16. Commentary: The Entanglements, Experiments, and Uncertainties of Algorithmic Regimes

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Abstract

This commentary argues that as we engage with the politics of algorithmic systems, we need not only to attend to the ways in which they generate new modes of control, organization, and knowledge production, but also how these new algorithmic regimes are constituted by messes, failures, and uncertainties. This is exactly why critical engagements such as those featured in this section are so crucial. They open small, important windows into the modes of valuation, labour, and aesthetics involved in upholding algorithmic regimes, which also allows us to truly appreciate their temporally sensitive and fundamentally unstable form.

Keywords: power; archives; mess; uncertainty

Introduction

How might we describe the politics of algorithmic regimes? Which organizations should we examine, which theories should we employ, and what methods should we use? As the contributions in this section show, there is not one correct answer: analyses and methods must be as heterogeneous as the territories they examine. But while territories may be heterogeneous, the role of power in shaping them is constant. The chapters in this section therefore also show the saliency of attending closely to the power dynamics at play in the unfolding politics of algorithmic landscapes, especially when it comes to the nexus between power and knowledge. In the following I weave together insights from these chapters to foreground three points

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that speak to and extend the insights offered in them: Thus, I make the point that as we engage with the politics of algorithmic systems, we need not only to attend to the ways in which they generate new modes of control, organization, and knowledge production, but also how these new modes are always also constituted by entanglements, failures, and uncertainties.

Entanglements

The emerging constellations of algorithmic regimes and the multiplicities of politics of knowledge in organizations are becoming increasingly crucial areas of analysis. As the chapters in this section show, while big tech (largely emerging out of Silicon Valley) offers one important nexus of analysis, it is far from the only one. Instead, attention must also be directed towards new knowledge/power assemblages far from the political and geographic reality of Silicon Valley. Such analyses are crucial because they allow us better to attend to not only the political regimes of knowledge that shape future governance infrastructures, but also the potential sites of friction they may generate. As analyses of public–private machine learning projects show, data scientific projects do not unfold in a political vacuum but will always be entangled within—and in negotiation with—surrounding environments (Amoore, 2020; Thylstrup et al. 2022). Yet, data science is often presented as a pragmatic, even miraculous, universal toolbox of Swiss Army knives that can be applied across different contexts (Slota et al., 2020). Bianca Prietl and Stefanie Raible's analysis of the professionalization of data science in universities in Germany, Austria, and Switzerland (in this volume) offers a good example of how such a framing unfolds. In their chapter, we see how institutional structures, epistemological positioning, and discursive legitimization enables the conceptualization of data science to appear as a scientific method that can be applied independent of the object of inquiry, but also why it must always be embedded in a political reality. The insights in Prietl and Raible's chapter exceed educational landscapes because it helps us understand how tech assemblages are depoliticized, even when they are deeply political. Take partnerships such as those Palantir have entered in with the health and police force in Europe and prominent NGOs (such as the World Food Programme). These partnerships were framed as neutral or even as "AI for good." Yet, it matters that Palantir, a defence contractor, is also working on data related to refugees (Martin et al., 2022). Even so, such concerns about spillover are often left unaddressed by involved and adjacent actors.

Rather than accepting the premise of "pragmatic" methods that shy away from engaging with context, then, the chapters in this section show the need to extend our understanding of the wider regimes technologies unfold within, and their entangled nature. Katharina Kinder-Kurlanda and Miriam Fahimi's chapter on the NoBIAS project, which seeks to develop better methods for understanding and mitigating algorithmic bias, shows, for instance, how contingent such engagements are and how dependent they are on different, and changing, vocabularies. They shed crucial light on how efforts to achieve fair AI are conditioned not only by technological knowledge, but also different contextual understandings of what "bias" means (not to speak of a variety of often conflicting reasons for getting involved in such work). Kinder-Kurlanda and Fahimi thus remind us that any analytical attempts at making machine learning systems "fairer" must contend with multiple relationalities and moments of interpretation. Their contribution can be situated within a broader regime of linguistic governance, rich with moments of interpretation that generate cultural spaces of uncertainty and potential instability (Hall, 1997, 1999). And as Kinder-Kurlanda and Fahimi show, rather than stabilizing such spaces through universal definitions of, for example, what is "fair," actors in algorithmic regimes would be better served by being equipped with knowledge about the oscillating meanings of concepts in specific contexts. This is because cultural systems and their meanings change and are contingent. Take content moderation systems, for instance, and their difficulties stabilizing language. While many content moderation system today implement systems that define and detect "toxic" content, these systems often fail because they struggle with the dynamic nature of cultural languages: what was once accepted practice, for instance, can suddenly be considered harmful and socially transgressive (Thylstrup & Talat, 2020). Similarly, content that is taboo in some communities, may be readily accepted in others. These cultural dynamics emphasize that when we talk about "fair," it is often less a question of the "essence" of an expression and more a question of the properties that are attached to the content. To ensure fairness, then, algorithmic regimes should continuously align with actors such as social and digital justice movements instead of taking categories of e.g., fair and "toxicity" for granted.

Experiments

We often ascribe regimes of prediction (see e.g., Egbert, in this volume) a sense of command of everything from trends in culture and thought to

potential epidemics, criminal acts, environmental disasters, and terrorist threats. Yet, as outlined above, while algorithmic regimes may seem to generate more mechanisms of control in algorithmic regimes, they are in fact highly messy entities that often even fail more than they succeed. Time and again experts and observers not only question the statistical validity of the diagnoses and prognoses promised by algorithmic regimes, but also warn of the broader implications of the large-scale determination of knowledge by algorithmic regimes. Yet, even in their failures, algorithmic systems often thrive. Thus, rather than undermining the power waged by tech companies, such stories often seem to consolidate and even extend their power. As such the fickle role of failure in algorithmic regimes also indicates a more fundamental clash of scientific paradigms regarding what constitutes knowledge and how best to achieve it. Clashes that are again nested within the deeper politics of how we understand success and failure in experimental algorithmic regimes: who has the power to determine something as a failure, and who is made to endure the consequences of these errors? As Orit Halpern (2021) points out, moments of failure in algorithmic regimes also become embedded in a logic of the experiment where: "experiments … prove which forms of research and technology need to be invoked next; that should exist and must be built." Marres (2020) calls this ongoing experimental implementation of algorithmic regimes exemplary of a new, "experimental" mode of industrial innovation, where experiments and beta testing that would previously occur in a lab, are today located in everyday societal and intimate settings like streets, personal computers, and smart phones. This is the dynamic exposed by Paola Lopez in her analysis of the Twitter crop algorithm. Her chapter thus succinctly shows how, in algorithmic regimes, even failures are routinely turned into a generative possibility and potential value creation.

How might we understand the role of failure in algorithmic regimes as a deeply political one? At the end of his essay "Life: Experience and Science," Michel Foucault concludes,

> at the most basic level of life, the processes of coding and decoding give way to a chance occurrence that, before becoming a disease, a deficiency, or a monstrosity, is something like a disturbance in the informative system, something like a "mistake." In this sense, life—and this is its radical feature—is that which is capable of error. (Foucault, 1998, p. 476)

Foucault's analysis points to the ambivalence of error, or failure, as both a creative event and a moment of power. This understanding of error can help

us move out of simplified ideas of error as an either purely productive process or as technical glitches that can be "corrected" to instead repoliticize error as fundamentally tied to questions of power. Contemporary feminist engagements with the failures of algorithmic regimes offer crucial perspectives on this. Relevant to the feature of the crop function, for instance, Catherine D'Ignazio (2021) has shown how the historical positioning of certain bodies as more anomalous than others also means that there is often uncertainty as to whether an outlier is an error in the recording of data or represents a true variation in the population. D'Ignazio thus reminds the reader that rejecting outliers as errors in data sets has serious implications for data subjects and notes that these implications also tend to reproduce gendered and racialized discriminations. In their work on (mis)gendering, Os Keyes (2021) moreover shows how these lines of oppression also remain lodged within the binary imaginary of data science, which at once excludes, for instance, trans experience from its organization of information, and at the same time continually reinserts trans people into static gender narratives drawn from archival material from pretransition lives.

The paradoxical role of failure in algorithmic regimes also places new demands on critical engagements with them. A default mechanism of algorithmic critique is often to expose its errors and make visible how regimes of power/knowledge built around algorithms are not so knowledgeable after all. Yet, in algorithmic regimes, this mode of engagement is in fact often challenged, because they seem to thrive on uncertainty and disruptive moments. Thus, moments of breakdown can both be viewed as moments of potential critique in the form of error, glitch, and subversion, and as a conceptualization of failure as a creative process that is easily co-opted as ventures. In the worst cases, failures can even be mobilized by platforms to deflect state and corporate accountability because uncertainty and experimentation is endogenous to digital-age capitalism.

As such the fickle role of failure in algorithmic regimes also indicates a more fundamental clash of scientific paradigms regarding what constitutes knowledge and how best to achieve it. Clashes that are again nested within the deeper politics of how we understand failure in digital knowledge regimes, who has the power to determine something as a failure, and who is made to endure the consequences of these errors. As such, phenomena of failure such as the one explored by Lopez (in this volume) are in fact symptomatic examples of how major tech companies reconfigure errors into what Orit Halpern (2021) calls demos: "experiments that prove which forms of research and technology need to be invoked next; that should exist and must be built." Indeed, as Noortje Marres (2020) points out in

relation to the ongoing experimental implementation of self-driving cars, such approaches are exemplary of a new, "experimental" mode of industrial innovation, where experiments and beta testing that would previously occur in a lab, are today located in everyday societal and intimate settings like streets, personal computers, and smart phones.

Uncertainty

As the above paragraphs show, the politics of algorithmic regimes are sites of knowledge retention and production fraught with failures and messes. This section suggests that we can meaningfully understand these conditions as expressions of an uncertainty, and that this uncertainty is endemic to algorithmic regimes, enhanced further by their complicity in systems of neoliberal global governance, authoritarian regimes, and dispossessions caused by wars and climate change. The uncertainty of algorithmic regimes is thus as much a function of disruption complicit with, rather than resistant to power as it is a dynamic that challenges power structures. This begs the question: if today's algorithmic regimes are constituted as much by entanglements and failures, how might we understand the knowledge production that takes place in the knowledge/power nexus, and how might we critically engage with it without reifying existing power structures?

Along with my co-authors (Thylstrup et al., 2021) I have previously argued that critical archival theory offers one rich analytic approach to the power/knowledge nexus in algorithmic regimes because it foregrounds both its profoundly political constitution as well as its speculative openings that may offer refuge for new critical engagements. Derrida (1995) famously traced the etymology of the term "archive" to *arkhe*, the Greek noun signifying beginning and commandment, and drew attention to the related noun *arkheion*, designating the homes where ancient magistrates (archons) stored the documents of the law (2). This perspective allows us to view archives as profoundly authoritative: as the origins "from which order is given" (Derrida, 1995, p. 1). Like Derrida, Foucault (2018) mobilizes the archive as a theoretical concept bound up with power. He locates this power in what he calls "the system of discursivity," that is, the system of possibility of what can be said (Foucault, 2018). Michel Rolph Trouillot similarly describes archives not only as neutral sites of knowledge retrieval but also as cultural sites of world-making where archivists are interpreters as much as guardians of archival content (Trouillot, 1995). These "hermeneutic operations" (Ring, 2015) involve the selection, preservation, and destruction of material and

the obstruction of access, and they are often entangled within colonial, gendered, and racialized power structures that manifest as moments and principles of exclusion (Chaudhuri et al., 2010; Onuoha, 2021; Taylor, 2020).

The lessons learned from poststructuralist and more recent critical archival theory can be productively harnessed in the field of algorithmic regimes to look at the new knowledge regimes in which the crucial methods of appraisal, storage, and classification are once again being performed by a small group that exercises White patriarchal power over the rest of the world, with disproportionate impact. As Safiya Noble (2019) states, "Political struggles over the classification of knowledge have been with us since human beings have been documenting history. The politics of knowledge plays out in whose knowledge is captured, in what context and how it gets deployed." Current practices of algorithmic production, collection, distribution, and consumption both build upon and draw from the history of theorizing the archive, even as they raise pertinent new questions that exceed the horizon of analogue archives. To think about the politics of knowledge regimes in this way also allows us to recognize the historical roots of current practices of data gathering, hoarding, storing, leaking, and wasting while also remembering that today's seemingly streamlined interaction between human beings and our digital files and folders is every bit as messy, porous, and generative as archival encounters have always been (Thylstrup et al., 2021).

Crucially, while algorithmic regimes may function as archival power/knowledge nexuses, cultural archival theory also reminds us of the impossibility of total control within these regimes. Foucault (2018) identified archives as making up a "web of which they [the holders of the archive] are not the masters" (p. 143). Today's seemingly streamlined interaction between human beings and our digital data and storage is arguably every bit as messy, porous, and generative as the archival technologies and practices Foucault described. Recognizing the structural instability of archives can help nuance approaches to the power of algorithmic regimes, for instance, of prediction, because it shows that the power of algorithmic regimes lies just as much in their performative nature as in their actual capacity for prediction—and that governors of algorithmic regimes also battle their own archival instabilities and vulnerabilities. Foucault (2018) thus identified archives as making up a "web of which they [the holders of the archive] are not the masters" (p. 143). And in Derrida's (1995) feverish archives, there is an "aggression and destruction drive" (p. 19) that renders "the violent patriarchive … less authoritative by the haunting impossibility of its own totalizing desire" (Ring, 2015, p. 398). The structural uncertainty that haunts (an)archival regimes

thus both demands an acknowledgement of the structural injustice of the politics of algorithmic regimes and also creates openings for new forms of critique that resist reifying their powers.

Algorithmic Regimes as Gimmicks

So far, I have sought to foreground the ways in which algorithmic regimes are constituted by messes, failures, and uncertainties, and how these characteristics are both part of their power and their Achilles heel. Think of self-driving cars, which still fail to deliver on their promises. Or machine learning models such as Midjourney, whose aesthetic success stories are constantly also accompanied by horror stories of racialized, gendered, and colonial biases. To conclude, I want to offer a question and a perspective: if algorithmic regimes are messy, full of failures, and highly uncertain, why are they still so powerful? One potential answer is that it is exactly because they overperform and underperform at the same time. My final proposal, then, is to understand algorithmic regimes as *gimmicks*. My interpretation of algorithmic regimes as organized around gimmicks draws on Sianne Ngai's (2020) wonderfully provocative theory of the gimmick as "a miniature model of capitalism itself":

> The gimmick is thus capitalism's most successful aesthetic category but also its biggest embarrassment and structural problem. With its dubious yet attractive promises about the saving of time, the reduction of labor, and the expansion of value, it gives us tantalizing glimpses of a world in which social life will no longer be organized by labor, while indexing one that continuously regenerates the conditions keeping labor's social necessity in place. (p. 2)

I think Ngai's description deftly encapsulates how algorithmic regimes are premised on an aesthetic specific to a mode of production that binds value to labour and time. And, more importantly, it also opens to a new form of critical engagement that may help us understand not only how algorithmic regimes extract surplus value from living labour but also how they—through their gimmicks—"encod[e] the limits to accumulation and expanded reproduction that expose capitalism to crisis" (Ngai, 2020, p. 4). This is exactly why critical engagements such as those featured in this section are so crucial. Because they open small, important windows into the modes of valuation, labour, and aesthetics involved in upholding

algorithmic regimes, which allow us to truly appreciate their temporally sensitive and fundamentally unstable nature.

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