

Brett Zehner

**MACHINES OF SUBJECTION:
NOTES ON A TACTICAL
APPROACH TO ARTIFICIAL
INTELLIGENCE**

Abstract

As the big data revolution ramps up, we are drawn to online platforms that modulate political identity far removed from so-called liberal politics (Cheney-Lippold 2011, 165). There are two ends to the extreme. We have seen the return of white supremacists on supposedly democratic networks while on the ‘back end’ of computational culture, algorithms de-subjectify users for proprietary gain. In the broad sense here, subjectivity is an individual’s relation to themselves. However, machine learning occupies a powerful position within the logics of capital by shifting the site of identification into a digital sphere (165). With the widespread use of machine learning practices, abduction creates an overall “sensitivity to change and alter events” (Mackenzie 2013, 402). By abstracting concrete social practices into data vectors, machine learners measure, forecast and modulate human behaviors. Put simply, machine learners have become some of the most potent social inscription devices today. It is within this context that my dissertation asks — how does the recent ubiquity of machine learning affect how we wield political subjectivity?

APRJA Volume 8, Issue 1, 2019
ISSN 2245-7755

CC license: ‘Attribution-NonCommercial-ShareAlike’.

As humans feed affect, thought, and sociality into algorithms, algorithms feed back into what used to be called subjectivity. This shift is what has given way to a post-representational politics adrift within information space.
— Hito Steyerl

1. Machines of subjection

For the past two decades, fields of knowledge-production that utilize statistics have adopted machine learning as their primary mode of operation (Mackenzie, “Programming Subjects” 434). Due to the advances of computational technology, machines can now be programmed to find patterns in large datasets. ‘Machine learners’[1] recursively use patterns to infer correlations, essentially hailing new performative judgments on the world. Adrian Mackenzie goes so far as to claim that we now live within a *regime of predictivity* characterized by computational practices that rely less on verification than inference and abductive reasoning. With the widespread use of machine learning practices, abduction creates an overall “sensitivity to change and alter events” (402). By abstracting concrete social practices into data vectors, machine learners measure, forecast and thus modulate human behaviors by essentially scripting performatives. Put simply, machine learners have become some of the most potent social inscription devices today. It is within this context that I ask – how does the recent ubiquity of machine learning affect the production of subjectivity?

As the big data revolution ramps up, much attention has been drawn to online platforms that modulate political identities “situated at a distance from traditional liberal politics and removed from civil discourse” (Cheney-Lippold 165). On two ends of the

extreme, we have seen the rise of white supremacists propagating through networks that segregate public opinions. Yet, on the ‘back end’ of computational culture, machine learning algorithms de-subjectify human users for proprietary gain. Capitalism doesn’t care if you’re a fascist, a passivist, or even a bot; so long as it can extract behavioral information from your actions to be packaged and resold by its advertisers. As Cheney-Lippold points out, machine learning shifts the site of identification into the “measurable, digital sphere” (165). Between the front-end user interface, and the back-end logics of computation — machine learners are embedded within the powerful contradictions of capitalist logics.

Amidst this seeming contradiction, the concept of subjectivity may be an unhelpful category. ‘Enlightenment Man,’ the Cartesian subject divided between mind and body, the rationalist ‘view from nowhere’ — these euro-centric notions of subjectivity are founded on the measuring functions of coloniality and the technological organization of capital brought to bear on the individual.[2] Still, technological imaginaries have also been mobilized to trouble hegemonic notions of subjectivity. Donna Haraway’s feminist subjects, for instance, dethrone the “god-tricks” of scientific rationalism through situated technopolitical practices (Haraway, 1988). The notion of technological subjection, or perhaps more accurately, the notion of de-subjectivization, occupies a set of complex problems that garner closer attention.

Now emerging scholarship at the intersection of identity and machine learning has opened new pathways of research in digital cultural studies. Healy and Fourcade observe that the state used to be the only apparatus with the technological power to track its subjects. However, this is no longer the case (Fourcade and Healy). The recent ability for machine learners to track

online users' digital footprints, or their "data exhaust," marks an important moment for what Shoshona Zuboff calls surveillance capitalism. Every action a user performs on a digital system is considered a signal to be analyzed, packaged, and subsequently fed back into the system. The quantity of user data is much more important than quality. As long as an action online can be converted into data, it can be utilized in predictive behavioral models. Zuboff explains that no online action is too trivial to be aggregated, repackaged, and sold again (79). "Facebook likes, Google searches, emails, texts, photos, songs, geo-location, communication patterns" are all considered lucrative data to marketing firms and myriad other companies (79). Though let's be clear. Surveillance capital is not merely a social media concern. The algorithmic bias of machine learners stems from a long line of quantitative racism and surveillance (Browne). The targeting of the poorest members of society continues, only now it operates through various forms of data surveillance and predatory credit scoring (Fourcade and Healy 31). Zuboff argues that technique supplants authority, and that "discipline and control produce a certain knowledge of human behavior independent of consent" (81). In this extractive logic, we see an *impersonal* form of subjection at the heart of surveillance capital. New forms of power emerge alienating persons "from their own behavior while producing new markets of behavioral prediction and modification" (75).

The liberal idea of the rational decision-maker then seems to unravel as a locus of power relations. In *The Control Revolution*, historian of technology James Beniger describes the automation of decision theory in the 1930s. "Any decision tree of finite length can be duplicated by a finite automaton, thereby equating the question of decidability with that of computability" (64). It was the

automation of decision theory that set the stage for the first machine learning program to be utilized for economic and military planning by the RAND Corporation in 1955. Tung-Hui Hu advances this historical analysis by mapping the topography of power relations within 'cloud computing' where decisions are distributed across networked assemblages. He argues that borders seem to be out of date conceptions at the foundation of the sovereign subject (14). The Tiqqun collective in their cybernetic hypothesis posit that traditional class divisions and social conflict no longer cut through the middle of society, but through the middle of each of us. What is troubling is that the production of subjectivity seems to be no longer about creating "people of substance" but of turning each person into a "fleshless envelope, the best possible conductor of social communication" (18). And most recently, in the Trump era, Luciana Parisi links the de-personalization of machine learning systems to the rise of post-truth politics. Here indeterminacy and the unknown "push automated cognition beyond knowledge-based systems" ("Reprogramming Decisionism" 10). What we ultimately find within the political subjection (and de-subjection) of machine learners is a brutal instrumentalism based more on mechanical functions than on ideological content.

Now, despite considering machine learning's effect on social identity,[3] the above scholarship on machine learning has left open an opportunity for rigorous scholarly attention to de-subjection. For instance, John Cheney-Lippold asks: "What does the banality of competing for a job interview using machine learning to predict future friendships say about subject formation" (8)? This line of questioning still focuses on subjection at the level of performatives and self-awareness. This limited viewpoint imagines the subject merely as a 'user' who

is always already ideologically 'hailed.' Even though data analysis seems to aggregate our most intimate habits, surveillance remains automated and deeply impersonal as it bypasses individuated modes of subjectivity and signifying semiotics. Both digital media studies, if focusing merely on identification through computational performatives, is limited in offering any new insights into the forces at play in our present moment.

I argue that the acceleration of predictive techniques and impersonal forms of control require a more robust consideration of de-subjection. Along these lines, tactical machine learning would have two goals. First, the goal would be to update theories of subjection, and de-subjection, for the proliferation of machine learning devices with a keen attention to practices that bypass classical definitions of the subject. And second, to provide an analysis of social practices externalized into the technologies of machine learning. We must describe and experiment with certain tactical media concepts that undergird machine learning today – scenario planning, training, and prediction.

2. A tactical media approach to machine learners

Methodologically, a tactical media approach to machine learning must be situated within the perspectives of media philosophy as well as the practice of media arts. The legacy of tactical media (and its forebears in 1960's intermedia, conceptual, and performance art practices) informs much of my project combining the fields of digital media with performance studies. For instance, tactical media was outlined in the late 1990s by David Garcia and Geert Lovink as a set of

practices engaging technology as always being wrapped up in power relations. The activist ethos of tactical media has been mobilized in various registers by Rita Raley, The Critical Art Ensemble, and Beatriz da Costa. In each case, performance is considered a mediating process that enacts technological apparatuses. Each usage of the term *tactical media* is dependent upon the specific set of technopolitical relations that the practitioners hope to intervene within. In the case of Beatriz da Costa and Kavita Philip, their tactical *biopolitics* replaces the term 'media' out of a consideration of specific technoscientific forms of knowledge production modulating the possibilities of life (da Costa and Philip). Jussi Parikka, in a similar manner, mobilizes a geological imaginary to intervene within extractive environmental politics and digital culture. In this vein of mapping a specific set of technopolitical relations, the title of this essay mobilizes tactical media in the service of exploring the temporal regimes of machine learners. The title also borrows directly from Saidiya Hartman's *Scenes of Subjection*. I hope to expand on scenographic modes of subjection by drawing on the cybernetic imaginary to elucidate forms of technological de-subjection at the heart of identity politics. My initial hypothesis is that through so-called new media regimes, old forms of subjection mutate through the new technopolitical conditions that arise. I look to unearth the technologies of subjection as they traffic through the digital sphere.

To provide insight into the processes of de-subjection I rely on two threads of critical theory. The first mode of critical theory that I utilize comes from post-autonomist marxism and its theories of signification and subjection within the late capitalist technosphere. I find it useful to consider the performative statements and decision architectures of machine learners via the philosophy of language found in the work of Michel Foucault, and

Félix Guattari. Especially useful is Foucault's concept of the *dispositif* — the structural yet mutable union between institutions, subjectivity, and discourse. He defines the *dispositif* as an autonomous technique which exists “on the other side of juridical and political structures of representation” (Foucault 40). The *dispositif* is a mechanism of capture, both material and discursive, which directly manages the experience of everyday life.

Guattari further identifies two *dispositifs* of power that operate in a contradictory manner. On the one hand, we face systems of social subjection. Social subjection categorizes us with assigned identities — it gives us a gender, a race, a profession — a position of symbolic representation. However, the production of an individuated subject is also coupled with a different process that proceeds through desubjectivization. Guattari defines this process as *machinic enslavement* which dismantles the individuated subject, consciousness, and representations, acting on both pre-personal and supra-individual levels. In *machinic enslavement*, the individual is no longer instituted as an “economic subject” or a “citizen.” She is instead considered “a gear, a cog, a component in financial and various other institutional assemblages” (cited in Lazzarato, *Signs and Machines* 25). For instance — advertising focus groups stopped using questionnaires long ago in favor of measuring biometric response to stimuli such as taste tests or eye tracking. Capitalism is so successful because it operates heterogeneously at the intersection of social subjection and *machinic enslavement*. We are all caught in a double bind between performative individuation and the dissolution into our individual parts, unknown to ourselves. Guattari's critique (which I extend to the analysis of machine learners) is of critical theories that deal only with language and/or recognition while ignoring de-subjectivizing processes and their non-representational semiotics.

Although the post-autonomist critique of technology is quite useful in understanding both processes of subjection and de-subjection within the logic of computational capital, there is still the problem of the specific historical and material contexts in which machine learners are situated. One must wonder if Guattari's exploration of de-subjection can find a more radical usage today. In this manner, and concerning de-subjection, the second strain of critical theory we must engage with is *queer-of-color-critique*.

We must turn to the negative identity politics that refuse to validate, affirm, or strengthen forms of subjectivity presently produced under capitalism. Recent antagonistic positions and pessimisms are powerful not because they have to do with identity “but because they have to do with the “mundane radicalism of the desire to de-subjectivize all categories” (Menon). *Queer-of-color critique* has long grappled with processes of de-subjection as a crucial step in forming minoritarian collectivity. Disidentification operates “in and against dominant ideologies” while refusing assimilation.

Hortense Spillers' theorization of the flesh and the body is important to consider in relation to present data practices which quantify human behaviors. Spillers positions the distinction between body and flesh as the central difference “between captive and liberated subject positions”. For Spillers, the body is possessed by an individual who is the sole owner of their selfhood. Yet for a captive, as in the case of chattel slavery, the body is reduced to flesh. This flesh is exposed to violence without protection from legality, equality, or democracy. In fact, Jasbir Puar writes that the violence of capital is legitimated through the right to maim. Outside of representation, vision, or ideology, the flesh records the primary narrative of the horrors of liberal humanism. It is the suffering of the flesh which exceeds white coloniality

and acts as transgenerational memory, highlighting the ways black bodies remain as flesh. Spiller's political antagonism is an attention to the memory of the flesh existing on the side of the de-subjected, the already outside, beyond the limits of the subject or the law.

Of course, the right to maim emerges in the data practices of predictive policing that quantifies black behaviors which are correlated to racist databases. All of this digital magic is merely a weapon to legitimate police horrors in the streets. Yet, as Spiller claims of the memory of the flesh. How can we reclaim the memory of our data exhaust?

Again, de-subjection and disidentification hold tactical power. Whereas optimism and the will to produce new subjectivity may look to the redeemable of the world, pessimism takes up its position as an attempt to channel the forces of the outside. We can see, for instance, a glint of optimism in the work of Fred Moten — in the gap between the flesh and the law. This is where Moten finds ungovernable fugitivity. For Moten, continuous movement exceeds the subjection of social death. Blackness for afropessimists however, cannot escape social death. The distinction here between optimism and pessimism is a difference in ways to refuse the measure of racial capital. Moten proposes movement and evasion. Afropessimism however sees no such possibility.

The methodological divide here is nuanced, yet crucial. Afropessimism attempts to disarticulate the real object from the object of knowledge. The analytical task Sexton suggests is to move from a measure of empirical experience to the structure of political ontology. Afropessimism claims that the empirical existence of racialized exclusions are "in danger of entering the discursive record as transcendental truths". The task is clearly to resist any empiricism which may play back into the measure of white supremacy.

I consider these positions, structure vs. empiricism, not as antagonistic but as a coupling of strategy and tactics. Jared Sexton's structures of social death measure the terms of total struggle while Moten's empirical fugitivity finds its escape lines on the shifting grounds of everyday survival. Put simply, Afropessimism both refuses social subjection, while escaping machinic enslavement. Guattari and Afropessimism both critique the subject as always already commodified and inscribed (albeit in different ways) by violence and exploitation. Afropessimism seems more relevant in its call to desubjectify not to reappropriate or celebrate already existing positions within racial capital. Perhaps it is here that data exhaust and its nefarious uses can be a site of real struggle. Data exhaust is used to expose and reconstitute subjects to new techniques of power. Facebook strikes, sabotage of data sets used to predictively police entire populations, and adversarial network attacks all become viable options in political struggle.

Although the tactical potentials of machine learning are emerging as we speak, one brief example we can gesture towards is Zach Blas' project *Facial Weaponization Suite*. Intervening directly in biometric surveillance systems, it "protests against biometric facial recognition by making 'collective masks' in community-based workshops that are modeled from the aggregated facial data of participants, resulting in amorphous masks that cannot be detected as human faces by biometric facial recognition technologies."^[4] The masks are subsequently used for public interventions and performances. What is so provocative about Blas' project is the gesture of obfuscation — a digital act of refusal of individual subjection achieved not through escaping systems of capture but by turning surveillance systems toward a disaggregated collective subject. *Facial Weaponization Suite* peers back into machine learning systems in



Figure 1: Zach Blas, *Facial Weaponization Suite* (2011-14).

their own likeness, alien aggregates, algorithmic approximations of the crowd, statistical average identities that ironically protect the individual identities most at risk from exploitation. Blas' machine learners operationalize data through the excessive overload of computational measure, illustrating the potentials of direct digital struggle.

The politics of machine learning are not yet entirely clear. What is clear is that machine learning needs endless supplies of data. Any data will do. And increasingly that data can be unstructured. What is perhaps most interesting here is that the processes in which machine learners operate are becoming less understandable to the designers engineering their functions (Fourcade and Healy 11). In instances where there is no initial hypothesis, no pre-existent model, machine learners experiment in ways that are

virtually unrecognizable to their engineers. What emerges is what Luciana Parisi calls the "alien rule" of algorithmic ubiquity:

Far from making the rational system of governance more efficient, this new level of determination forces governance to rely on indeterminate probabilities, and thus to become confronted with data that produce alien rules. These rules are at once discrete and infinite, united and fractalized.
(Contagious Architecture 11)

Of course, the tautological empiricism of machine learners is problematic as they can be used to reinscribe prejudiced data to justify social segregation (Mackenzie, "The Production of Prediction" 441). However, for those political struggles not interested in recognition but that are more invested in functional power and the right to opacity; perhaps there is an opportunity offered by machine learners to turn their alienating weapons against systems of exploitation (Coulthard; Glissant).

Notes

[1] The generalized practice of machine learning encompasses many techniques of predictive modeling that are used to classify events and things into stable categories. Some of these techniques include linear regression models, Bayesian classifiers, and k-nearest neighbors. Decision trees, deep belief networks, and neural networks however are the most interesting in terms of subjection. The research on machine learning is evolving, seemingly on a week to week basis.

[2] It is useful to remember here what Gilles Deleuze, and Lewis Mumford before him, were keen to observe: that technologies are social before they are mechanical.

[3] For our purposes here social identity and subjectivity are one and the same. Social identity is considered a given coordinate in a state-based system of categorization: race, gender, name, social status.

[4] See <http://www.zachblas.info/works/facial-weaponization-suite/>.

Works cited

Aarons, K. "No Selves To Abolish: Afropessimism, Anti-Politics and the End of the World." *Metamute*, 29 February 2016, <http://www.metamute.org/editorial/articles/no-selves-to-abolish-afropessimism-anti-politics-and-end-world>

Beniger, James. *The Control Revolution: Technological and Economic Origins of the Information Society*. Cambridge, MA: Harvard University Press, 1986.

Browne, Simone. *Dark Matters: On the Surveillance of Blackness*. Durham: Duke University Press, 2015.

Brunton, Finn, and Helen Nissenbaum. *Obfuscation: A User's Guide for Privacy and Protest*. Cambridge: MIT Press, 2015.

Cheney-Lippold, John. 2011. "A New Algorithmic Identity: Soft Biopolitics and the Modulation of Control." *Theory, Culture & Society* 28.6 (2011): 164-181.

Coulthard, Glen. *Red Skin, White Masks*. Minneapolis: University of Minnesota Press, 2014.

Da Costa, Beatriz, and Kavita Philip, eds. *Tactical Biopolitics: Art, Activism, and Technoscience*. Cambridge: MIT Press, 2010.

Deleuze, Gilles, and Félix Guattari. *A Thousand Plateaus: Capitalism and Schizophrenia*. Minneapolis: University of Minnesota Press, 1987.

Deleuze, Gilles. "Postscript on the Societies of Control." *October*, vol. 59, pp. 3-7.

Critical Art Ensemble. "Tactical Media at Dusk?" *Third Text*, vol. 22 no. 5, 2008, pp. 535-548.

Ernst, Wolfgang. 2016. *Chronopoetics: The Temporal Being and Operativity of Technological Media*. Lanham, MD: Rowman and Littlefield International.

Michel Foucault. 1999. *Abnormal: Lectures at the Collège de France 1974-1975*. Trans. Graham Burchell. New York: Picador.

- Fourcade, Marion, and Kieran Healy. "Seeing Like a Market." *Socio-Economic Review*, vol. 15, no. 1, 2016, pp. 9-29.
- Garcia, David, and Geert Lovink. "The ABC of Tactical Media." *Nettime*, 16 May, 1997, <https://www.nettime.org/Lists-Archives/nettime-I-9705/msg00096.html>. Posting to mailing list.
- Ghamari-Tabrizi, Sharon. *The Worlds of Herman Kahn: The Intuitive Science of Thermonuclear War*. Cambridge: Harvard University Press, 2009.
- Glissant, Édouard. *Poetics of Relation*. Ann Arbor: University of Michigan Press, 1997.
- Guattari, Félix. *Soft Subversions*. Los Angeles: Semiotext(e), 1996.
- Haraway, Donna. "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective." *Feminist Studies*, vol 14, no. 3, 1988, pp. 575-599.
- Hartman, Saidiya. *Scenes of Subjection: Terror, Slavery, and Self-Making in Nineteenth-Century America*. Oxford: Oxford University Press, 1997.
- Hu, Tung-Hui. *A Prehistory of the Cloud*. Cambridge: MIT Press, 2015.
- Lazzarato, Maurizio. "Exiting Language: Semiotic Systems and the Production of Subjectivity in Félix Guattari." *Cognitive Architecture: From Biopolitics to Noopolitics. Architecture and Mind in the Age of Communication*, edited by Hauptmann D. and Neidich W. Rotterdam, Netherlands: 010 Publishers, 2010, pp. 502-521.
- Lazzarato, Maurizio. 2014. *Signs and Machines: Capitalism and the Production of Subjectivity*. Los Angeles: Semiotext(e).
- Mackenzie, Adrian. "The Production of Prediction: What Does Machine Learning Want?" *European Journal of Cultural Studies*, vol. 18. No. 4-5, 2015, pp. 429-445.
- Mackenzie, Adrian. "Programming Subjects in the Regime of Anticipation: Software Studies and Subjectivity." *Subjectivity*, vol. 6, no. 4, 2013, pp. 391-405.
- Menon, Madhavi. *Indifference to Difference: On Queer Universalism*. Minneapolis: University of Minnesota Press, 2015.
- Mumford, Lewis. *The Myth of the Machine: Techniques and Human Development*. New York: Harcourt, Brace & World, 1967.
- Muñoz, José Esteban. *Disidentifications: Queers of Color and the Performance of Politics*. Minneapolis: University of Minnesota Press, 1999.
- Parikka, Jussi. *A Geology of Media*. Minneapolis: University of Minnesota Press, 2015.
- Parisi, Luciana. "Reprogramming Decisionism." *e-flux journal*, no. 85, October 2017, <https://www.e-flux.com/journal/85/155472/reprogramming-decisionism/>
- Parisi, Luciana. *Contagious Architecture: Computation, Aesthetics, and Space*. MIT Press, 2013.
- Pasquinelli, Matteo, ed. *Alleys of Your Mind: Augmented Intelligence and its Traumas*. London: Meson Press, 2015

Raley, Rita. *Tactical Media*. Minneapolis: University of Minnesota Press, 2009.

Spillers, Hortense J. "Mama's Baby, Papa's Maybe: An American Grammar Book." *Diacritics*, vol. 1, no. 2, 1987, pp. 65-81.

Hito Steyerl. "Proxy Politics: Signal and Noise," *e-flux journal*, no. 60, December 2014, <http://www.e-flux.com/journal/60/61045/proxy-politics-signal-and-noise>

Tiqqun. "The Cybernetic Hypothesis." *The Anarchist Library*, <https://theanarchistlibrary.org/library/tiqqun-the-cybernetic-hypothesis>. Retrieved on May 29, 2010 from cybernet.jottit.com

Zuboff, Shoshana. "Big Other: Surveillance Capitalism and the Prospects of an Information Civilization." *Journal of Information Technology*, vol. 30, no. 1, 2015, pp. 75-89.