INTRODUCTION *Tracking Footprints: Settler Surveillance across Unsettled Borders*

Unsettled Borders theorizes the contested status of today's militarized security technologies deployed at the US-Mexico border (and beyond) from the perspective of Native Americans who inhabit these lands. I use the term *unsettled* to foreground the contestations of the Apache, Tohono O'odham, and Yucatec Maya against the settler state's ongoing attempts to dispossess them of their ancestral lands, to border or contain their movement, and to eradicate their sacred relationality with land in the name of securing the nation.[1] As the escalating financial and human costs of securing the US border reach obscene levels, the Arizona-Mexico border, in particular, has become a profitable laboratory for the most cutting-edge innovations in automated surveillance. Despite these costly and violent developments, little is known about the rise of militarized surveillance along the border and the historical conditions, knowledges, and desires that undergird its technological eye.

In the process of tracking how the US border in Arizona (and borders around the world) has become militarized, many questions arose about how automated surveillance technologies allowed the state to absolve itself of violence and to extend its reach beyond US national boundaries, law, and jurisdiction, especially onto Native American reservations. The increasing militarization of the border demonstrates the ramping up of US control over the sovereignty of people and land.[2] Not only do the surveillance sensors used along borders today delve deeper into the body, across Native reservations, high up in the air, and beneath the ground, but never before has the government circumvented so many of its own laws to build and govern the virtual and physical border wall. This begged the question, How did we get to this point? And I realized that until we understand the logic driving the development of surveillance at borders, we may not find the best solutions for imagining and realizing a way out of this sprawling gaze of the state. Yet as I followed the military research and development driving surveillance technologies along the Arizona-O'odham-Mexico

border farther back, another story emerged that significantly challenged and expanded my personal, academic, and political commitments.

I have spent most of my academic career preoccupied with Xicana/Latinx and Latin American immigration and decolonial border issues. It was not until undertaking this project that I came to recognize a glaring absence in these fields: with few exceptions they failed to consider the struggles of Native Americans against the state's occupation of their land.[3] This oversight is stunning when we consider that today there are twenty-six US tribal nations recognized by the US federal government living in the US-Mexico border region and a smaller number of Indigenous peoples whose land and people cross into Mexico—including the Tohono O'odham, the Yaqui (Yoeme), the Cocopah, the Kumeyaay, the Pai, the Apaches, the Tigua (Tiwa), and the Kickapoo.[4] To come to terms with this widespread present-absence that contributes to the relegation of Native peoples to the past, the story of the border must be centered in the ongoing settler colonial dispossession of Indigenous peoples *and* migrant-refugees.[5]

I tell this story from Fort Huachuca, a military fort in Arizona close to the border (the ancestral land of various groups of Apache, some which seasonally return), from the Tohono O'odham reservation, and even from the Yucatán, where Maya women are fighting to preserve their land. Not only do Native peoples live on both sides of the border, but many migrants crossing this land are displaced Indigenous peoples, including Maya from southern Mexico, Guatemala, and Honduras.

The fields in which the book intervenes—Latinx immigration and border studies as well as feminist science and technology studies—rarely engage, and if so, only recently, in debates in Indigenous studies.[6] To bridge these divides, I not only draw from Indigenous studies scholars' critical engagements with borders, empire, technology, and land-based epistemologies, but I also build on lessons learned from Native American and Xicana elders, and gained insights from Maya/bees, O'odham/saguaros, and Apache/mountains. From these knowledges I theorize the concept of sacredscience. Sacredscience considers Native American understandings with land as *scientific*, a methodology of collective intelligence that regenerates ancestral knowledges to sustain sacred intrarelationality with land. This term is elaborated in the final section of the introduction and runs throughout the book.

The research for this book and the recent expansion of border and migration studies into Indigenous epistemologies radically jolted my understanding of the borderlands. Unquestioned perspectives about migrants' experiences in Latinx studies must be rethought when it participates in the erasure of Native

Americans from history *and*, especially, from the ongoing violence at the border. Given that scholarship, media, and films on immigration and borders focus on the brutal journey of border-crossers, we have failed to also account for the challenges faced by Native Americans such as the Tohono O'odham, who are under US occupation by the border-security-industrial complex on their own land. They, too, face a carceral logic of containment, detention, prisons, and even deportation. In addition, focusing on migrants' rights to documentation without considering Native American sovereignty, and on assimilation without discussing policies aimed at Native extinction, renders unthinkable the land-based struggles of the O'odham, Maya, and Apache against the theft of unceded territories along the border and beyond that hold their ancestral knowledges. Even the pro-immigrant political outcry—the United States is a nation of immigrants!—diminishes Native American ancestral claims to land.[7]

Along with Jodi Byrd, Roxanne Dunbar-Ortiz, and María Josefina Saldaña-Portillo, I consider the ways the empire of border regions are "produced through colonial encounters with Indigeneity."[8] This more recent reorienting of Latinx/Latin American/border studies through Indigenous studies has usefully challenged intellectual ruts and expanded political collaborations forged by activists and scholars including Maylei Blackwell, M. Bianet Castellaños, Macarena Gómez-Barris, Audra Simpson, and many others.[9] The absenting of Native Americans and the history of the Apache Wars (1861-1900) as formative in the emergence of militarized border surveillance today warrants more careful and sustained attention if we are to build a broad-based politics aimed at abolishing the carceral and imperial logics of physical and virtual borders as well as border epistemologies.

Unsettled Borders follows the technoscientific logics of settlement that reproduce colonial binaries of civilized versus primitive land and bodies, which have consequences for how borders are seen, or imagined, and thus governed, as well as how they can be broken down. The book traces the militarization of the US-Mexico border, and especially today's automated border surveillance, to Fort Huachuca, a high-tech military intelligence hub twenty miles from the Arizona-Mexico border. The fort was first erected in 1877 as a military garrison, tasked to track and control fugitive movements by "marauding Indians."[10] The most notable of these fugitives were the Chiricahua Apache, who refused to be moved onto reservations, who continued to raid encroaching settlers, and who cleverly escaped Euro-American cavalry troops by fleeing to Mexico. Many of the tools deployed at the border today—drones, surveillance gadgetry, aerial balloons, and other military techniques—are developed and tested at Fort Huachuca.

From the historical accounts of Fort Huachuca, the Apache Wars emerge as the incubator for innovations in border control.[11] At this fort, surrounded by the Huachuca mountain range considered sacred to the Apache and other Native peoples in the area, the science of military innovation began, and the Indian Wars supposedly came to a close.[12] According to Fort Huachuca's museums and archival documents, the Indian scout was the most significant innovation in the cavalry's arsenal. Unable to capture Apaches who easily maneuvered across the "wild" and unknown terrain of the western frontier and into Mexico, lieutenants hired Indian scouts to join the front lines of battle, significantly extending the army's ability to see and move across rugged mountainous terrain and impenetrable desert. As an early military technology, the visual acuity of Indian scouts—what I call Nativision—was abstracted by the US military as the "eyes of the army," converting Native bodies and cognitive practices into biotech sensors, information conduits, and cryptography that extended the state's vision, communication, and control over territories. However effective Indian scouts were in aiding the army to track Apache resisters, Native knowledges were significantly distorted in the process of being translated into Western technoscientific discovery and innovations. Once converted into technologies, the source of that knowledge disappeared from the memory of the settler nation. The military's extraction of Nativision into its innovative arsenal of control, converts colonial genocide into a technoevolutionary story. This story naturalizes and authorizes the US nation's technological emergence from the savage past into a civilized futurity.

I argue that the colonial construct of the Indian "savage" is the original threat justifying militarized approaches to border security. I further argue that Chiricahua Apache and other Native American warrior intelligence inspires the military innovations that weaponize border surveillance around the globe today.[13] In other words, not only are the Indian Wars an overlooked moment in most historical treatments of the rise of the US-Mexico border, but Indigeneity and Indian Country are figurations of primitive otherness that bolster the empire of border security domestically and around the world.[14] For example, in chapter 1, I demonstrate how military innovations in border security, settlement, and dispossession gleaned from Apache warriors and used to settle the frontier during the late 1870s were deployed less than a decade later in the Philippines and Puerto Rico. And as I show in chapter 3, bordering technologies used against Palestinians in Israel, are deployed against the O'odham on the Arizona border, while drones and surveillance developed at Fort Huachuca are repurposed in Iraq and Afghanistan.

At Fort Huachuca, the inauguration of military surveillance cannibalizes Native knowledge into the military's own embodied arsenal of supposedly automated vision, an act that erases the Apache's sophisticated relational knowledge with land that threatened the settlement of the West. These place-based worldviews are converted into armaments of military security and then used to dispossess the very same peoples, to disarm them of the collectively held land that has long sustained their freedom to live according to the rhythms of their land. Fighting off threats at the border continues to be imagined as a war between the primitive and the modern, programmed into the scientific methods and technological innovations that are key to maintaining territorial control. This belief justifies the constant monitoring and control of bodies and borders while reifying the primitive/modern hierarchy.

Early military intelligence—influenced by colonial evolutionary science—converted Native American sacredsciences into a resource, or data to be extracted. Thus, Indian (time) and Indian Country (space) are coded into the militarized optics of border surveillance. The rise of scientific objectivity masks the context of its emergence, such as the colonial theories of evolution undergirding the science of comparison (anthropology, ethnology, ethnography, physiognomy, and archaeology). Thus, I trace a trajectory from the technoscientific knowledges that buttressed territorial borders during the Apache Wars (1848–1924) to the automated intelligence surveillance programmed into today's border wars (ground and aerial surveillance, remote communication technologies, data sharing, computational biology and the algorithmic processing of big data). Often missed is how these technoscientific knowledges perpetuate racial violence *and* Native dispossession, eradicating sacred ties to land.

Indians were romanticized as fiercely independent and thus ideal subjects exemplifying a rebellious individualism antagonistic to industrialized docility but were also considered a dangerous impediment to manifest destiny, and thus to settler wealth and security. As argued by Philip Deloria, American fondness of "playing Indian," or nurturing the "wild Indian within" has a long and complex history.[15] Indigeneity has long inspired the spirit of Americanness (shaping the Constitution, settler masculinity, and military strategy), thus anxiously situating Native peoples as both inside and outside American identity, law, and land.[16] For these reasons, the territorial proximity of Indigeneity within the American psyche and nation was and is of concern to the status quo and must be relegated to the past or contained within or isolated from civilized nations.

In fact, Native skills were embraced as patriotic when used in the service of US empire and as dangerous when they stymied Western progress. Military intelligence has long been fascinated with the secrets of Apache warriors' ability to communicate across vast distances. This colonial imaginary continues to drive military strategies. During World Wars I and II, the army capitalized on Choctaw and then Navajo code (or wind) talkers, who used their language as code to transmit secret messages across the airwaves. Then, starting in the early 1970s and continuing today, the Border Patrol has relied on the superior tracking skills of Native Americans to detect the elusive presence of migrant footsteps, forming an all-Native Border Patrol on the Tohono O'odham reservation called the Shadow Wolves. More recently, a broad-based group of Native American border patrol called NATIVE Immigration and Customs Enforcement sends the Shadow Wolves, imagined as fearless hunters of animals and humans, to borders around the world owing to their mythic reputation in the media as "manhunters."[17]

Tracking Footprints: Remapping the Borderlands

Contesting the military's turn to Native tracking and surveillance as technologies of border control, *Unsettled Borders* remaps the border through a focus on the O'odham, Maya, and Apache cosmologies of footprints. To follow footprints entails an understanding of place undertaken through the study of material and ephemeral ancestral imprints left on the land as well as storied relation to place. For instance, the Huachuca mountain range is an ancestor; a sacred portal linking the past, present, and future-to-come; and an elevated being that offers prophetic visions of other times and places, privileged knowledge that could influence decisions made in the present. One important Apache vision originating from these mountains told of the coming of a strange people with light hair and blue eyes that some interpreted as the coming of death, perched atop large dogs with pointy ears (what they later learned to be white men on horses). Starry-night ceremonial visions warned the Chiricahua of the arrival of the Spaniards and later Euro-American settlers before anyone could see them arriving from the mountaintop. Seeing footsteps was thus a complex activity that included prophecies; ancient memory; visions; dreams; the deep study of stars, land and animals; and elevated viewpoints that materialized a sacred connection with place.

Before the advent of sixteenth-century Spanish maps in Mexico, Maya maps illustrated footprints across land, marking sacred places alongside prominent animals, plants, and places that supported and defined the critical beings that

support human flourishing. Mapping land in this way communicated the character of land through a recognition of important inhabitants and sites, a living and fluid place in which a segregated border was unthinkable.[18] And for the O'odham and Apache today, movement across land to hunt, to harvest, and to engage in pilgrimages connects them to a phenomenological orientation of belonging with ancestors who made similar journeys. Since the body-as-land holds memory, one can think of footprints as a praxis of awakening collective sensual bonds with land. To follow the ever-shifting footprints of animals, invaders, clouds, stars, plants, rocks, and winds is to learn from, and with, diverse beings rather than to map, or to contain life into knowable (dead) objects that can be converted into property.

These embodied knowledges with the more-than-human world hold insurgent knowledges, memories of ancestral presence and ways of belonging to and with land. Rather than reproducing state definitions of membership or citizenship—through blood quantum, biometric documents, or DNA—orienting oneself to ancestral paths imprints the land with footprints that define belonging as a collective relation with the beings of a particular place.[19] The past is a well-worn path or trail, a footprint, that is *alive* as a companion that guides one's actions in the present-future. In other words, a footprint is not simply a sign of the past imprinted on earth but a respected ancestral guide that collectively orients how Native Americans care for and preserve all the animal and plant nations and their "worldings" across time and space. In this book, ancestral practices with more-than-human beings—mountains, wind, bees, water, and saguaros—serve as guides who preserve vital practices of intrabecoming that sustain people and their land. When one fails to follow these footprints, they may go extinct, along with the people.

Orienting oneself to the pathways of ancestral footprints draws inspiration from Indigenous land-based knowledge practices as well as postcolonial queer studies scholars such as Sara Ahmed. Ahmed argues that to be oriented in space is to follow footprints toward a path "as a trace of past journeys," an alignment with others that sustains communal bonds.[20] By following footprints we see an incommensurate claim to the same regions of the borderlands that bring Latinx and Maya migrants onto the ancestral lands of Native Americans.[21] With these incommensurate relations to the borderland in mind, I see possibility for solidarity when we first orient our understanding of the border from the autonomous perspective of Native peoples, or the Indigenous borderlands. There are numerous possibilities for being in alignment with Native Americans' land claims, especially when we orient ourselves to the intimate ties that entangle a people with a particular place. For this reason, I turn to

decolonial perceptual cosmologies that materialize sensual embodied relation to place through Indigenous, Xicana, and queer methods and practices such as Gloria Anzaldúa's poetic entanglement with land. In her pathbreaking book *Borderlands/La Frontera: The New Mestiza*, I consider Anzaldúa's less theorized Xicana sensual methodology with the more-than-human evident in the poetic ruptures of her imaginal writing. While she failed to address the actual histories and knowledges of Native tribes along the border today, there is much to glean from her training as a *naguala* or *chamana*: one who perceives beyond the borders of the self and other. Through a sensual engagement with the more-than-human that exceeds the temporal and spatial confines of the borders and their ontoepistemological limits, Anzaldúa's praxis is politically engaged with a return to Indigenous relation with land in Mexico and the United States.[22]

I also follow the footprints of Indigenous presence and absence by tracing how military surveillance technologies, what I call *settler surveillance*, void the land of all perspectives except one—that of the state. Automated state seeing empties the land of Native presence, even as it scans landscapes for Native threat—ironically, by deploying technologies derived from Indian scouts. As a tool of alienation, settler surveillance abstracts relational ties with land through an extractive relation to phenomena. This extractive vision has long shaped the scientific gaze, a way of seeing that estranges, abstracts, and extracts as its mode of seeing and knowing. *Unsettled Borders* traces the flashpoints of Native presence foundational to the military innovation and design of surveillance. At the same time, each chapter unsettles technoscientific borders by questioning how Enlightenment science and technologies desacralize land and bodies by extracting and automating Nativision into Western ways of knowing and seeing. Instead of segregating modern technology and science from Indigenous traditional ecological knowledge (TEK), the book proposes the term *sacredscience* to confuse the temporal fabrications and historical erasures that segregate tradition from science, the human from the nonhuman, the subject from the object, the local from the universal, the past from the future, and so on.

By attending to a range of struggles, demands, and knowledge practices shared with me, I have come to see how entangled many of us are in settler ways of seeing and unseeing that rob Native peoples (and all of us!) of knowledges with land critical to their/our healing and sustenance with land, now and long into the future. There is much to learn from Indigenous feminist, Latinx, and queer sensing, feeling, and seeing that hone in on sensual ways of relating with the land and each other that crowd out the destructive vision propped up by

masculinist-militarized technovisions of control that see nonconforming bodies, land, and collectivities through colonial fears of Indian resurgence.

Captivating Visions: Settler Technoevolutionary Belonging

Visuality and settler colonial occupation are tethered through the scientific, technological, and legal knowledges that produce the power to "see" and "unsee" land and bodies. For example, the English Common Law doctrine of discovery facilitated settler theft of *terra nullius*, or empty land through the proclamation of footprints onto seemingly unclaimed territory, turning the settler colonial gaze into a *scientific weapon.* The very project of seeing and observing the natural world, as argued by Jodi Byrd, as either overly full of Natives or empty of Natives, entitled settlers to ownership of Native land.[23] Once a territory could be proven as "discovered," witnessed as a wild space in need of Indian removal or void of human (Native) presence, it could legally become another's property.

This doctrine borrows from the Roman legal doctrine of *res nullius* (nobody's thing), in which unowned objects without legal rights—wild animals, earth, water, and even slaves—could become property once captured. Subjects within law, such as citizens and propertied land, were excluded. Curiously, when an animal (or slave or Indian) broke free of captivity, they could then recover their natural albeit precarious liberty.[24] Bees, for example, could not become property until hived, or domesticated, as was true for slaves—further entrenching the boundaries between civilized domesticity, law, and rights, on one hand, and wild or unruly spaces and human-animal natures, on the other. The civilizational impulse to own property was premised on containment, the contained zones of the plantation, the farm, animal husbandry, and the reservation—and later the border.

These legal doctrines reveal the socioeconomic and political motivations compelling the rise of Western science as a method of seeing that segregates the viewing subject from the objects it sees and disaggregates the "objects" of the natural world from the human. And the monitoring and containing of one's property—from slaves and Indians to animals and land—ensured one's rights as a citizen. As argued by Ethnic Studies scholar la paperson, "The 'humanity' of the settler is constructed upon his agency over land and nature."[25] Put another way, control over nature, and thus land, was the passport to humanity. Through alienated seeing, settlers participated in the mastery of state vision by "harnessing of nature and its 'natural' people."[26] By participating in state

technologies of seeing, embedded within evolutionary stories of racial development, white settlers ran from the wild natures of racialized others as a past that started to feel like, literally, another country. The race was on to tame, control, and take as much land as they could.

H. L. Morgan, Technology, and the Evolution of Intelligence

The US purchased the southern territory of Arizona from Mexico in 1853 as part of the concession following the Mexican-American War. The military covered up the mass genocide of Native Americans through scientific studies that proved Indians were at the origin of anthropological time, marking the rise of modern human historical evolution. Nineteenth-century theories of social and cultural evolution moved away from hereditary theories of genetics to posit instead a materialist portrait of time propelled by humans' agential role as laborers (who turn nature into objects). The most prominent ethnologist of such a hierarchical evolutionary social order, Lewis Henry Morgan, popularized evolutionary theory in his 1877 book, *Ancient Society*. Morgan aimed not only to map and archive the history of man and his contributions across time and space but also to prove that human intelligence could be measured by the impact their innovative objects have on human society. The earliest stage of time began with Indians, who created the simplest tools (savagery); humans then evolved to make more effective inventions (barbarism) and then finally reached the highest state (civilization), evident in the sophisticated technological innovations of white men. Like most scientific disciplines of his time, Morgan's comparative approach to racial difference drew from his and others' studies of Native tribes such as the ancient Aztecs and from the Iroquois Indians whom he studied in person during the late 1800s.

Morgan's obsessive collection of physical traces of human intelligence offers a window into the colonial psyche driving white men's desire to monumentalize their position at the highest point of the world's social order. This early example proves a larger point in *Unsettled Borders*: that border technologies, such as automated sensors or Donald Trump's wall—however ineffective in actually preventing the flow of migrants—constitute an archival trace, a monument, or a footprint of white civilizational superiority and belonging. For Morgan, the more significant the technology to human flourishing (leading to more widespread architectural designs, patriarchal family structures, private property, and democratic governance), the higher the group would land on this scale.

Morgan was undoubtedly influenced by Charles Darwin, who established a similar hierarchy of animals including bees, whose position in his taxonomy

depended on the complexity of their honeycomb construction (chapter 4).[27] Morgan states, "With the production of inventions and discoveries, and with the growth of institutions, the human mind necessarily grew and expanded; and we are led to recognize a gradual enlargement of the brain itself, particularly of the cerebral portion."[28] Folded within this story was a comparative sketch of behavioral evolution that converted intelligence from an innate trait of biology into man's agential role in the conversion of nature into material objects. By measuring intelligence through objects, acumen could be appropriated as a raw material for the next stage of humans to incorporate into subsequent designs. One technological feat was replaced by the next, just as one tribe of people, or species of bees, was replaced by a more advanced one. Archaeological objects defined the present-absence of a people whose tenure on land (mysteriously) expired when they were replaced by a more technologically advanced group. Within this evolutionary model, Native Americans lacked humanity not only based on their designation as savage (lack of intelligence owing to proximity to nature) but also based on their incapacity for creative labor (or ability to turn nature/land into objects). As Morgan argued, those with more advanced labor skills were better equipped to relate to land as property, since they converted nature into objects, which became property. Hence, we see the ways nature had to be separated from objects in the colonized worldview as a precondition for labor/agency, intelligence, and property and thus for becoming fully human.

By wresting intelligence from the immutable confines of biology as well as from the divine design of higher religious forces, Morgan's evolutionary materialization of time and human (creative) labor supports, even as it departs from his contemporary Karl Marx's materialist theory of labor. Early man's preindustrial production of objects might have been simple, leading to modest improvements in society, but this labor, argues Morgan, does not dull the mind. On the contrary, creating material objects out of nature fostered human intelligence and uplifted humans from other animals. It is no surprise that Marx was a great fan of Morgan's book.[29] Even as Native people's savage intelligence was the vital foundation for modern man's eventual rise, Marx's revolutionary sociality found good company with Morgan's depiction of preindustrial labor as an activity associated with creativity, humanity, and intelligence. Neither criticized the racial consequences that propped up this evolutionary drive of historical materialism (and neither could imagine or grasp Indigenous intelligence with regard to land as the creative source for expanding human cognition and hence evolution). Marx fetishized precapitalist labor relations as an alternative utopia to the dehumanizing effects of capitalist

industrial production that alienated humans from their creative potential and thus intelligent evolution. Even for Marx this tale of human-technological development also presumed that Indians were stuck in the past and—similar to animals, plants, and the natural world—served man as a raw material for a revolutionary social order that privileged a return to creative labor.

Current innovations in autonomous intelligent robotics extend the evolutionary myth that technological objects make humans smarter. For instance, a recent Alexa ad touts, "Smart Speaker. Smarter Human."[30] Alexa is another version of the Indian scout given that "she" performs everyday reconnaissance missions (yes, sir!) by reporting back information for humans on command. "She" is the object for whom "humans" become more intelligent and thus more human (she is, after all, *merely* a machine). Human intelligence, quality of life (rapid information retrieval), and our very humanity improve alongside our techno-objects. And each data trace is archived and recorded, easily turning our virtual pathways into surveillance capital-as-property.[31]

Morgan felt it urgent to document the traces of each group's contributions before they were replaced, forgotten, and lost to history forever. In fact, media scholar Brian Hochman interprets this drive to document and categorize human behaviors and culture as an innovation driven by the racist beliefs of the nineteenth century, when "writers and anthropologists believed that historical forces had pushed the world's primitive cultures to the brink of extinction."[32] While other scholars have written extensively on the popular perception of the "vanishing Indian" driving anthropology, ethnology, and so forth, Hochman argues that the imperative to archive Indianness—Indians' voices, languages, and culture—inextricably linked extinction and obsolescence to the innovative drive of ethnographic documentation.[33] In other words, Hochman's coupling of racial and technological obsolescence is crucial to unpacking not only how technologies produce racial meaning but also, perhaps less noted, how racial alterity itself motivates innovative techniques, such as phonography, to capture its inevitable disappearance.[34]

By naturalizing the inevitable extinction of racial otherness, automated technologies escape accusations of labor exploitation, military violence, environmental destruction, and settler dispossession. For instance, Tung-Hui Hu exposes the colonial infrastructure that props up the supposed ephemeral placelessness of the internet's digital cloud, stored in thousands of environmentally disastrous data centers and routed across fiber optic lines that trail nineteenth-century telegraph lines, built close to old railroad tracks.[35] The construction of telegraph lines brings us to another example of how technological development participated in the settler theft of Native American relation to

land. Literary scholar Kay Yandell argues that these telegraph lines justified the settlement of the western frontier by replacing Native Americans' ability to communicate across space ("moccasin telegraph") with an electrical wire (developed by Samuel Morse) that could transmit the "nation's origin myths and thus sacralize settlers' connections to American lands."[36] This virtual form of communication fostered a disembodied relation to land that attempted to replace Natives' storied and spiritual connection to land.

Also disappeared from technological infrastructure and products are workers: from Chinese railroad workers during the nineteenth century, to contemporary and future Mexican laborers replaced by automated arms that will pick our produce, to mostly female Navajo workers at a microchip facility in New Mexico hired from 1965 to 1975.[37] Not only are laborers racialized and gendered as devalued and hidden labor for high-tech products and functions, but, as argued by Neda Atanasoski and Kalindi Vora, automated machines like robotic laborers also take on a surrogate relation to the freedom and humanity of the privileged class, who can disaggregate human activity from dehumanized and racialized labor—the mundane, dirty, and meaningless labor now performed by robots.[38] Projecting a future in which technological objects replace exploitative and slave-like labor would mean imagining a time, Atanasoski and Vora argue, without gendered and racialized laborers—human servants, slaves, and caretakers—who historically have performed this labor.

To combat the structural imaginary of enslavement undergirding Western manipulation of techno-objects to serve the will of humans, a collective of Native scholars speculate a world in which autonomous intelligent objects are treated not as an alien other but as kin. Against the interpretation of such techno-objects as void of responsibility and relation, and extending Donna Haraway's notion of "making kin," they ask, what if we treated all objects as kin?[39] Through this provocation, they refuse to treat automated objects (as Westerners do) as nonhumans void of interiority and thus as slaves, or machines unworthy of relation.[40]

Surveillance Studies

The field of surveillance and security studies gained prominence and momentum after the attacks on September 11, 2001, by foreign terrorists who penetrated US borders. As part of the effort to secure the nation, attention refocused on the US-Mexico border. In *Innovation Nation: How America Is Losing Its Innovation Edge, Why It Matters, and What We Can Do to Get It Back*, security advisor John Kao argues that 9/11 broadcast a known but unspoken fact, that

the United States' inability to innovate at the level required to control its borders was a sign of the country's slow decline as a global power since the Cold War.[41] Kao worked with US national security agencies and departments as an adviser during the 1990s to discuss how to best protect national interests now and into the future through high-tech innovations. We must, he argues, keep an *eye* on future threats *and* opportunities, by identifying the unknowns well before they emerge.[42]

Scholars have disputed Kao's position, arguing that 9/11 was not *the* exceptional event launching us into an elevated state of national security. They claim, rather, that 9/11 brought back Cold War–era racialized suspicion and a windfall of funding for, and interest in, militarized technologies from World War II, such as the drone.[43] Immigration scholars have similarly linked the militarized border to the Cold War, when fears of foreigners and immigrants justified more ubiquitous security against an elusive enemy, while locating a new site (the border) for the use of war technologies.[44] While clearly both the Cold War and 9/11 are important moments in amplifying border security, they occlude our ability to recognize the longer history of settler colonial ambitions driving border surveillance against a universalizable Indian threat, as well as the logic of occupation and dispossession of Indigenous land. Against these erasures, Native American scholars understand 9/11 as a national threat haunted by Indigeneity, evident in the military coding of Osama bin Laden as Geronimo.[45]

As the field of surveillance gained traction post-9/11, the majority of scholars in the 2000s popularized an analysis of state surveillance as emerging with the rise of modernity, most readily evident in Michel Foucault's theorization of the panopticon. For Foucault, this "watchful gaze of the state" became a key technology to follow broader sociopolitical transformations in state control, from spectacular displays of torture and violence to modern bureaucratic discipline, from the guillotine to the watchtower, and from a sovereign ruler empowered by the divine right to kill to the state's bureaucratic violence of containment. This story of the state's techno-evolutionary progression—from bloody brutality to bureaucratic discipline—obscures the ongoing colonial violence hidden within the surveillant eye that captures and transmits data. For Paul Virilio, the watchtower was more than a disciplinary tool; it was a visual weapon of war: "from the *original* watch-tower through the anchored balloon to the reconnaissance aircraft and remote-sensing satellites, one and the same function has been indefinitely repeated, the eye's function being the function of a weapon" (my italics).[46] Contra Virilio, Caren Kaplan questions the accuracy of aerial views, however weaponized, and destabilizes this totalizing

viewpoint by attending to what cannot be captured or known by the eye in the sky.[47]

Few scholars consider the colonial use of *vigías*, or watchtowers, erected by Spanish colonizers to monitor the movements of American Indians in the Southwest and Maya in the Yucatán. These early towers aimed to parse land and bodies into the governable and the ungovernable, or the wild and the civilized, as well as the licit and the illicit, especially by controlling the trade of unauthorized goods, as well as preventing the Maya from escaping into the jungle, out of the reach of colonial tribute and control.[48] The surveillant eye of the *vigía* serves as a colonial technology of bordering, of territorial dispossession and bodily containment, demarcating racial and territorial boundaries while determining the jurisdictional control of Indigenous movement. For the O'odham, border security today extends the violence of governance from the discipline of the watch tower to an atmospheric occupation aimed (unsuccessfully) at Indigenous extinction. To tear apart their reservation through the imposition of a border is to attempt to render extinct their sovereignty and freedom, which are inextricable from movement, from following the footprints of their ancestors that preserve the lively connections with the land.

As many have noted, Foucault's limited analysis of racially targeted state violence, confined to the horrors of the Holocaust, led him to see racialization as an exceptional problem found elsewhere and as a historical event in the past, sending many scholars down a similar path of forgetting the centrality and ongoingness of the racial containment of slaves onto plantations and of Native peoples onto reservations.[49] Or as Macarena Gómez-Barris asserts, theories of visuality that begin with modernity forget the context of coloniality and thus "render invisible the enclosure, the plantation, the ship, and the reservation."[50] And, I would add, the border. What all of these spatial enclosures have in common, despite their distinct temporalities and territorial configurations, is a biopolitics that extends beyond simply disciplining bodies through containment but of investing in the ongoing slow death, or extinction, of Black, Latinx, Asian, and Indigenous life. If we see the rise of surveillance alongside land-based struggles like the Indian Wars from the 1700s to the 1880s, the quest for land goes hand-in-hand with settler surveillance as a military tool for expanding state sovereignty and control.[51] This happens in part when we focus, as Andrea Smith argues, on what surveillance sees, what it makes hypervisible versus what "delegitimizes the state itself."[52] This critical framework of what is visible or hidden is helpful in understanding the book's focus on how Indigeneity drives the technological innovations of the settler state and attempts to assert its sovereign power.

Feminist and critical race perspectives on surveillance have pushed the field from Eurocentric perspectives on the rise of modernity to critical accounts of the racial underpinnings of state seeing.[53] Rather than focusing on the bodies caught in the surveillant eye, it is imperative to situate settler seeing within the historical and scientific context in which surveillance emerges, including the settler military imaginaries that continue to hide how this gaze targets Indigenous bodies and land, transplanted globally to mean any foe that threatens the colonizers' land-based power. To interrogate surveillance as a settler colonial technology is to attend to the ways Western spatial imaginaries desacralize relational bonds between land and bodies, regarding them instead as unruly entities to be conquered. The border's spectacular resonance as an uninhabitable or wild frontier—either empty or overrun—continues to justify the need for settler presence and a ubiquitous security apparatus.

The fields of feminist science and technology studies have also emerged to combat the growing militarization of knowledge resulting from alliances between the Department of Homeland Security, the Defense Advanced Research Projects Agency (DARPA), and universities. As public state funding diminishes for higher education, these agencies offer students, researchers, and faculty ample grants, funded centers, and endowed positions for becoming the research and development arm of border security. The University of Arizona, just an hour from the border, is one of the leaders in this field. Such alliances demand we interrogate how academic theory supports the logic of these innovations in science and technology. By attending to the technoscientific worldviews driving surveillance, we move away from a focus on stable subordinated identities to the very processes of subjection, or from seeing racial bodies to unpacking what Ruha Benjamin defines as the discriminatory design of the state and its technoscientific methods that produce racialized ways of seeing and knowing.[54] If we return to the historical context of military surveillance, these technologies were designed not only within a racial imaginary that sees the Indian as a threat. For within the evolutionary context of automated intelligence, technological advancements in border security led to infrastructural occupation on Native land that threatens to render Native peoples obsolete, or extinct.

State surveillance continues scientific and neoliberal rationalities that encourage us to believe that governance operates best when it can see problems with a distant gaze and when it develops technologies that provide more humane, efficient, and accurate vistas. The surveillant gaze reinforces the belief that the phenomena we can see and know are good and that what we cannot see is false/deceptive, dangerous, suspicious, and threatening, resulting in a

neocolonial tracking system that justifies the need to light up, or see in the dark, to see what cannot be knowable or fully controlled. In her book *Dark Matters: On the Surveillance of Blackness*, Simone Browne traces the racial underbelly informing Foucault's theory of biopolitical governance through the surveillant panopticon to Jeremy Bentham, who came up with this term while on a slave ship. By centering slavery in the heart of surveillance, Browne argues that surveillance produces definitions of Blackness (what cannot be seen or known and thus is in need of control), while at the same time anti-Black racism prefigures the need for, and fabrication of, these technologies. When one traces this earlier history of surveillance, the panopticon fails as a register of modernity and its association with bureaucratic efficiency, objectivity, and unbiased development.

Through a present-future secured through ubiquitous surveillance, these technologies target racialized bodies and extend the state's intrusive eye into more areas, reaching beyond its sovereign control.[55] The act of seeing like a state thus weaponizes illicit bodies, land, and knowledges, distinguishing the safe from the dangerous, the white from the racialized, the normal from the abnormal. Attempts to visually produce evidence of the racialized body as a criminal threat or vector of disease at the border can be seen in the rise of technologies used to identify certain migrants. For example, in the late nineteenth century, Chinese migrants were the first to have photographs taken of them at the border (at a time when photographs were used as proof of criminality), and Mexican migrants in the early twentieth century were quarantined, sprayed with DDT (thought to be a delousing agent), and branded with an iron to mark them as "authorized."[56] What interests me is how this visual technology automates these racial stereotypes into data visible on the body and land to justify the need to visually map every dangerous movement and unstable region bordered by surveillance.

Refusing Technoscientific Seeing through Apache, O'odham, and Maya Sacredsciences

National border control fantasies of multiscalar surveillance, of seeing from every dimension possible (with the goal of controlling more space), stand in stark contrast to Native sacredsciences that have long observed the shape and intelligence of humanity in motion with the multidimensional spirit of life. By interweaving science and the sacred, I aim to highlight Indigenous perception as a technology honed across generations that extends human becoming and intelligence with the more-than-human world. Sacredscience consists

of practices and knowledges that re-enliven relations with ancestors and that activate a calling to nourish the intricate web of entanglements that sustain all living beings on earth. Compared with the objective approach in Western science that alienates one phenomenon from another in order to control the natural world through ubiquitous vision and, thus, knowledge, sacredscience refers to a knowledge system that fosters one's responsibility to respect the relational web and life force that holds us all together, glimmering in a dimension that eludes Western systems of knowledge.[57]

Thus, against the military theft of Nativision tied to the land, *Unsettled Borders* follows the more-than-human knowledges, fugitive movements, and acts of freedom that exceed technologies designed to control, incarcerate, and limit Indigenous land-based flourishing. These opposing forces have each gained momentum, and the tension between them has reached a feverish pitch. As Native voices rise up with greater force, advances in science and technology promise to unlock the mysteries of life and gain greater control over it. I argue that describing Native American cosmologies with place as a sacredscience is critical at this particular moment. As noted by many Indigenous scholars, Native knowledge is often considered as the antithesis of science: as myth, primitive belief, or as raw material to be extracted and developed through Western science, patented as its own, and commodified.[58] Growing movements of Native activists are refusing settler development on their sacred land, from Standing Rock to Mauna Kea, and at the US-Mexico border by the Tohono O'odham, who protect their sacred burials and springs from destruction by the construction of President Trump's border wall (chapter 2 and conclusion). In the process of refusing the construction of an observatory on Mauna Kea, a mountain the Kānaka Maoli consider sacred, Native Hawaiians are accused of being antiscience, an epithet with a punch given the centuries of denouncing many Native peoples for their "primitive beliefs" unsupported by scientific methods such as documentable evidence.[59] A 2014 *New York Times* article labeled Indigenous creationism as opposing science, and opposition to the Mauna Kea telescope as a "turn back to the dark ages."[60] To understand the contestations over Mauna Kea, Hi'ilei Julia Hobart traces the "superimposition of Western spatial imaginaries—particularly emptiness—upon Indigenous geographies [that] has been used to justify a number of development projects."[61] Not only is the land emptied of Native Hawaiian presence but, Hobart continues, the land is also deanimated from a Kānaka Maoli perspective that sees intention, ancestor, and spirit when a deluge of snow from the mountain halts all construction and settler passage up to the summit.[62]

In the case of the San Carlos Apache, who stand against the University of Arizona's construction of two telescopes on their sacred mountain, Dzil Nchaa Si'An ("big seated mountain"/Mount Graham) in Tucson, Arizona, anthropologist Elizabeth Brandt reported that proponents of the telescopes wanted physical proof of "sacredness," such as extensive ruins, a temple or church, or a burning bush, evidence that falls outside of Apache understandings of the sacred as a way of living with land.[63] Misunderstanding the sacred through Western concepts of religious freedom, defined as the freedom to practice one's beliefs in places of worship (such as a church or mosque), has turned a blind eye to Native peoples' sacred relation to land. As argued by Winona LaDuke, "Some 200 years after the U.S. Constitution guaranteed freedom of religion for most Americans, Congress passed the American Indian Religious Freedom Act in 1978," and while this law protected the legal rights of Native peoples to hold ceremony, LaDuke continues, "It did not protect the places where many of these rituals take place or the relatives and elements central to these ceremonies."[64]

In 1883 the Department of the Interior declared Native American religion illegal, attempting to destroy Native knowledge, power, and relation with land.[65] As scholars such as Keith Basso acknowledge, various Apache tribes find meaning, memory, and knowledge in place, or "place-based thoughts."[66] Nicholas Laluk, a white mountain Apache anthropologist, finds that the most important word in the Western Apache language is *Ni*, which means both "land" and "mind."[67] Knowledge and thought are not the sole domain of humans but are inspired by, and inseparable from, the intelligent design of all scales of life. And not only do cognitive and social meanings reside in relation to place, but places are spirited, alive, and part of the meaning-making process. Thus, to track footprints is a key methodology in this book, not only for following the past but also for seeing with Apache and many other Native-inspired place-based knowledges. Anthropologists such as Laluk, as well as Lesley Green and David Green, find that archaeology imposes a Western framework on Indigenous expressions, or, better yet, practices of history, time, and place.[68] In contrast to looking to archaeological objects to determine "belief systems" or historical "presence" (as if Native peoples and their ancestors did not still reside in those areas), "footprints" or "tracks" offer an alternative worldview to think about what it means to follow the past as a relative that guides one's actions. Western understandings of "history" reserve it as a temporal placeholder that alienates the past from the present-future, while objectifying time as independent of human and nonhuman intervention. Basso describes the ways Chiricahua and

other Apache experience places, rather than objects or time, as holding memories that are awakened, and storied, by ancestors when one follows their footprints or tracks on the land. For example, the time of flooding in the Huachuca mountain desert region is told by the naming of a place or by stories that describe the larger events accompanying the mineral residue of water imprinted on the rocks. This event holds importance owing to its relevance in the present. Learning the footprint of water on a rock or the motion of the stars and moon across the sky provides lessons on how those movements relate to the annual rising and falling of the waters, or the change of seasons, the timing of when to plant, and the migration of humans and animals.[69] What appears to be a "localized" knowledge allows one to understand the entanglement of cosmic or local events. To see the great migration of settlers from the east—the tracks of the white people and their tools, animals, bodily movements, eating habits, and technologies—is to understand how these movements will alter the world around them. To learn to see how land wilts or dies off, how it shows signs of lifelessness when overworked by extractive industries, monocultural factory farming, or other kinds of misuse is to foresee a time to come that teeters toward destruction if we don't take responsibility to repair these wrongs. By tracking footprints, one can come to understand, and take part in, the artful dance of life and death of a world in constant motion.

Terms usually thought of as antithetical—*sacred*, *technology*, and *science*—are juxtaposed in the book to resignify, reimagine, and refuse Western hierarchical racial orders guiding science and technological development. Sacredscience is a term in conversation with a range of Xicana and Indigenous scholars who highlight land-based ontoepistemologies, what Michi Saagiig Nishnaabeg scholar, writer, and activist Leanne Betasamosake Simpson calls Nishnaabeg intelligence, or land-based pedagogy.[70] Through sensual stories of maple harvesting told with childlike awe and love, and drawn from deep observation with squirrels and trees, Simpson situates harvesting as an intelligence "woven within kinetics, spiritual presence and emotion, it is contextual and relational."[71] Through this traditional story Simpson shows how technological "discoveries" come out of love and respect for the land, thereby strengthening the communal bonds between people who together take part in the creative act of feeding the mind, belly, and social relations in ways that strengthen the bonds connecting people with land. Simpson knows that "settlers easily appropriate and reproduce the content of the story . . . when they make commercial maple syrup in the context of capitalism, but they completely miss the wisdom that underlies the entire process because they deterritorialize the mechanics of maple syrup production from the place, and from freedom with Aki, or land."[72]

These stories remind us that Nishnaabeg "discoveries" strengthen their freedom to uphold collective responsibilities.

In a similar vein, the Tohono O'odham refuse their extinction by surveillance, extraction, and dispossession of their land, by following in the footsteps of ancestral ways, including communing with their creator/mountain through songs of prayer and harvesting sacred plants such as the saguaro cactus whom they consider to be an ancestor that teaches many lessons on how to live, survive, and thrive in the desert (chapter 2). The Yucatec Maya turn back to ancestral practices of beekeeping, to remember knowledges that not only counter the militarized extraction of land, outmigration, and dispossession but strengthen relationality with each other and the land (chapter 4). As a sacredscience, these ancestral knowledges entail seeing with ancestral eyes that preserve knowledges across timespaces that aid the present. Past knowledges reside in the plants, animals, and people that engage in these practices to ensure futurity for many to come. Indigenous knowledges are not simply accumulated traditional ecological knowledge (TEK), bound and archived, that can be picked up by scientists and environmentalists and transferred to any location, as noted by Potawatomi philosopher Kyle Powys Whyte.[73] Instead, he argues, they are situated knowledges embedded in the worldviews, creation stories, and cultural practices of a community of people. Held within these sacredsciences are memories that kinetically regenerate people's freedom to move with the laws of the many creatures inhabiting the entangled, yet distinct, worlds of their land. Anishinaabe speculative fiction scholar Grace Dillon skeptically uses the term *Indigenous scientific literacies* as critical to Indigenous futurity: "In contrast to the accelerating effect of techno-driven western scientific method, Indigenous scientific literacies represent practices used by Indigenous peoples over thousands of years to reenergize the natural environment while improving the interconnected relationships among all persons (animal, human, spirit, and even machine)."[74] Ancestral sacredsciences are remembered as footprints that inform the present-future, while settler science looks to a future in which the past is overcome, or improved upon.

The scholarly work of Vine Deloria, one of the leaders of the field of Native American studies, addresses the strength of Native spiritual knowledges that were delegitimized as worldviews and methods because they threatened the legitimacy of Western science. Deloria convincingly contends that Native knowledges surpass Western knowledge systems, especially since they do not rely on one single thinker or scientist and instead gather wisdom from a diversity of intelligent perspectives across the human and nonhuman and across time. Deloria says, "Indians consider their own individual experiences,

the accumulated wisdom of the community that has been gathered by previous generations, their dreams, visions, and prophesies, and any information received from birds, animals, and plants as data that must be arranged, evaluated, and understood as a unified body of knowledge."[75] Robin Kimmerer, a Native ethnobotanist and citizen of the Potawatomi Nation, argues that Indigenous TEK should be seen as parallel to science. The two major differences are that TEKs are qualitative, based on observations by a community over a long period of time and that, unlike in Western science, with TEK, the observers tend to be those who use the resources themselves and thus consider what is observed from the position of subject rather than object. Kimmerer reminds those who protect the land without regard for the inhabitants that environmental problem solving cannot be disconnected from human values and worldviews.[76] Gregory Cajete, a Tewa scholar, goes even further to argue that Native science rejects the objective distance of Western science and instead acknowledges the material and spiritual ties of transformation when he says, "in learning from and eating each other, we are transformed into each other."[77] In a similar vein, the physicist F. David Peat sees connections between quantum physics and Native philosophy, which both recognize an experiential and ontological shift: "within the Indigenous world the act of coming to know something involves a personal transformation. The knower and the known are indissolubly linked and changed in a fundamental way."[78] The book extends these ideas to consider how becoming animal (both biologically and imaginatively) is a technology that extends human becoming, knowledge, and perception of the world through each animal's particular aptitudes.

These sacredsciences come from everyday necessity and collective visions, pushing biological knowledge into an entire sacred cosmology that accounts for the lively presence and knowledge of wind patterns, animal habits and behaviors, the edible parts of animals and plants, plant growth, star patterns, and what all life forces need to survive, propagate themselves, and thrive.

Alongside Native scholars and scientists and feminist science and technology studies scholars, the book draws from decolonial Indigenous, Xicana, and queer methods to address realms that fall outside rational technoscientific perspectives, such as embodied knowledges that come through dreams, visions, poetry, conversations with elders, experiences of birthing and dying, and ceremony. To follow footprints entails seeing the not-quite-visible through other animal-plant-star movements and stories, songs, and visions with ancestors. I am especially moved by Gloria Anzaldúa's erotic cosmontology, or sensual becoming through deep engagement with the land, or the more-than-human world, that builds consciousness, or knowing and becoming beyond the

limits of the human. I see in Anzaldúa's writing a deep engagement with the spirited forces all around her, a methodology of perception in which she not only intimately learns to see with the more-than-human world but becomes other with them. This third-space methodology in Chicanx/Latinx decolonial scholarship builds alliances with Indigenous cosmologies that refuse to separate human from nonhuman perceptual ontologies, a separation foundational to Western borders between the self and other. In a similar vein, Macarena Gómez-Barris builds on a decolonial queer episteme that privileges an Andean phenomenology that respects sensual, intimate, and embodied relations with land, to break with the dispossessive logics of extractivist perceptions driving spiritual tourism in Peru.[79]

Indigenous and feminist science and technology studies scholars such as Kim Tallbear and Angela Willey theorize sexuality as a potential technology for engaging science otherwise, breaking the heteronormative hold on scientific ways of knowing by identifying the healing potential of erotic intimacies that transcend sexual reproduction and the human.[80] Tallbear evocatively asks us to consider how polyamorous relationalities might expand our kin networks and enact collective healing. In a related vein, queer literary scholar Mark Rifkin turns to queer Indigenous writers such as Qwo-Li Driskill to articulate an erotics of sovereignty that decolonizes empirical and state definitions of "the real." Instead, Rifkin argues that embodied knowledges with land bring back sensually perceived relatedness that reignites felt moments of freedom that disappear the bounds between human and nonhuman, self and other.[81]

There are other decolonial scholars that are important to acknowledge as having similar goals of expanding what Arturo Escobar calls the One World approach, universal knowledges that replace the detached perspective of science and the academy with multiple perspectives, or a turn to the relational knowledges that lead to many worlds, or what he calls the Pluriverse.[82] There is a group of decolonial, Indigenous, and postcolonial science and technology studies scholars whose methods dovetail with the perceptual apparatus from Indigenous and subaltern perspectives from below, including what Macarena Gómez-Barris calls "submerged perspectives," and Zoe Todd calls seeing with "fish pluralities."[83] There is also an emergent group of feminist science studies scholars who attempt to incorporate postcolonial approaches to see the world from perspectives that refuse to hierarchically categorize life with the human at the apex. For example, Deboleena Roy asks what kinds of becomings might be possible when we see beyond the human, from and with grass.[84]

These scholars enact theories from places and from intimate knowledge of place that emerged through respecting the intraconnected patterns of life

that affect us all. Indigenous peoples across the Americas refused to submit to the Spaniards' sovereign God that transcended the human earthly realm, or, later, the sovereignty of colonists and their allegiance to a king or nation ruled by humans who thought themselves superior to nature. An alternative understanding of sovereignty based on respect for the flow of life's infinite forms—from the sun to rivers to plants—challenges settlers' belief that nature was a wild sphere to be domesticated through borders on a map demarcating private property, which in their mind and practices segregated wild from cultivated land. As forcefully stated by Val Lopez of the Amah Mutsun tribe, it's not that Native peoples did not alter their landscapes, but they did so in ways that fostered the growth of plants, creating water systems that were used by Indigenous peoples without cutting off the flow of the fish, and so forth.[85] The stakes of the project entail both understanding the constant yet changing forms of settler colonialism that continue to push the bounds of state sovereignty and also heeding the call of Native communities who risk losing their land and their particular way of knowing and being in the world. When people's land is stolen, occupied by the military, destroyed by extraction and toxic dumping, what webs of relational becoming disappear or go extinct?

Chapter Overview

In each of the chapters, I track the Native footprints driving settler surveillance as an automated structure of seeing that is extractive, removing and containing threats to settler governance, capitalism, and belonging. This colonial structure of seeing bodies beyond state detection as dangerous intruders reinforces military occupation, carceral containment, and elimination and dispossession of Native land and bodies as well as migrant border crossers. At the same time, each chapter interrupts these violent ways of seeing through demands for Indigenous autonomy maintained by outright protest, as well as by less understood collective relational practices with land. By elucidating the tensions between automation and autonomy, I hope to unravel the binaries foundational to Western knowledge and subjectivity that continue to drive the violent settler colonial and extractive desires of the state, while pointing us to other ontoepistemological possibilities that support and proliferate life on earth for all.

Chapter 1, "'The Eyes of the Army': Indian Scouts and the Rise of Military Innovation during the Apache Wars," situates military surveillance as an innovation developed within the laboratory of the Apache wars. As a tool of settler violence, Native "eyes" or visionary skills had the power to aid or disorient

settler military control of the Southwest border region. While Indian scouts were dubbed "the eyes of the army," Apache visionary practices with land were tied to centuries of adaptations to all the forces of land I call a *sacredscience*. Their animated vision and communication across space constituted a powerful tie to land that was dangerous to military-backed settler belonging. Early military innovations, such as the heliograph and binoculars, were created to extend settler seeing in order to track down, contain, and replace Apache fugitives in frontier regions considered remote, wild, untamable, and hostile to the civilizational might of settler presence.

In chapter 2, "Occupation on Sacred Land: Colliding Sovereignties on the Tohono O'odham Reservation," I move from the Apache Wars to the current border war waged on the Tohono O'odham reservation. While the O'odham have no word for "border," the United States declared the region between Arizona and Mexico a security "void" to justify their illegal invasion of the sovereign O'odham reservation. This chapter examines the colonial history of Western visual mapping of O'odham desert land as inhospitable or empty to contextualize the current military occupation of the reservation by infrastructures of security. Given that little scholarly attention has addressed the Native peoples living on the border today, this chapter assesses how the same immigration policies and infrastructures that funnel Latinx migrants and smugglers onto O'odham sovereign land—many of whom die crossing the desert—target O'odham tribal members. Many O'odham tribal members and activists see this militarized intrusion as another attempt to occupy their land and render them extinct, or to dismantle the sacred worldviews and practices that make them a distinct people. Similar to other sovereign nations along the US-Mexico border, they demand autonomy and an end to all incursions by border-security technologies, from the wall to surveillance towers, that close in on them from the ground to the sky.

Chapter 3, "Automated Border Control: Criminalizing the 'Hidden Intent' of Migrant/Native Embodiment," traces the long legacy of collaboration among the state, the military, and universities that has led to the branding of Arizona as Optics Valley, a laboratory for visual technologies that include surveillance, drones, sensors, and observatories. In this chapter I trace the research and development that created the sensors used to scan border travelers in the automated border kiosk AVATAR, funded by the Department of Homeland Security and developed at the University of Arizona. Automated border surveillance today promises to visualize and detect threats across all scales—from the ground to the sky, including inside the body. The AVATAR kiosk invades the body with fifty sensors that track the hidden signs of physiological

deception with the goal of identifying whether people are crossing the border for good versus malicious reasons. As the body is turned into matter, biological life resurfaces as a more scientifically verifiable truth than human verbal testimony, moving border security into the colonial recesses of the body's unconscious movements. This chapter unpacks the connections between the nineteenth-century visual capture of "marauding Indians" and the detection of a primitive Indian racial unconscious that continues to inspire Arizona's border-security-industrial complex.

Chapter 4, "From the Eyes of the Bees: Biorobotic Border Security and the Resurgence of Bee Collectives in the Yucatán," turns to another phase of automated security that draws from scientific studies of "swarm intelligence." I trace the turn in autonomous intelligence from human to animal intelligence through nineteenth-century debates about bee intelligence in the natural sciences, such as the views of Charles Darwin, to consider how the rise of biological sciences inaugurated the move away from religious, spiritual, and any other unseen life forces, a materialist debate I track through scientific observations with bees. The last section of the chapter disproves the evolutionary disappearance of the Maya/bee by focusing on the resurgence of beekeeping by Maya in the Yucatán, Mexico. Through ancestral sacredsciences tied to beekeeping, women engage in land-based protests against the containment and disappearance of their land by logging companies and tourism economies. Through the campaign "I am the Maya bee," they refuse to separate collective demands to protect the bees, their land, and women's bodies from the violence of extractive industries, environmental devastation, the murder of women eco-activists, and the loss of bees. In addition to demanding autonomy, Maya build sustainable approaches to living that they hope will bring Maya refugees back home.

And last, the conclusion, "Wild versus Sacred: The Ongoing Border War against Indigenous Peoples," returns to Organ Pipe Cactus National Monument on the Arizona desert border, a public wildlife preserve managed by the US Department of the Interior, on land considered sacred ancestral land of the Tohono O'odham nation and the Hia-Ced O'odham. This chapter forges connections between conservation and border control, discussing how surveillance-as-conservation serves as another settler tool to protect the land from human threats, such as O'odham and immigrants, while opening it up to settler tourists. On this land Trump began the construction of his thirty-foot-high metal-and-concrete border wall. I return to the saguaro desert, where the footprints of O'odham, Apache, and Maya collide. O'odham fight against the construction of a border wall—a process which has led to the destruction of some of their sacred burial sites and the extraction of sacred water from Quitobaquito

Springs—to protect not only their history but the sacred footprints of the living and dead: Hohokam and Apache ancestral burial sites, Maya and Latinx refugees and migrants, and a range of ancestral animals, plants, and resources at risk of dying out.

For this book I traveled across the Southwest and into Mexico—from Fort Huachuca to the Tohono O'odham reservation and the Maya territory of the Yucatán—to remap the border from settler eyes to the footprints of the original and ongoing inhabitants of this region. My own family's footprints crossed Indigenous land spanning Northern Mexico and Texas, the state where they settled. This book aspires to critically assess how a focus on the militarized border as it targets immigrants inadvertently erases the perspective of Native border dwellers. I hope the book can thus deepen an alliance and activist claims to justice across these unsettled borders. The land and its original people have spoken to me, and I've tried to listen with my heart's eye. Like Anzaldúa, I sense a shift in form, a new face and time emerging. A shedding of settler colonial skin. A rebirth, an awakening. And as many Xicana and Indigenous writers, poets, and thinkers have prophesized, *the land is and will be Indian land*.