DEAR SCIENCE AND OTHER STORIES

FAILURE (MY HEAD WAS FULL OF MISTY FUMES OF DOUBT)

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n March 2014, *Harper's* published the report "Chronicle of a Death Foretold." In this piece, Monte Reel describes a program implemented by Chicago schools in 2009 that would "determine exactly which of their 400,000 students would get shot."2 The program became known alongside an initiative called "The Culture of Calm." Consultants from the Massachusetts Institute of Technology and the University of Chicago developed an algorithm that scanned juvenile detention and school attendance records, as well as test scores, and used these archives to prognosticate the preventable death of youths. When I first came across this report, I could not read past the first page: the report begins with Davonte Flennoy, a young man who was—to use an awkward nonword— "algorithmed." More specifically, data was pulled from Flennoy's archival file, and this led to interpretable paper scores; in the application of the algorithm, his well-being and his psychic and biologic life were rendered in excess of a deterministic set of discursive calculations. To put it simply, the algorithm mathematically refused all aspects of his livingness. Flennoy's archive—his records, his test scores—were culled and collated, and he was determined to be highly killable, or "ultra-high-risk." Indeed, in

The subtitle of this story, "My Head Was Full of Misty Fumes of Doubt," is from Zora Neale Hurston, *Dust Tracks on a Road* (1942; rpt., New York: HarperCollins, 1991), 195.

^{1.} Monte Reel, "Chronicle of a Death Foretold: Predicting Murder on Chicago's South Side," *Harper's*, March 2014, 43–51.

^{2.} Reel, "Chronicle of a Death Foretold," 43.

^{3.} Reel, "Chronicle of a Death Foretold," 46. On risk thinking see Nikolas Rose, "At Risk of Madness," in *Embracing Risk: The Changing Culture of Insurance and Responsibility*, ed. Tom Baker and Jonathan Simon (Chicago: University of Chicago Press, 2002), 209–237.

many ways his life only enters the mathematical equation as death. The algorithm was granted more energy and vitality—through the act of application—than Flennoy (the object and outcome of the mathematical analysis). After the predictive system algorithmically anticipated his death, and measures were taken to prevent his death, Flennoy was killed in June 2012. This report sat on my desk for just over two years, and I read the first page over and over. I could not fully integrate into my psyche the idea of an algorithm that was manufactured to assume, anticipate, predetermine, and foretell deadly violence; at the same time, I did not want to consume, yet again, what I and we already know. I read that first page over and over for about two years, noticing that the compulsion to repeat put me in a state, to borrow from Dina Georgis, "of simultaneously not wanting to forget and not wanting to know."

When I returned to the report and completed reading it, I learned that the predictable algorithmic model saw both funding cuts and ineffectual results: the key to the program was to run the algorithm, identify ultrahigh-risk people, and prevent their deaths by providing them with mentors who would support, teach, counsel youths. The cost was about \$15,000 per student, annually, and the funding model was unsustainable; as well, gunshot victimization did not decrease among the algorithmed. Soon after, a similar predictable-analytics formula was adopted by the Chicago Police Department—one we are all familiar with and referred to as the predictive policing model: this algorithm identifies a series of "hot spots" and "hot lists" that single out criminals and their attendant geographies.

I begin this story with the *Harper's* report not because what is uncovered is new or astonishing but because it shows how blackness and race are implicit to mathematical codes, discourses, and problems. The report, without reserve, situates black youths in the midst of what Bernard Harcourt calls "actuarial predictions." The predictions—the hot spots,

^{4.} Dina Georgis, The Better Story: Queer Affects from the Middle East (Albany: SUNY Press, 2013), 47.

^{5.} Rachel Levenstein, Sue Sporte, and Elaine Allensworth, "Findings from an Investigation into the Culture of Calm Initiative," *University of Chicago Consortium on School Research*, October 2011, https://consortium.uchicago.edu/publications/findings-investigation-culture-calm-initiative. Dana Chandler, Steven D. Levitt, and John A. List, "Predicting and Preventing Shootings among At-Risk Youth," *American Economic Review: Papers and Proceedings* 101, no. 3 (2011): 288–292. Thank you, Nik Theodore.

^{6.} Bernard Harcourt, Against Prediction: Profiling, Policing, and Punishment in an Actuarial Age (Chicago: University of Chicago Press, 2007), 2.

the ultra-high-risk youths, for example—emerge from the "mechanical combining of information for classification purposes." The question of why or how or under what conditions premature death is predictable is not asked. Instead, death is an analytical and methodological variable in the overall equation. Even the underfunded and defunded program, which was intended to save black life and engender mentorship, grimly assumed loss (the vulnerable were not given life, they were given foreseeable death).

For the two years the report sat on my desk, unread, I thought about the mathematics of black life. I wrote an essay where I wanted to centralize black life rather than preventable and premature death; that essay argues, in a less-than-straightforward way, that one way to imagine black life differently is to rethink the mathematics that underwrite slave archives.8 Following Saidiya Hartman's "Venus in Two Acts," I explore how archives document and institutionalize sexist and racist practices. I argue that because the archives primarily document instances of violence toward and the death of black enslaved people, racism acts as an eerie origin story that can steer us, analytically, toward death. What the archive tells us is what we already know and what we resist, but it can also structure and frame how we enter into the present and future in our writing: Middle Passage and plantation systems formalized and made ubiquitously mundane, in writing and practice, violence against black people, black subordination, and racism, and we sometimes use this as a blueprint to understand and struggle against oppression. Anything in excess of violence, racism, and subordination—black life, black joy, the practice of loving, for example is either absent or perversely tied to the dehumanizing logics of white supremacy. My central questions for that essay were: If the archive is a knowledge network that records and normalizes black subordination, how do we understand this network outside of itself? What happens to our understanding of black humanity when our analytical frames do not emerge from a broad swathe of numbing racial violence but, instead, from multiple and untracked enunciations of black life?

What I want to think about in this story, in a similar but different way, is how black life is absent from the classificatory algorithms that are applied to statistically organize our world. This absence affirms how the

^{7.} Paul Meehl quoted in Harcourt, Against Prediction, 16-17.

^{8.} Katherine McKittrick, "Mathematics Black Life," *Black Scholar* 44, no. 2 (Summer 2014): 16–28.

premature death of black people, and, more broadly, the acute marginalization of the world's most vulnerable communities, are entrenched in algorithmic equations. What I am struggling to work out, then, is twofold: that premature death is an algorithmic variable; that black life is outside algorithmic logics altogether.9 It follows that coded infrastructures and patterns that are instituted to name and/or resolve social problems are bound up in biocentric thinking and, as well, that we are already grasping an alternative knowledge system when we analytically privilege black life. I am not, I want to underline, suggesting that we replace the dead with the living; I am not seeking to dismiss our losses. I want, instead, to reimagine blackness—as life and living memory and whatever is in between—as emerging from a black sense of place. My concern is therefore, broadly, methodological: How do we come to and formulate answers and what do we want from these solutions, politically? How might a black sense of place rethink the demand to fix and repair black humanity by lifting black folks up, from subhuman to a genre of human that cannot bear black life? What if black life opens up question marks and unanswerable curiosities?

A black sense of place draws attention to geographic processes that emerged from plantation slavery and its attendant racial violences yet cannot be contained by the logics of white supremacy. A black sense of place is not a standpoint or a situated knowledge; it is a location of difficult encounter and relationality. A black sense of place is not individualized knowledge—it is collaborative praxis. It assumes that our collective assertions of life are always in tandem with other ways of being (including those ways of being we cannot bear). A black sense of place always calls into question, struggles against, critiques, undoes, prevailing racist scripts. A black sense of place is a diasporic-plantocratic-black geography

9. If a nonuniform problem enters the data processes machine, it generates a noncomputable form and the output may not be predictable or calculable. The process of working with and working out the equation might: result in infinite calculation; or, alternatively (depending on the mechanics underpinning the working with and working out), the data processing machine might be offered a different set of rules through which to accommodate the non-uniform problem and resolve it. Gualtiero Piccinini, "Alan Turing and the Mathematical Objection," Minds and Machines 13 (2003): 23–48. If black life is the nonuniform problem, we might sit with this and its attendant noncomputability. If entered (recorded, logged), within the context of computation, black life might offer us multiple ways to unthink the problematic enfleshment of algorithms because it is an irresolvable variable; if entered (recorded, logged) into the equation, and within the working with and working out stages, the unsolvable also provides the opportunity to sit with unpredictability-entropy as this relates to the potential, not only the death-dealing, technologies of human life.

that reframes what we know by reorienting and honoring *where* we know from. ¹⁰ This is a place where, to borrow from Édouard Glissant, "analytic thought is led to construct unities whose interdependent variances jointly piece together the interactive totality." ¹¹ A black sense of place is a methodology and an analytical frame that believes in and believes black humanity. So I ask: What does a black sense of place *do* to algorithms that presume, in advance, black premature death? How might we shift our methodological questions so that we do not end up in an analytical bind that affirms rather than undoes racial violence?

A black sense of place draws attention to uncomfortable relationalities yet understands these as a method through which we can wade through the horrific uneasiness of black death that is, as we know, posited as an easy resolution to a vast range of social problems. What I also want to signal, as I move through this story, is how some geographies get called up as answers to problems. To put it simply, solving crimes often involves surveying and marking black and/or impoverished geographies and claiming that this is not profiling because places, rather than people, are being targeted. In other words, social problems are resolved through producing calculations, equations, and problem-solving operations; these problems (black people) are translated into cartographically itemized racial codes. Part of our task, then, is to notice how algorithms have a place and take place and produce place and how blackness—where we know

^{10.} Katherine McKittrick, "On Plantations, Prisons, and a Black Sense of Place," *Social and Cultural Geography* 12, no. 8 (2011): 947–963.

^{11.} Édouard Glissant, *Poetics of Relation*, trans. Betsy Wing (1990; rpt., Ann Arbor: University of Michigan Press, 1997), 92.

^{12.} These problem-solving operations can be imagined in relation to the Du Boisian question "How does it feel to be a problem?" In this case, the calculations and other mathematical operations require the uneasy embodiment of racial and racist designation and resultant structures of feeling (how does it feel to be?). The mathematics seek to resolve (solve, find an answer to) us. We are the repository of the mathematical operations. The affective work Du Bois points to is taxing. We know that problems are trouble. Problems are harmful and problems get in the way. Problems need to be resolved. Problem is dilemma, nightmare, mess. How does it feel to be a problem? It feels oppressive. It feels worrying. It feels forever. It feels awful. W. E. B. Du Bois, *The Souls of Black Folk* (New York: Vintage, 1990), 7; W. E. B. Du Bois, "The Study of the Negro Problems," *Annals of the American Academy of Political and Social Science* 11 (January 1898): 1–23; Nahum Chandler, *X*— *The Problem of the Negro as a Problem for Thought* (New York: Fordham University Press, 2014); Paul Gilroy, *Against Race: Imagining Political Culture beyond the Color Line* (Cambridge, MA: Harvard University Press, 2000). She is a loose cannon, a problem. Remove her.

from—understands and reorders these geographies. I also focus on geography to dislodge crude identity politics, to cast the net beyond the individual and to emphasize that *where* we know from—rather than what we already know about our seemingly authentic selves—is a more generous and difficult political project that takes into account interhuman geographies. With this in mind, I suture a black sense of place to these mathematics and problem-solving practices in order to unthink the violence that often accompanies the production of space.

An algorithm "applies to any mathematical procedure consisting of an indefinite number of steps, each step applying to the one preceding it."13 The steps are, in fact, massive calculations that are set up to accomplish a task; most algorithms stop on finding the answer. In addition, algorithms are intended to solve problems correctly and efficiently.¹⁴ According to Khan Academy, the reason algorithms matter is that the massive calculations "do things people care about." 15 While algorithms are best known within the context of computer science, they are attached to longer practices of statistical data collection. The aforementioned "hot spots," "hot lists," and "risky people" were the result of computer algorithms, as are trending hashtags, credit application scores, job application scores, prison sentencing decisions, publication impact factors, Netflix and Amazon recommendations, and so on. Algorithms also assess voter information environments, extract personal information, accumulate data sets, transfer data to capitalist stakeholders, ergo, profoundly remaking our sense of place (task accomplished).16 These computer-generated algorithms are

^{13.} Tobias Dantzig, Number: The Language of Science (1930; rpt., New York: Plume, 2007), 33.

^{14.} Khan Academy, "What Is an Algorithm and Why Should You Care?," accessed May 19, 2016, https://www.khanacademy.org/computing/computer-science/algorithms/intro-to-algorithms/v/what-are-algorithms.

^{15.} Khan Academy, "What Is an Algorithm and Why Should You Care?"

^{16.} Carole Cadwalladr, "The Great British Brexit Robbery: How Our Democracy was Hijacked," *Guardian*, May 7, 2017, https://www.theguardian.com/technology/2017/may/07/the-great-british-brexit-robbery-hijacked-democracy? CMP=share_btn_link. In addition to being linked to the military industrial complex and surveillance, Cadwalladr likens voter information extraction to a "massive land grab." She also refers to the data and generation of computer information as an "ecosystem" that can be mapped. Data mining: to quarry, to excavate, to remove. The spatial terms are dizzying given that computer data is not, in fact, a three-dimensional space that we can touch and/or inhabit. Instead, the data ecosystem is made up of computer codes. The ecosystem is produced by scripting languages like C++ or Frege or Python or Objective-J and it is upheld by software architecture. In many

automated-decision-making-software: they are computer codes that are given a problem, that seek and compile patterns and themes, and then spit out solutions.

An important feature underlying many algorithms is predictability: they are not only used to work out problems; they know the problem in advance and are tasked to achieve a specified result. So the accomplishment, the answer, the result, what we care about, comes before the equation. An important example of this is predictive algorithm models. In his study of policing and profiling, Harcourt explores predictive parole models alongside the overlapping fields of sociology, criminology, and statistics. Beginning in roughly the 1930s, statistical information on prisoners such as immigrant status, employment history, personality type, and characteristic traits—was gathered to determine the likelihood of repeat offenses.¹⁷ While his study is very extensive, what can be deciphered from his text is that what these early statistical systems knew in advance was tied to "characteristic traits" that ostensibly shape recidivism and other decisions about prison life. It is not news, of course, that "characteristic traits" are underpinned by differential racial histories and privileges. What we learn from predictive algorithms, then, is that the mathematic

ways, the land does not exist and therefore cannot be grabbed or mined: the goal is, Jiawei Han and Micheline Kamber argue, "the extraction of patterns and knowledge from large amounts of data, not the extraction (mining) of data itself." Jiawei Han and Micheline Kamber, Data Mining: Concepts and Techniques (Burlington, MA: Morgan Kaufmann, 2001), 5. However, Cadwalladr's language is powerful precisely because it nods to a much longer history of racial and colonial violence and, at the same time, allows our mind to leap and think about how data produces real three-dimensional geographies. Data grabbing and data mining are certainly not the same as massive transnational land transactions and land grabs, spurred by violent "development" logics that necessarily displace and destroy the lives of the world's most vulnerable. But the data grabbing—think Brexit and US president Trump, for example—remakes place and perhaps might be an anticipatory shadow in less immediate histories that were underwritten by displacement and accumulation by dispossession. Here, the work of Sharlene Mollett is instructive: land grabbing is not novel or recent; land grabbing is long-standing and routinely operationalized to naturalize racial hierarchies and racist "whitening logics." Sharlene Mollett, "The Power to Plunder: Rethinking Land Grabbing in Latin America," Antipode 48, no. 2 (March 2016): 412-432. Land grabbing is a selfreplicating system that provides the avaricious conditions for the data grab. They are not the same, but they are both tied to colonialism and capitalism and they are both entwined with the production of space. The task of data grabbing is to remake our sense of place, heartlessly. Thank you, Paul Gilroy.

^{17.} Harcourt, Against Prediction, 57.

answer or result is, at least in part and sometimes in whole, tied to a larger colonial and plantocratic logic: a trait is, as we know, a genetically determined characteristic—like eye color. Traits are the variables that underlie a biocentric system of knowledge.¹⁸

In contemporary contexts, sometimes race is written into the predictive formula. A Violence Prediction Model Variable counts and assesses:

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African American;
Hispanic;
School Per Capita Shooting History;
Times Shot Previously;
Serious Misconducts Per Day;
Math Score; Reading Score;
Percent of Days Suspended;
Percent of Days Absent;
and so on.<sup>19</sup>
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And sometimes race is obscured by the predictive formula. A Risk Terrain Model counts and assesses:

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Drug Arrests, Gang;
Territory;
At-Risk Housing;
Risky Facilities;
Shootings;
Gun Robberies;
and so on.<sup>20</sup>
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Violence. Terrain. Predictive algorithms and actuarial patterns did and still do rely on genetic variables to help solve problems and get results and do things people care about. We should also note that the characteristic traits that underlie early algorithms get coded over and coded

^{18.} Sylvia Wynter and Katherine McKittrick, "Unparalleled Catastrophe for Our Species? Or, to Give Humanness a Different Future: Conversations," in *Sylvia Wynter: On Being Human as Praxis*, ed. Katherine McKittrick (Durham, NC: Duke University Press, 2015), 26–30.

^{19.} Chandler, Levitt, and List, "Predicting and Preventing Shootings among At-Risk Youth," 288–292.

^{20.} Leslie W. Kennedy, Joel M. Caplan, and Eric Piza, "Risk Clusters, Hotspots, and Spatial Intelligence: Risk Terrain Modeling as an Algorithm for Police Resource Allocation Strategies," *Journal of Quantitative Criminology* 27, no. 3 (2011): 339–362.

over and coded over, so that the variables (the traits) within the original equation that was fashioned to do things we care about sometimes get weighed down and lost underneath mathematical cyphers (as seen in the "Risk Terrain Model"). The weight that conceals traits also hides the work of the coders and translators: those workers who fuel algorithms by collecting and collating the data yet remain unseen and unacknowledged. These workers, Neda Atanasoski and Kalindi Vora write, are the "surrogate technologies" whose labor facilitates the ease of coming to an algorithmic conclusion. The work and process of coding conceals a long biocentric statistical history that continues to define "traits"—our genetic characteristics—as variables. A variable is a symbol that represents a quantity in a mathematical expression. What unfolds are measurable numbers—often abstracted from human input—calculating resolutions that we care about.

If we understand algorithms in this vein, we can begin to tease out how numbers and mathematical equations are tied to a biocentric system of knowledge. What becomes increasingly clear, then, is not simply that the results and answers are racist (e.g., your traits mathematically result in your incarceration), but that the work of administrating algorithms (e.g., what we do to solve the problems that we care about) requires biocentric methods and methodologies that can only produce dehumanizing mathematical results. In other words, black inhumanity, specifically the biocentric racist claim that black people are nonhuman and unevolved and a priori deceased, is a variable in the problem-solving equation before the question is asked, which means that the work of the algorithm—to do things people care about, to accomplish the task—already knows that Flennoy's life and well-being are extraneous to its methodology. What comes into clear view, then, is not simply the racist result but the administrative and methodological steps that require racism before they begin to work through and toward the problem.

A large number of articles and books speak to these themes—particularly in relation to predictive policing but also in relation to other algorithmic patterns: predictive algorithms are racist, predictive algorithms imitate a racist system, predictive algorithms are technologies of racial

^{21.} Neda Atanasoski and Kalindi Vora, "Surrogate Humanity: Posthuman Networks and the (Racialized) Obsolescence of Labor," *Catalyst: Feminism, Theory, Technoscience* 1, no. 1 (2015): n.p., http://feministtechnoscience.org/ojs/index.php/catalyst/article/view/ata_vora.

profiling, predictive algorithms are antiblack, algorithms harm communities of color, algorithms threaten democracy.²² I subscribe to the "Algorithm" page on Flipboard, which algorithmically gathers a range of recommended articles on big data and algorithms and presents them to me because I care about algorithms. Headlines include "Beauty Contest Regrets Using Robots for Judges after Only White People Win," "Facebook Algorithms Can't Replace Good Judgment," "It's Getting Tougher to Tell if You're on the Phone with a Machine or Human: Algorithm Can Accurately Mimic Human Voices, Including Breathing," "Could an Algorithm Replace the Pill?," and "How Algorithms Can Destroy Your Chance of Getting a Job."23 The widely circulated *ProPublica* article "Machine Bias" draws attention to how the software and formulas used to determine future criminals are racially biased: regardless of their criminal history a history that may include no criminal activity at all—black people are cast as more unlawful and culpable than white people.²⁴ We also know, as well, that there is widespread support for predictive models, which are described as beneficial, proactive, promising, strikingly successful, cost-

22. Ezekiel Edwards, "Predictive Policing Software Is More Accurate at Predicting Policing," *Huffington Post*, August 31, 2016, http://www.huffingtonpost.com/entry/predictive-policing-reform_us_57c6ffe0e4boe6od31dc9120; R. Joshua Scannell, "Broken Windows, Broken Code," *Real Life*, August 29, 2016, http://reallifemag.com/broken-windows-broken-code/; Cathy O'Neil, *Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy* (New York: Crown, 2016). Ruha Benjamin, *Race After Technology: Abolitionist Tools for the New Jim Code* (Cambridge: Polity, 2019).

23. Amanda Fama, "Beauty Contest Regrets Using Robots for Judges after Only White People Win," Elite Daily, September 9, 2016, https://www.elitedaily.com/news/beauty-contest-robot-judges-regrets/1606213; Navneet Alang, "Facebook Algorithms Can't Replace Good Judgment," Globe and Mail, September 9, 2016, https://www.theglobeandmail.com/opinion/facebook-algorithms-cant-replace-good-judgment/article31805498/; Dave Gershgorn, "It's Getting Tougher to Tell if You're on the Phone with a Machine or Human," Quartz, September 9, 2016, https://qz.com/778056/google-deepminds-wavenet-algorithm-can-accurately-mimic-human-voices/; Cory Doctorow, "Blackballed by Machine Learning: How Algorithms Can Destroy Your Chance of Getting a Job," BoingBoing, September 8, 2016, https://boingboing.net/2016/09/08/blackballed-by-machine-learnin.html; Emma Lundin, "Could an Algorithm Replace the Pill?," Guardian, November 7, 2016, https://www.theguardian.com/lifeandstyle/2016/nov/07/natural-cycles-fertility-app-algorithm-replace-pill-contraception. Read with: Marcus Gilroy-Ware, Filling the Void: Emotion, Capitalism, and Social Media (London: Repeater Books, 2017).

24. Julia Angwin, Jeff Larson, Surya Mattu, and Lauren Kirchner, "Machine Bias," *Pro-Publica*, accessed June 20, 2016, https://www.propublica.org/article/machine-bias-risk-assessments-in-criminal-sentencing.

effective, incredibly accurate, and so on.²⁵ These incredibly accurate algorithms are also often posited as delinked from race, thus pushing up against the *ProPublica* thesis. The website for PredPol (a well-known company that produces predictive policing software) reads, "PredPol uses only three data points in making predictions: past type of crime, place of crime and time of crime. It uses no personal information about individuals or groups of individuals, eliminating any personal liberties and profiling concerns."²⁶

Type. Place. Time. In some of the studies I read, there are often short definitions of what a predictive algorithm is, or what predictive policing algorithms are, but the racial shadows behind numbers are often unspoken-unwritten. The already existing biocentric logic does not necessarily inform the administration of the algorithm (how we *get to* what we care about is not relevant). Instead, what is highlighted, discussed, are the answers: finding bad illegal geographies and disciplining the bad criminal people that inhabit these places. This kind of analytical move refuses racism, capitalism, and white supremacy while presenting their logics and outcomes—dysselection—as objective truths. Samuel Greengard writes:

Feed reams of data—particularly data focused on the time, distribution, and geography of past events—into a database and ferret out patterns that would not be apparent to the human eye or brain. With the resulting data, it is possible to adjust patrols and other resources to create a stronger deterrent, but also to predict where crimes are likely to take place and be in a better position to apprehend suspects.²⁷

What I am trying to work through is, then, how the racist biocentric logics that inform the algorithmic queries and their answers are quietly yet securely tied to the mathematics of black lifelessness. What we have is a system wherein black people are dehumanized in advance, and this

^{25.} Walt L. Perry, Brian McInnis, Carter C. Price, Susan C. Smith, and John S. Hollywood, Predictive Policing: The Role of Crime Forecasting in Law Enforcement Operations (Santa Monica, CA: Rand, 2013); Andrew Guthrie Ferguson, "Predictive Policing and Reasonable Suspicion," Emory Law Journal 259 (2012): 261–313; Samuel Greengard, "Policing the Future," Communications of the ACM 55, no. 3 (March 2012): 19–21.

^{26.} Predpol, "About," accessed February 1, 2017, http://www.predpol.com/about/.

^{27.} Greengard, "Policing the Future," 19 (emphasis added).

dehumanization is hardened and made objective by mathematical codes. The tensions between these analytical approaches—the biological and the mathematical—function to produce a series of "objective facts" precisely because they are grounded in a positivist system of knowledge that indexes simultaneously, racial, sexual, economic, geographic, and temporal differences. The algorithm expresses, almost perfectly, the brutality of racism precisely because it is an accounting system that produces what Sylvia Wynter calls "adaptive truth-for" terms that are specific to our present order of consciousness.²⁸ The numbers that come before, comprise, and complete the algorithm are devoid of black life yet filled up with acts of black dysselection. It is a process typical to what we already know: a biocentric system is mathematically confirmed; it unfolds and is, in theory, seemingly absent of racism because the methodology cannot comprehend black well-being in the first place; the system and methodologies cannot bear black livingness, and the math and coding behind the algorithm provide an alibi for racism because black life is not relevant to the "things people care about." What is also revealed is the tendency to bifurcate the science of the biological and science of mathematics: even though we know in our hearts algorithms imitate a racist system, within our present system of knowledge, the numbers do not and cannot lie.

Josh Scannell adds to this by exploring how algorithms are "real social processes" that "enshrine contested neo-plantation systems of rule as technocratic abstractions, infrastructural, and inevitable." The information behind algorithms is cast as "spectral data bodies" that produce a "metrics of prehension" that is spatially enacted. Indeed, if the numbers cannot lie, the spatialization of these numbers, expressed across multiscalar geographies, ensures what Ruth Wilson Gilmore calls the "fatal couplings of power and difference signified by racism." Geography matters because it functions to illuminate how algorithmic answers to our problems—what we care about—are embedded in place. Interestingly, the more we research these connections between geography and algorithms, the more

^{28.} Sylvia Wynter, "Unsettling the Coloniality of Being/Power/Truth/Freedom towards the Human, after Man, Its Overrepresentation—an Argument," CR: The New Centennial Review 3, no. 3 (Fall 2003): 280.

^{29.} R. Joshua Scannell, "What Can an Algorithm Do?," DIS Magazine (2016), accessed September 26, 2016, http://dismagazine.com/discussion/72975/josh-scannell-what-can-an-algorithm-do/.

^{30.} Ruth Wilson Gilmore, "Fatal Couplings of Power and Difference: Notes on Racism and Geography," *Professional Geographer* 54, no. 1 (February 2002): 22.

we notice how the former, geography, is racially codified. Predictive algorithms are not only imitating a racist system, they are refusing an already refused black humanity by marking black geographies predictably criminal. In many ways, then, the answer to our problems is revealed as the multiscalar dispossession of the dispossessed. This geographic layer perfects the algorithmic alibi by using mathematical procedures to abstract human activity from racist problem-solving practices and by depersonalizing black geographies. PredPol: "Using only three data points—past type, place and time of crime and a unique algorithm based on criminal behavior patterns, PredPol's powerful software provides each law enforcement agency with customized crime predictions for the places and times that crimes are most likely to occur. PredPol pinpoints small areas, depicted in 500 feet by 500 feet boxes on maps—that are automatically generated for each shift of each day." Type of crime, place of crime, time of crime. Type. Place. Time.

In addition to studies like "Machine Bias," there has been some valuable work on reclaiming and recoding algorithms, recognizing coders who critique and refuse predictive models, highlighting nonpredictive and eternal algorithms, thinking about the algorithm as similar to the Code Noir or as a form of plantation neoliberalism or as enacting a Foucauldian panopticon.³² There are algorithmic poetics and code-work that index and map different sites of safety and violence.³³ There have also been algorithmic mappings of Negritude, opacity, slave ship routes, city sounds, deaths since Ferguson, and more. So even though the numbers do not lie, many are working hard to counter-code or renarrate or simply tell the certainties that underlie the brutal statistics, traits, and mathematics of dysselection.

^{31.} Predpol, "About."

^{32.} Wendy Chun, "On 'Sourcery,' or Code as Fetish," *Configurations* 16, no. 3 (Fall 2008): 299–324; Christopher Taylor, "Plantation Neoliberalism," *New Inquiry*, July 8, 2014, www .thenewinquiry.com/essays/plantation-neoliberalism/; Louis Henderson, "Black Code/Code Noir: The Algorithm as Necropolitical Control," *Khiasma*, June 2016, http://www.khiasma.net/magazine/black-codecode-noir/; Colin Koopman, "The Algorithm and the Watchtower," *New Inquiry*, September 29, 2015, http://thenewinquiry.com/essays/the-algorithm-and-the-watchtower/.

^{33.} Micha Cárdenas, "Trans of Color Poetics: Stitching Bodies, Concepts, and Algorithms," *Scholar and Feminist Online* 3, no. 13–4, no. 1 (2016), http://sfonline.barnard.edu/traversing-technologies/micha-cardenas-trans-of-color-poetics-stitching-bodies-concepts-and-algorithms/o/.

What all of this has led me to—the codes and the recodes, the equations and problems, the predictions and spatial alibis, the software and the numbers, all covered in blood and death and things we care about that would not otherwise be apparent to the eye or the brain—is a lesson in methodology. I am interested in algorithms because of what they tell us about how we do the things we care about. Much of this story has centralized how many algorithms are future-making mathematic equations. They are anticipatory computations that tell us what we already know, but in the future. If we want different or better or more just futures and worlds, it is important to notice what kind of knowledge networks are already predicting our futures. As we know, as well, futurity and futures are deeply meaningful to black folks: we see this playing out in a number of ways, in reconceptualizations of time and space, in Afrofuturisms, in black science fictions and speculative fictions, in the unmet promises of modernity, in the freedom yet to come; in the syllabi and the calls for papers and the conferences and the books and articles and blogs; in the keywords and in the museums; in the recent and not-recent-at-all turn to string theory and theoretical physics and quantum mechanics (within the context of black studies, for example); in the unending and open-ended circulation of the spectacles, the litanies, the lists of those we, you, I have lost; in the lists we cannot bear to draw up; in the poems and the theories we write and the poems and theories we will not write; on the streets, and in parks, and around our tables, and in artworlds, and in our sighs and side-eyes, in our tiredness and dreams; in the demand to keep it up, keep it up.34

If algorithms are future-making mathematical equations, they matter to black studies and black people because they are predicated on the negation of black life: this negation demands we keep an eye on algorithmic fictions because we cannot live with, we do not want to live with, the future outcome they produce; this negation also highlights, boldly, that black life is rebelling against that system of negation precisely because it is unimaginable within the practice of (automated) decision-making. Predictive black life is the antithesis to those technologies of race that repli-

^{34. &}quot;Never stop the action / keep it up / keep it up": Grace Jones, "Jones the Rhythm," Slave to the Rhythm, Island Records, 1985. Also recall Jones's live performances of "Slave to the Rhythm," where she hula-hoops throughout the entire song, often for over eight minutes—no beat lost. See Grace Jones, "Slave to the Rhythm—Live Avo Session," YouTube video, 8:33, posted June 26, 2010, https://www.youtube.com/watch?v=yPHmJLRFv8c.

cate what we already know about racial violence. Predictive black life. If algorithms provide a generalized template that requires the absolute negation of black humanity, and black life is in excess of this self-replicating system, then the equations, the algorithms, the big data, cannot adapt to black life. This opens up a methodological opportunity for us, because the algorithms signal that what is outside this and other systems of big knowledge—black life, black well-being, black livingness—is a genre of humanness that is poised to decode, or is already decoding, this system and, at the same time, enunciating a worldview that functions within, across, and outside oppressive technologies and infrastructures. This is the demonic ground Wynter writes about in her piece on The Tempest: a different and alternative space-time—a black sense of place, where we know from—that can and does reorder our present system of knowledge because it is not, in fact, measurable on colonial terms. Part of what I am suggesting is a monumental demand—to reorder how we know, to produce a new science of black mnemonic livingness—but I think it is a meaningful demand. We might engender and honor black life as methodology human being as praxis coupled with diasporic interdisciplinarity that cannot be measured or pinned down. The demand can, therefore, be grasped on a smaller scale by posing new and different academic questions that emerge from a black sense of place (where we know from).

What happens to our questions if we insist our methodologies are, in themselves, forms of black well-being? What happens if the nonmeasurability-noncomputability of black life is indicative of, necessary to, our analytics? What if we are not seeking outputs, answers, conclusions that end with only describing racism within our present system of knowledge? What if the answers that emerge from our colonial and plantocratic blueprints are not good enough? What if there is not a learning outcome? What if we taught and wrote not as problem solvers who count and assess variables (and creative texts can, at times, be theorized as variables) but as intellectuals who, with all our hearts, believe in opacity and giving on and with rather than finding, grasping, and having?³⁵ The answers that emerge from our colonial pasts are not good enough precisely because they are given in advance of the questions. If the depth and richness of our lives are absented from our analytics—if our questions recite what we already know—we risk working with and reproducing a system that

cannot adapt to black life. This positions the algorithm not as something we should abandon but, instead, as a warning sign that signals the limits and possibilities of how we do what we do. The features of the algorithm are disquieting and familiar because they loom over and under the disciplining methodologies that make the academy what it is: the question, the answer, the massive calculations that are set up to accomplish a task; the push to solve problems correctly and efficiently. I am not arguing that the algorithm is the same, methodologically, as discourse analysis or text-based analyses or participant observation or other methodological processes we employ to do what we do. I am, though, suggesting that our academic worlds celebrate problem solving, learning outcomes, accomplishments, reviews, and mandates—and, in the case of my university, master plans, strategic plans—and that these features often lurk behind our questions. If we shift our focus to embrace, more boldly and confidently, an analytic of black life and livingness, we centralize black humanity—not eschewing racism and racial violence but, rather, understanding that these practices have always engendered a different form of life that privileges our collective well-being.

When I was writing this story, I stopped several times because I didn't want to finish it. I felt tired and defeated. In fact, I hated my argument and I came to despise algorithms. I realized that the work of coding—the practical science of computer science—was impenetrable and unwelcoming to a person who has not been trained in the discipline. I hated what I wanted to know and why I wanted to know it. My curiosity diminished. I am not a computer scientist: everything I read that was intelligible—the articles and books that spelled out how algorithms are undemocratic and racist—affirmed racism. What I read did not take me anywhere new and, at the same time, gave me a future I did not want. I didn't know anything yet I knew something. The only transparency for me, a non-computer scientist, was premature and preventable death. I also resented the context through which I and we are writing and thinking—normalized racial violence, lists of the dead and dying, the same old thing: "rampant textuality" coupled with excessive unspeakable violence that leads us on a linear path to a future of unfreedom.³⁶

^{36.} The term "rampant textuality" is from Paul Gilroy, *The Black Atlantic: Modernity and Double Consciousness* (Cambridge, MA: Harvard University Press, 1993), 78.

I confess my anger and frustration because I adore and believe, with all my heart, that radical (rogue) interdisciplinarity (method-making) and patient relational thinking offer ways to rethink our present system of knowledge; the reason I originally turned to algorithms is because I wanted to write a story about how these mathematical equations organize our world and I wanted to put them into conversation with creative texts that would, perhaps, take us somewhere new. What I also confronted, during my research, is that sometimes the seduction of interdisciplinarity can take us so radically outside our own sense of place that we lose sight of why we do the work we do. Part of my confession, then, is that I don't really know—in a confident and academic sense—how algorithms are made. I am still learning. It's like my interest in physics: I learned a lot and continue to learn, even though I am not sure I have the energetic knowledge base to unsettle both physics and blackness. What I learned from my research on computer science, for the most part, was the outcome. I came to despise the work because my interdisciplinarity project was foiled by what I did not know and what I could not know, as a non-computer scientist. I tried to make my own algorithm. I failed. I then had the grand idea to algorithmically mash up what I wrote here with something a colleague sent me. I wanted to produce an endless list of scrolling words that come from two senses of place. I could not do it. I did not know how to write the code. Defeated, the most I could bear was to input the words from this story into one of those word-cloud generators. I felt sick to my stomach. Those word clouds were, at one time, promotional narratives—part of the master plan, the strategic plan—for my university. "Gender" in large block letters, "women" in smaller letters, "queer" in tiny letters, "international" in medium-sized letters, "black" nowhere. I became and am offended and sickened by the word cloud.

But all of this led me to something I already know but keep returning to in a kind of compulsive and repetitious way. To do radical interdisciplinary work, from a black sense of place, that changes the kinds of questions we ask is not just about reading outside our discipline, researching, and using slices and terms from people we do not normally read; it is about sharing ideas comprehensively and moving these ideas into new contexts and places. In a different story I asked that we read creative texts as theoretical texts; I asked, What happens if the groove or the song gives insight to the theoretical frame? For this story, I checked in with my partner, Zilli, who is a musician and coder. When I told him what I wanted to do—to learn how to code, to create an algorithm that shows that predic-

tive policing algorithms are not the only ways of knowing or doing black geographies, to learn how algorithms might be made into something new or different—he told me that was the wrong path. More specifically, he asked me: Why are you beginning with outcomes? What do you want the algorithm to do? I could not formulate satisfactory answers. I could only produce a nonfunctional and brutally individualistic formula: I begin with Flennoy, as outcome, I want my algorithm to change this outcome, or allow me to forget it, or bring him back, or give me some ethical distance, or . . . me, I want the algorithm to help me. Zilli and I had many conversations about the back end of algorithms, about how the politics of algorithms—even endless ones—are actually demands for clear and clean answers; they always already know. We also talked about Markov chains and Alan Turing, about AI and Minority Report. What I learned about algorithms is that the questions I ask in my own research emerge from difficult and often unbearable encounters—these encounters are riddled with impatience and are endless repetitive burdens that are ongoing and never resolved. I learned that I wanted something I could not get from an algorithm because all it could provide—in my reading, not everyone's reading!—was a predetermined codified answer. I also learned that there is a sexiness to algorithms—imagine, I thought, if I could actually code a poetic-politics of blackness, an algorithm of resistance, and publish it as part of my book.³⁷

My conversations with Zilli led me down an important path because I came to understand that not knowing what an algorithm is, in an academic sense, opened up bigger questions about how we come to know blackness, in an academic sense. I began to dwell on praxis and methodology and to think differently about the production of knowledge in relation to race. The encounter did not produce a sexy coder with sexy codes; it produced an unfinished mess and a still-worried and still-curious person who continues to be deeply suspicious of how we come to know, where we know from, and the ways in which many academic methodologies refuse black life and relational thinking. But the conversation with Zilli is what I want to underscore—for if we are to reorient our analytics and privilege black life as we practice radical interdisciplinarity, we must engage, deeply, in conversation and share ideas generously. This is to say that relationality, like a black sense of place, must be praxis—a praxis that does not assume or desire resolved outcomes. Paying close attention to, drawing out, and forging relational knowledges will provide us, as people who are invested in undoing the normalized workings of racial violence, with analytical mechanisms that allow us to do anticolonial work in a variety of university settings that, as we know, were not built to support or recognize black communities and black work.

Part of our intellectual task, then, is to work out how different kinds and types of texts, voices, and geographies relate to each other and open up unexpected and surprising ways to talk about liberation, knowledge, history, race, gender, narrative, and blackness. The task, as I have repeatedly noted throughout these stories, is not to track and quantify marginalized peoples and seek reparation through centering their objectification, but, rather, to posit that many divergent and different and relational voices of unfreedom are analytical and intellectual sites that can tell us something new about our academic concerns and our anticolonial futures. This story, then, is a long plea to be uncomfortably satisfied with the unmeasurability of black life and to engender interhuman relationalities, with all our heart; it is a plea to practice radical interdisciplinarity without fraying its connection to black life; it is a plea to honor a black sense of place and where we know from, rather than mobilizing crude identity politics as the answer and the fix. This is a plea to keep it up and a plea to foster and share intellectual spaces—sometimes crammed into the corners of the academy, sometimes not—for and with each other in order to methodologically and analytically redefine what they think we are.