

Target Practice

The Algorithmics and Biopolitics of Race in Emerging Smart Border Practices and Technologies

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Abstract

Taking the Canada–U.S. border as a starting point to reflect on emergent smart border practices, this essay analyzes the differential yet central place that race continues to hold in the regulation of mobilities through the technopolitical mechanism of the border. Against claims that smart borders offer a more scientific and “postracial” mode of border control, the essay offers a situated conceptual reflection on how race is currently being (re)shaped by the complex intersection of biopolitical and algorithmic forms of governmentality as they converge in border technologies. The essay proposes to think through four different sets of smart border technologies that enact and track race as a biopolitical assemblage in particular ways, analyzing the associated perceptual codes each puts into play (biometric, movement sensing, drone, and data-based). It closes by reflecting on how these algorithmic technologies inflect the biopolitical targeting of race and mobility in ways that serve to insulate smart border practices from democratic accountability.

Keywords

algorithmic governmentality, assemblage, biopolitics, border technologies, race, smart borders

In his 2011 announcement of the Action Plan on Perimeter Security and Economic Competiveness between the United States and Canada alongside Barack Obama, Canadian prime minister Stephen Harper proclaimed the launch of “a new, modern border for a new century.” This new border, he declared, “would improve (North American) perimeter security with smart systems and ease travel and trade within the continent.” In his declaration, a triumphal promise of future technological border mastery assures the smooth functioning of secure border flows, soon followed, nevertheless, by a different, more ominous tone: “We also believe that, just as threats should be stopped at the perimeter, trusted travellers should cross the border more quickly. ... Indeed, ... the key that locks the door against terrorists also opens a wider gate to cross-border trade and travel.”¹

As suggested in Harper's proclamation, the opening decades of this century have seen a rapid shift in bordering practices in North America and on a global scale, condensed in the figure of the *smart border* secured through a proliferation of border surveillance technologies. Despite claims to its "postracial" nature, this essay proposes to consider and analyze the differential yet central place that race continues to hold as a key biopolitical vector in the regulation of mobilities through the mechanism of the border. Focusing largely on the Canadian—U.S. border, it seeks to consider how race is being enacted and reconfigured through a series of technologies and practices of bordering that have come to be articulated through this sign of the "smart border," or what Holger Potzsch terms the iBorder.²

Specifically, this essay offers a situated conceptual reflection on how race is currently being (re)shaped by the complex interplay of bio/necropolitics,³ algorithmic governmentality,⁴ and specific border technologies in current bordering practices in North America. I begin by considering the smart border as a technopolitical mechanism that makes particular promises of a more rational, scientific, and "postracial" mode of border control. I go on to consider key theoretical approaches that help to inform my inquiry into race as a biopolitical assemblage as it is produced and remade through the smart border. In particular, I argue that new intersections between biopolitical and algorithmic forms of government are converging in emerging smart border technologies. Based on this conceptual grounding, this essay proposes to think through four different sets of smart bordering practices that enact and track race in particular ways, each set tied to a particular cluster of border technologies and the associated perceptual apparatus they put into play (visual, nonvisible, databased). It closes by reflecting on how these different sets of algorithmic technologies inflect the biopolitics of race and mobility as they are being enacted and extended through smart border practices.

The Smart Border as Technopolitical Mechanism

Recent approaches in mobility and border studies⁵ analyze contemporary borders as increasingly expanding beyond physical borders and territorial demarcation to consider their diffusion into more mobile regimes of bordering.⁶ This shift from a narrower emphasis on policing territorial lines to the surveillance and regulation of bodies on the move is a key characteristic of mobile, smart border regimes. Critical to this governmental and material shift in bordering practices is the central role technologies are given as agents and drivers of this transformation (encapsulated in the figures of the *smart* and the *mobile*). The flexible smart border relies on expanding technological affordances and forms of mediation embedded within hi-tech computerized, military, and private security industries (e.g., Palantir, Boeing, Deloitte). The

explosion in surveillance and border technologies emerged in a post-9/11 context of homeland securitization and neoliberal privatization of military and security functions. Kelly Gates and also Shoshana Magnet show how this post-9/11 context and inaugural forms such as the Canada–U.S. bilateral Smart Border Declaration (followed by the Smart Border Action Plan) signed in December 2001, signaled an era of unparalleled spending on border security, surveillance, and biometric technologies.⁷ In the promotional view of the governmental and corporate actors at work in this emerging smart border regime, digital border technologies become the solution to the once messy work of traditional, analog border enforcement in a “new” era of global, ambient terror threats.

Indeed, the defining element of the smart border relates to the data-driven, algorithmic nature of the technologies that constitute its *smartness*. These technologies are presented as affording cleaner, more mediated and rational practices of bordering, and enforcement at a distance.⁸ Biometric technologies have been promoted as ushering in a new postracial era of more egalitarian, objective border policing.⁹ This promotional, often futuristic enthusiasm regarding the smart border tends to deflect from and obscure the ways in which biopolitical processes of racialization and the targeting of racialized bodies as threats to be preempted continue to be central to the operations of current smart border regimes. In what follows, I consider how the smart border operates as a technopolitical mechanism, further analyzing the political and cultural functions that border technologies are being made to enact.

The Enactment of Race as Biopolitical Assemblage at the Smart Border

The approach to race taken in this inquiry is inflected by theories of bio/necropolitics,¹⁰ assemblage theory,¹¹ and cultural materialist approaches emerging from critical race, feminist and decolonial theory.¹² In such a rendering, race operates through a differentiated, unequal, and often violent regulation of bodies, materialities, and im/mobilities that is produced through intersecting assemblages related to mobility, borders, surveillance, economic, medical, and detention/prison practices. As Alexander Weheliye argues, race emerges through the embodied inscription of abstract forces of power and differentiation onto bodies and flesh,¹³ inscribing “the social character of racializing assemblages” into ostensibly objective, embodied criteria (skin, phenotype, genetics, facial traits, retinas, embodied movements, cultural compartments). These embodied traits are naturalized into biological and cultural evidence of hierarchically differentiated races.¹⁴

In a telling recent U.S. draft policy reform by the Obama administration in response to critiques of racial profiling, for instance, the administration pro-

posed to introduce new draft rules to limit ethnoracial profiling in federal law enforcement, but to *exempt* the areas of national security and border enforcement. Department of Homeland Security officials, among others, claimed, “that it was impractical to ignore ethnicity when it came to border enforcement.” The immigration investigators have said, “We can’t do our job without taking ethnicity into account. We are very dependent on that.”¹⁵ In this way, the biopolitical imperatives of migration governance continue to make migration, security, and border enforcement, however “smart,” into exceptional governmental domains in which ethnoracial profiling is explicitly espoused as an essential security practice. Significantly here, the draft rules “expand the definition of racial profiling to include religion, national origin, gender, sexual orientation and gender identity.”¹⁶ Here it is notable how such power-based social markers such as gender, sexuality, and religion are explicitly articulated with, and at the same time folded into race as the overarching signifier denoted in the term “racial profiling.” This is suggestive of Foucaultian readings of the biopolitics of race, in which race functions as a more abstract operator that articulates and condenses a range of social markers to enact a dividing line between those who are granted the capacity to move freely among the population, and those who are cast out or denied mobility.

Drawing on the literature on mobility/surveillant assemblages and Weheliye’s approach to race as assemblage then,¹⁷ I argue, that the contemporary bio/necropolitics of race is mobilized and produced through a series of racializing assemblages, a key one of which is the mobility/border assemblage. Biopolitical assemblages of race are being made and remade through the technopolitical work of the border and its constellation of embodied markers, visual codings, and invisible data streams. The smart border produces race (in its articulation with gender, class, sexuality, etc.) as a dispersed but embodied index regulating access to mobility as well as vulnerability to surveillant and punitive, repressive forms of mobility control.

Toward that end, this analysis builds on Donna Haraway’s insistence on what she terms “gender in the making” in technoscientific practices by considering “race in the making” through the biopolitics of the smart border.¹⁸ How is race surfaced, produced, and remade in technopolitical border assemblages? To pursue this question, I propose to explore what I argue are emerging intersections between biopolitical and algorithmic forms of governmentality in the deployment of smart border technologies.¹⁹

Contemporary and emergent smart border assemblages in their territorialized and more diffuse, mobile forms constitute key sites of biopolitical government. Amid the technologies focused on regulating the life of the population (*faire vivre la population*), what Foucault calls state racism introduces a *coupure*,²⁰ or gap, in the species being of the population between those who must live and those who must die. In an important reworking of the limitations of these early theorizations of biopolitics with respect to colonial con-

texts, Achille Mbembe proposes the notion of necropower, “the subjugation of life to the power of death.”²¹ Mbembe argues that this is a more theoretically precise term for the permeation of systematic, targeted violence, leveled at colonized, racialized populations. Given the settler colonial legacies of the United States and Canada, this combined lens of bio/necropower offers a more resonant approach through which to analyze the (neo)colonial registers of migration and border policies in the smart border era of securitization.

The intensified securitization of migration policies and border enforcement since the turn of the millennium are centrally premised on the biopolitical surveillance and control of race. If state racism marks the point of cleavage between those bodies that are able to move freely and become part of the massified body of the population, and those bodies that are marked as potential threats, enemies, or undesirables to be targeted for containment, neglect, expulsion, or elimination, then borders are key sites of biopolitical enactment. At the same time, the intertwined necropolitical face of the border is never estranged from these border functions. This is evidenced by the tragic ongoing indexes of migrant border deaths, as examined in a nascent literature on biopolitical borders along with the necropolitical face of the border.²²

Another intensifying feature that has particular effects on the ways that the biopolitics of race is being inscribed in emergent smart border assemblages relates to the algorithmic form that border control and governance are increasingly taking. In what they call a form of government without subjects but not without targets, Antoinette Rouvroy and Thomas Berns argue that emergent forms of algorithmic governmentality are based on the mining, aggregation, and automated analysis of mass data sets in order to anticipate, affect, and act upon potential behaviors preemptively.²³ A key aim of this form of algorithmic profiling is to predict and preemptively target individual behaviors through interventions on their environment.²⁴ In the idealized smart border scenario of a totalized field of live tracking of border movements,²⁵ the real-time surveillance and targeting afforded through smart border technologies seeks to create a totalizing border *environment* for preemptive interventions on migrant movement through real-time data collection. Furthermore, the mapping and inscription of statistical or data doubles collected from algorithmic monitoring back onto migrant bodies afford new modes of racialized inscription.²⁶

In what follows, I will center my analysis on specific sets of border technologies as key vectors and markers of the *smartness* of smart borders. Following technocultural approaches that emphasize the material coconstitution of culture and technology,²⁷ I propose to diagnose current smart border technologies by analyzing some of the perceptual modes they produce. What are the specific perceptual affordances each set of border technologies put into place and how are they deployed to enact particular forms of racialization?

I propose to group them along four clusters, each one relating to a key set of bordering practices and the perceptual modes of governance they are used to enact. I examine these clusters of border technologies and related bordering practices, less as objects of extended empirical description and more as cultural lenses that refract some of the broader technopolitical functions of North American smart borders emerging at this conjuncture.

In particular, I consider how these four sets of technologies operate at the intersection of biopolitical and algorithmic forms of government to both mobilize and reshape race and its inscription into the surveillant smart border assemblage. They include (in nonexclusive, overlapping forms): technologies of bioembodied inscription; movement sensing and geolocation; autonomous machinic technologies; and algorithmic data assembling and storage.

Technologies of Biometric Inscription (Face, Skin, Irises)

Centered on the biometric detection and datafication of bodily traits, this set of technologies ranges from the digital fingerprints that make up the European Union's Eurodac database, which seeks to prevent "asylum shopping" by tracking asylum seekers' movements, to the DNA testing imposed on migrant families in countries such as Canada, disproportionately imposed in a racialized manner on migrant families of specific (racialized) backgrounds. They include iris scans that frequent or preferred travelers voluntarily enlist in to accelerate their border processing as part of various preapproved, "low-risk" traveler cross-border programs, such as the joint NEXUS program of the United States and Canada. Here, I will focus my analysis in particular on facial recognition technologies. This range of biometric technologies targets and reads data off the bodies of people on the move, converting bioembodied indexes (skin, fingerprints, facial traits, retinas, irises, DNA) into data doubles.²⁸ These are stored in networked databases in order to profile, track, and surveil mobile in/dividuals.

According to Lisa Nakamura, surveillance technologies do not simply observe bodies on the move, they actively remake the body through visualization and media practices that produce biometric and surveillance data.²⁹ For Joseph Pugliese, biometrics remake the body as both target of surveillance and as a data-information object to be harvested.³⁰ In their examination of the Backscatter X-ray body scanner, Louise Amoore and Alexandra Hall argue that the biometric gaze functions by digitally dissecting the body into fragmented and disjointed parts, digitized body parts that are claimed to make what is invisible or concealed visible in such a way as to establish a stabilized truth about the body.³¹ This invasive imaging ultimately constitutes a visual-

ization regime of the body at the border that presents itself as biometric truth. Biometric visualizations of the body at the border have specific political objectives, which are often belied by appeals to the scientific nature of these technologies.³²

For instance, an expanding area in this field is facial recognition technology, most widely used on the U.S.–Mexican border but quickly becoming part of a rapidly growing global market. Using photo and video images as well as 3D sensors to capture and reconstruct facial morphology and characteristics, emerging tools are being developed to enhance the possibilities of skin texture analysis, “turn(ing) ... the unique lines, patterns, and spots apparent in a person’s skin into mathematical space.”³³

The datafication of the microfeatures of a subject’s skin affords many possibilities for racialized and gendered targeting. The technology’s encoding of race and gender is not something its industry developers downplay, and is a central feature touted in the promotional rhetorics associated with its emergence. For instance, at the Border Security Expo 2014, Kevin Haskins of Cognitec (a key facial recognition developer) stated: “If we need to target on any specific gender or race because we’re trying to find a subject, we can set the parameters and the threshold to find that person.”³⁴ In this way, racialized and gendered profiling are openly espoused as central affordances encoded in the cultural logic of this technology, belying the ways in which it is often promoted in terms of its ostensible technological neutrality. Kelly Gates shows how this technology was rapidly developed and put forward as a biopolitical tool of targeting and classification in a post-9/11 context in which the identification and targeting of “racialized faces of terror” was made paramount.³⁵

Drawing on Nanavati, Thieme, and Nanavati,³⁶ Simone Browne further shows how what she calls prototypical whiteness is encoded into the technical specifications and calibrations of a range of biometric technologies,³⁷ such as the calibration of video cameras to light skin in facial recognition technologies.³⁸ These racialized encodings challenge claims to neutrality and objective observation that are typically ascribed to biometric technologies.

In such regimes of surveillant visualization, as Gates shows, race is produced as a sometimes implicit and often overt referent that grounds the cultural logic and objectives of such technologies. It is articulated through the trope of the “face of terror,” the needle in the digital haystack that must be constantly monitored for, identified, and targeted.³⁹ In this way, biopolitical logics and practices of paranoid visualization articulated through facial recognition and other biometric technologies performatively produce the very deviant subjects they were developed to “neutrally” identify.⁴⁰ As such, they are employed in ways that produce new practices of racialization by constructing perceptual codes of paranoid visualization and embodied inscription that tie bodily traits to biopolitical monitoring.

Movement Sensing and Geolocation

New algorithmic modes of sensing and tracking of movement constitute another major technopolitical function that smart border technologies are enacting. This set of technologies ranges from ground sensors that carry out surface-crossing detection, radar, infrared, and thermal imaging. Emerging tools include geolocation tracking and gesture and gait recognition softwares that focus on the more intimate scale of individual bodily movements and gestures for profiling purposes. In addition, fiber optic and unattended ground sensors (UGS) track ground-level routes and surface movements, detecting different forms (walking, running) and types of movement (human, animal). They are being increasingly deployed with the aim of creating a total situational awareness picture through the real-time sensory capture of all border movements in effect. On a more micro scale, the nascent development of gesture and gait recognition software technologies promises to monitor, track, and profile the micromovements of the body, “interpreting human gestures via mathematical algorithms” through the “identification and recognition of [facial and hand gestures], posture, gait, [and] proxemics.” Developing gait recognition technologies aim to identify target subjects by their unique walking patterns, as “minor variations in gait style can be used as a biometric identifier.”⁴¹

In this way, the detection of “abnormal” or unusual patterns and routes of movement is a key prescriptive mode built into the development and implementation of movement-sensing technologies. While the racialized policing of travel and movement routes has a long history in migration policies,⁴² the increasingly algorithmic and continuous “real time” means through which forms and routes of movement are being tracked and surveilled are being intensified. This is indicative of the ways in which the biopolitical targeting of “suspicious movements” channels indexes of race and racialized repression through forms and routes of movement deemed nonnormative at a range of scales. In emerging smart border practices, race and processes of racialization are increasingly articulated through mobility practices, through algorithmically tracked forms and routes of nonnormative movement.⁴³ In this perceptual modality, race is monitored and produced through the tracking of nonnormative movements.

In a related vein, but constructing a different practice of visualization, thermal imaging and the temperature data it generates is another key technology of movement sensing employed in border surveillance and migrant detection. As Lisa Parks has argued, on the one hand, the visual data generated through thermal imaging of human bodies goes beyond “epidermalization” and the visualization of (racialized) skin surfaces by color-coding bodily heat as an index of human presence.⁴⁴ On the other hand, this does not mean that it no longer encodes racial indexes due to the absence of visually registered surface markers of difference in the visual/perceptual regime of this technology.

In the cultural logic through which this technology is deployed, the targeted thermal coding of certain kinds of bodies on the move in politically targeted geographies produces them as implicit targets. The visual affordances of these technologies render bodies on the move into temperature doubles. Parks argues that in practices of thermal imaging deployed on drones, “strategies of ethnic/racial differentiation do not disappear within an aerial system of temperature-based visuality; rather, they are restructured along a vertical axis of power and recodified through systems of social sorting, remote sensing, and computational imaging.”⁴⁵ With the visual and perceptual practices deployed through thermal imaging in border surveillance, the visual fact of being detected and thermally monitored positions and produces one as a suspect.⁴⁶ The forms of biopolitical racialization effected through thermal imaging operate through a temperature-based rather than an epidermal surface visuality. These practices of visual monitoring position bodies producing a heat double and moving in particular ways and sites as potentially racialized targets.

Autonomous Machine Technologies

Perhaps the most striking of a range of military technologies to emerge from the post-9/11 military–homeland security complex and becoming increasingly integrated into smart border surveillance practices is the unmanned aerial vehicle (UAV) or drone. Other emerging autonomous/unmanned technologies that are being developed and introduced alongside the UAV drone arsenal includes Raytheon’s unmanned aerostats, and unmanned ground vehicles (UGVs). These were initially employed in the fields of Afghanistan and Iraq, and in the case of the UGV, on the border of Gaza by the Israeli military.

The introduction of these newer forms of mobile military surveillance into larger practices of border control are significant on a number of fronts. They institute a particular repertoire of militarized visuality developed in combat zones in Afghanistan and Pakistan into the policing of border mobilities. The extreme zoom capacity of drone cameras, which can move from a 25 square kilometer radius view to minute details of 6 inches from 20,000 feet, combined with infrared thermal imaging, augments visual surveillance into an expanded practice of remote sensing. Caren Kaplan argues that panoramic vistas and aerial or elevated viewing have been central to imperialist projects of military conquest historically,⁴⁷ while Rey Chow as well as Lisa Parks have shown how the proliferation of aerial, overhead images in popular culture tends to configure a way of seeing that structures the world as a target.⁴⁸ Parks further argues that the overhead image “triggers a demand for more local or embodied views in contrast to its remote and abstract perspective.”⁴⁹ Drone visualities fulfill that demand by augmenting this panoramic overhead vision with a microvision capturing minute details. This oscillation between an om-

niscient, panoramic vision and a zoomed-in, “surveillant intimacy” produces a form of mobile military visuality that Alex Rivera and Malcolm Harris argue is “a new type of military sight ... the most visceral and intense expression of the transnational/telepresent world we inhabit.”⁵⁰

The production of this militarized visuality introduces a racialized practice of necropolitical surveillance and targeting born in the war arenas of Iraq, Afghanistan, and Pakistan into the realm of bordering practices. While not employed for directly lethal purposes, or what Peter Asaro calls “bureaucratized killing,” a visual logic of ‘targeted’ assassination drawn from the military field also structures drone surveillance in border policing of migrant movements.⁵¹ As Asaro argues, within the “limited range of action” embedded in drone surveillance, interaction is “fundamentally reduced to sorting the world into friends, enemies, and potential enemies, as no other categories can be meaningfully acted upon.”⁵² It further entrenches the biopolitical dichotomies at work in the policing of migrant movements and bodies, dichotomies of legal/illegal, and benign versus potential threats in ways that have particularly racialized consequences. The oscillation from panoramic vision to surveillant intimacy produces a prescriptive visual logic that sorts “legitimate” border-crossers from illegalized migrants and security threats in stark necropolitical and racialized terms.

Algorithmic Data Assembling and Storage

Matteo Pasquinelli argues that two key functions of algorithms as they are currently employed in governmental computation practices involve pattern recognition and anomaly detection.⁵³ This has important implications for how what he calls the “return of the abnormal” in mathematical techniques of governance amplify algorithmic practices of racialization. The ideal of constant real-time feeds of border movements that are the objective of current smart border projects, along with the big data assemblages of databases such as the Schengen Information System (SIS) II or Eurodac, enlist the algorithmic tracking of anomalous routes and forms of movement to interdict and preempt illegalized movements in ways that have racialized effects.⁵⁴

Despite appeals to the neutrality and rational predictive capacities of algorithms in smart border discourses, the socioalgorithmics of race, as Lisa Nakamura calls it, are inherently inscribed in the transformation of border surveillance into “a digital algorithmic process.”⁵⁵ It is not merely that the origin of algorithmic computation is bound up with the history of racial classification, particularly as Nakamura shows, in its emergence at a time when influxes of immigration provoked crises and instabilities in racial categories.⁵⁶ Biometric and algorithmic processes of border surveillance continue to encode racialized forms of classification and targeting in a range of modalities.

Simone Browne shows how what she calls digital epidermalization is central to the governing of databased bodies,⁵⁷ in which “epidermal thinking”⁵⁸ that fixates on the phenotypical visible signs of racial difference is key to the algorithmic processes through which the body is made biometric. Browne argues that the disembodied but never neutral gaze cast by surveillance technologies onto “suspect” travelers and migrants serves to informationalize the body and warehouse it in databases, astutely linking these practices to the history of slavery and the branding of slave bodies. Yet, as we have seen, this “racialization of algorithmic code,”⁵⁹ operates through both visible/epidermal, as well as less visible perceptual modalities. It ranges from the visual registers of prototypical whiteness that Browne argues are encoded into biometric technologies, to the less explicit or epidermally oriented forms of racialized targeting through thermal imaging or sensory/movement detection.

In other words, algorithms are not neutral or purely mathematical forms, but are political operators that “assemble forces and imprint themselves on the social” as material and social practices when mobilized as techniques of algorithmic governance.⁶⁰ Nakamura argues that databases as technocultural forms are “political projects of identity formation and regulation” shored up by the socioalgorithmics of race.⁶¹ She argues that race is transformed and becomes both visual marker and invisible data field, both phenotypical/ethnocultural attribution and social algorithm, when subjected to current regimes of algorithmic governance.⁶²

The politics effected through smart border databases are highly consequential in determining which bodies are granted access to legal routes of mobility, and which are not, based on a biopolitical practice of risk profiling. Consider the Smart Border Analytics Tool promoted as “increasing security without sacrificing mobility” by the private UK-based global auditing and consulting corporation Deloitte. Deloitte touts the Smart Border Analytics Tool (SBAT) as one that “leverages ‘big data’ and geospatial capabilities to analyze the migration of people ... across the border,” offering “predictive and descriptive modeling, data mining, simulation and other analytic techniques to identify, mitigate, and manage ... risk.” It promises predictive analytics on “the common visa types ... typically used to illegally cross the border” through the profiling of “high-risk characteristics.” The predictive data it offers includes the “primary countries of origin for illegal migrants” and “where illegal migrants (are) travelling” so as to “predict where the influx of migrants that pose a security threat” may cluster.⁶³ Here we see how both the notion of risk and specific mobility routes are racialized based on predictive analytics of “risky” visa types and countries of origin.

As is evident in the promotional discourses of Deloitte and many other private and governmental proponents of the growing smart border assemblage, the fantasy of a smooth and seamless, omniscient and predictive smart border is constantly coupled with the biopolitical foregrounding of risky bod-

ies, of threats and risk profiles projected onto bodies on the move to be algorithmically identified and targeted through smart border technologies. This *smartness* (acting as a signifier and placeholder for the algorithmic governance of the border) and the targeting of threats (bio/necropolitics) go hand in hand. Algorithms act as the infrastructural apparatuses that assemble and activate the necropolitical targeting of racialized bodies on the move, as well as the biopolitical facilitation of the mobilities of racially privileged (white) subjects.⁶⁴

Conclusion: Streaming Racializations, Algorithmic Inscriptions of Race

Keller Easterling argues that the infrastructural spaces that emerge through information technologies are powerful precisely because of the hidden ways they make certain practices possible while disallowing others.⁶⁵ The infrastructural technologies that make up emerging smart border assemblages operate by orchestrating practices and activities that often go unstated and disguised, diverting from actual practices (racialized targeting, repressive enforcement) by foregrounding a set of utopic narratives (*smart technologies*).⁶⁶ Indeed, smart borders are key sites in the emerging governmental medium Easterling calls *extrastatecraft*, the often undisclosed yet consequential governmental practices, beyond visible forms of law or diplomacy, that take place both outside and in conjunction with statecraft.⁶⁷

If border technologies are key vectors of *extrastatecraft* and the algorithmic reshaping of current North American border practices, they are often also mobilized discursively in smart border rhetorics to downplay the agency of immigration and border agents, and to efface the necropolitical, racialized processes of enforcement they effect. David Newman argues that smart border discourses serve to render practices of racial profiling more acceptable and less problematic when effected through technologies, precisely because biometric/algorithmic practices are framed as more objective and rational forms of profiling.⁶⁸ In this way, the biopolitics of algorithmic governance at the smart border and the foregrounding of smart border technologies effects a disavowal of political decision-making and practices of racialization by both human and machinic agents.

Yet, as both Nakamura and Browne show, decisions on which bodies are pulled aside and screened are still made by human agents, through acts of visual monitoring as well as machinic procedures of data processing.⁶⁹ Smart border discourses are being employed to insulate state and other actors in border enforcement from democratic accountability, particularly as they allow a claim to scientific rationality when decision making is algorithmically routed.⁷⁰

As I have argued with respect to each of the four sets of border technologies and the accompanying perceptual regimes they put into place above, smart border surveillance technologies are having a deep impact on how race is being read, monitored, and enacted through the border and the differential mobility routes it is used to enforce. Race is encoded and performed as both visible marker and invisible data stream in its algorithmic rendering, forming the locus around which risk profiling and necropolitical targeting functions are centered.⁷¹ As Nakamura argues, race as a social marker is both amplified and reduced when it is turned into a data point.⁷² Race is enacted and materialized as a flickering signifier for practices of biopolitical targeting, tracking, enforcement, and exclusion.⁷³ With biometrics, race is in/visibilized and refracted through practices of paranoid visualization and the production of data bodies, wherein data doubles are inscribed and projected back onto targeted bodies. The targeting of threats and risk are activated through the digitized dissection and pattern recognition of specific facial types, skin, and fingerprints, as well as the panoramic and surveillant intimacy of anomalous movements with the drone. But they are also enacted through the targeting of less visible or recognizable markers, from subepidermal thermal imaging and movement sensors to the algorithmic tracking of travel routes, visa types, and meal choice patterns. Ultimately, this broader biopolitics of risk assessment and the targeting of threats underlie these algorithmic forms of surveillance.

In this way, algorithmic practices of targeting threats and suspect movements such as those I have considered constitute key bio/necropolitical racializing processes enacted through smart borders. The totalizing logics of wide-ranging big data collection and the total field of situational awareness touted in so many smart border projects are nevertheless aimed toward a narrower, specialized function: that of targeting undocumented movements and threats.

Here it is worth recalling Weheliye's analysis of how race emerges through the inscription of social forces of power and differentiation onto bodies targeted through racializing assemblages.⁷⁴ Building upon this analysis, I would argue that smart border technologies are key vectors and concrete instantiations of such social processes of racialized inscription. Through the racializing assemblage of the smart border, these technologies are deployed in ways that inscribe social and political forces of differentiation onto targeted bodies. This biopolitical process of racialized inscription is effected through the production of data bodies and datafied bodily traits (data doubles) that are then mapped onto the bodies that are positioned as their targets. In this sense, current uses of border technologies are key vectors in the production of smart borders as racialized assemblages. Target practices enacted through algorithmic border governance promise a smooth border that "increases security without sacrificing mobility,"⁷⁵ but the differential effects of this target-

ing indicate the extent to which smart border assemblages are enacting new forms of racialized mobility control.

In closing, further research is needed at the intersection of mobility, media studies, critical surveillance and race studies, in order to examine how border surveillance technologies as mediated and racializing practices are being negotiated and challenged through everyday encounters and counter-media practices.⁷⁶ As Nakamura argues, framing and highlighting these surveillant technocultural practices as media production practices or visualizations,⁷⁷ rather than neutral instruments, fundamentally challenges their proclaimed status as accurate scientific tools delivering the truth about identities in smart border discourses.⁷⁸ Biometric and border surveillance technologies are rapidly evolving forms of algorithmic media.⁷⁹ What contestational negotiations, practices, and lines of flight are emerging in surveillant smart border assemblages? What intensities, affects, and contentious practices are developing through the mobile and media practices of racialized subjects on the move? Tracing emerging lines of flight, failure, and escape from the totalizing yet incomplete logics of surveillant smart borders,⁸⁰ along with the emergence of what we might call biometric countermedia—these are further trajectories of research to pursue so as to more fully account for the tensions and contradictory forces at play in emergent North American smart border assemblages.

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