over negation, thinking loses its capacity to imagine how things may be otherwise, and surrenders itself wholly to reproducing the *status quo*. To be sure, this development likewise evinces the inextricable entanglement of enlightenment with myth: as strenuously as it tries to distance itself from enchanted representations of reality, enlightenment regresses to myth to the extent that it consigns itself to the perpetual validation of the actual. It is not difficult to imagine the political implications of this epistemological development.

As Harari notes, Dataism posits a vision of the political that is rooted in its epistemology of quantification and immediacy, seeing society as a data-processing system in which the flow of information must be facilitated as much as possible in order that it run smoothly (370). Hence, the Dataist political gesture *par excellence* is the demand for transparency. Byung Chul-Han argues that the domination of contemporary public discourse by the term 'transparency' is symptomatic of an ascendant society of transparency in which all matters are violently bereaved of negativity so as to integrate them more facilely into streams of capital, communication, and information: "Today's social system submits all its processes to the

demand for transparency in order to *operationalize* and *accelerate* them" (*The Transparency Society* 2). Ultimately, he insists that this systemic imperative reduces the social to a machine, and the human to little more than a functional element therein. As such, the Dataist decentering of the human in fact underpins and reinforces a rather traditionalist conception of politics (Golumbia 2): the organization of society according to the dictates of instrumental—or, even, algorithmic—reason for the sake of technological progress and economic growth (Adorno and Horkheimer 78). According to Adorno and Horkheimer, under such conditions, politics becomes little more than a matter of technical management, which delimits or even eliminates the political as such, and bereaves the citizenry of the possibility of formulating a distinct set of alternatives (Schechter 80). Likewise, the Dataist injunction of transparency, even as it promises greater agency and freedom of information, ensues in a disavowal of the political potentiality of the public, according to which the political subject is permitted only to "spot anomalies or aberrations in a system he or she has to otherwise acknowledge as fair" (Birchall, *Shareveillance* 38). In this way, Dataism retains enlightenment's crystallization of fate in the functioning of the social and political apparatus by delimiting the realm of the political, such that a more equitable reconfiguration of social reality appears is dismissed as hopelessly utopian, and critical thought is denounced as ideological.

Conclusion

In my view, Adorno and Horkheimer's insistence upon the dialectical entanglement of myth and enlightenment represents a meaningful way to critically examine Dataist dogma—a challenge that Harari deems "the most urgent political and economic project of the 21st century" (394). To insist upon the dialectical entanglement of myth and enlightenment is to point to how enlightenment, as much as it may lay claim to unmediated access to reality, is itself a myth. Indeed, on this scheme, myth designates those representations that

human beings enlist in order to narrate, record, and explain their reality, as well as the processes by which they act upon it. I propose that Dataism may, too, be read as a *myth*—that is, as a set of representations of, and abstractions from, reality that humans employ in order to act upon it. To do so is not to suggest that Big Data practices are to be unequivocally rejected as so many tools of domination, but to emphasize, among other things, the centrality of interpretation to data analysis, the enduring relevance of negative thought, the difference between entities in the world and representations of entities in the world, and the perils of extending the ideal of transparency to beings who are not even transparent to themselves.

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