POETIC OPERATIONS

TRANS OF COLOR ART
IN DIGITAL MEDIA

micha cárdenas

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For May, Judy, and chosen families everywhere

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I must begin by acknowledging that most of the writing of this book took place on "the unceded territory of the Awaswas-speaking Uypi Tribe. The Amah Mutsun Tribal Band, comprising the descendants of indigenous people taken to missions Santa Cruz and San Juan Bautista during Spanish colonization of the Central Coast, is today working hard to restore traditional stewardship practices on these lands and to heal from historical trauma," to quote the UCSC land acknowledgment developed with the Amah Mutsun people. Additional writing took place on the lands of the Duwamish, Sammamish, Tongva, Mississauga, and New Credit peoples. The attempted genocide of native peoples in the Americas is the ground on which the contemporary digital economy is built, and my work tries to account for this fact.

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ALGORITHMIC ANALYSIS

INTRODUCTION

TURN YOUR HEAD and her gender changes. Her exquisitely unruly face, scarlet hair framing her gracefully arched eyebrows, is pictured in a shifting hologram on a neon pink ID card (figure I.1). Depending on the angle at which you look at the Peruvian artist Giuseppe Campuzano's artwork *DNI (De Natura Incertus)*, a manufactured national ID card, the sex marker shifts from "M" to "T," for *travesti*, and the image of his face changes.[1] The work performs the gesture of shifting optics by using a lenticular printing technique. Lenticular prints are used for holograms because they rely on a shifting of the viewer that corresponds to a change of image and can be used to present the illusion of a three-dimensional image. *DNI* is Campuzano's national identity card, a requirement for every Peruvian citizen older than eighteen, digitally modified to display an image of him in drag with a "T" gender marker. The gesture of a forged DNI is additionally subversive in that many travestis do not have access to a DNI card.[2] Campuzano's project was presented at the 2014 São Paulo Biennial (MAL).[3] The title of the artwork uses the initials of Peru's Documento Nacional de Identidad (National Identity Document) and reimagines it with the Latin phrase "De Natura Incertus" (Of Uncertain Nature). Campuzano's *DNI* uses the algorithmic media of identification

I.I *DNI (De Natura Incertus)*, by Giuseppe Campuzano.

cards to simultaneously call into question ideologies of binary gender, national identity, and immigration.

In Campuzano's work, a trans of color survival strategy is made tangible through a poetic subversion of the algorithms of immigration control technologies. The rest of the card is intact, from the background image of a vicuña as a national symbol of Peru to the seemingly random numbers and "<" signs common to passports today that make their data more easily readable by electronic scanners (figure I.2). I alternate gender pronouns throughout the text to linguistically represent Campuzano's gender fluidity, following the method used by Malú Machuca Rose, whom I cite later in the chapter. By digitally cutting and stitching the image of her national identity card with this performative image of her female gender presentation and the letter "T," Campuzano uses art and performance to gesture to speculative possibilities of subversions of gender regulation.[4]

Campuzano's shifting and layered approach to visibility is a powerful introduction to the technologies of representation used by trans people of color. Identification cards such as the DNI are digital technological assemblages, often using bidimensional bar codes and radio frequency identification (RFID) transmitters. Campuzano's intervention into them requires studying these technologies, and forgery techniques, to simulate future possibilities for gender markers and photos on ID cards. The holographic watermark of the word *IDENTIDAD* is also present in Campuzano's *DNI*. The Peruvian DNI cards are designed to be read by algorithmic devices; thus, they can be understood as a physical embodiment of the algorithms that read them. Campuzano's *DNI* creates a fictional example of countersurveillance strategies that go beyond the visual, intervening in the sensor networks that would read the data on

I.2 *DNI (De Natura Incertus),* by Giuseppe Campuzano.

a DNI card to confirm its validity. Algorithmic analysis invites us to look for algorithms—to identify the components and operations that make up the process we are analyzing—to understand them better, where a process can be an artwork, an identity, or a moment of violence. Campuzano creatively hacks identification and migration control algorithms, subverting them through what I call trans of color operations of cutting, shifting, and stitching. These operations are evident from the cutting out of the photos of her face to the shifting of lenticular images, the digitally stitching together of images, and the elaborate costumes she creates for those images. Cutting is an operation that helps identify the parts of an algorithm, but one should imagine cuts not so much as absolute separation as definitions for spaces of intra-action. The parts, or variables, shift over time. Stitching is the operation of attaching various parts together, which is essential to both intersectionality and assemblage, as I expand on in this chapter. The identification and elaboration of these poetic operations—cutting, stitching, and shifting—is central to my analysis and continues later in the chapter and throughout the book. Campuzano is reaching here not for simple visibility or invisibility but for a holographic body that can shift and change with the movement of the viewer. The emphasis on movement is decolonial, as Western modes of knowing emphasize the primacy of the visual over embodied movement. The Cameroonian theorist Achille Mbembe has described the optics of our

necropolitical moment in terms of "hologrammization" to allow for "invisible killings."[5] While Mbembe is speaking of three-dimensional maps of occupied Palestine, the forms of visibility he describes have far-reaching relevance for communities targeted by racial and gender violence worldwide. Trans of color poetics go beyond binaries of visible and invisible, using methods, such as holograms, that rely on movement more than visuality.

In this book, I argue that by using algorithmic analysis to consider artworks that contribute to safety for trans people of color, survival strategies can be perceived, and from these strategies emerges a trans of color poetics: a repertoire of poetic operations. Poetics, whether of language, media, or movement, are the observable meeting points of matter and agency. While for Aristotle poetics described the essential qualities of a good poem, for the Caribbean theorist Édouard Glissant poetics are an expressive material force that flows, with political impact, between people and cultures.[6] Glissant's poetic imaginary begins with the cry of the enslaved African person thrown from a slave ship into the abyss. I build on his poetics and return to them throughout the book. The main focus of this book is the poetics of artwork made by trans people of color working in digital media, a body of work that has been undertheorized. The artworks I discuss all contribute—most explicitly and a few implicitly—to reducing violence against trans people of color by interrupting colonial control of embodiment, modulating perceptibility, fostering transformation, and building solidarity. Trans of color poetics can also be seen in the work of artists who do not identify as people of color or as trans or gender nonconforming whose poetics still increase safety for trans of color communities. An understanding of these poetics can aid work for gender and racial justice more broadly, especially in considerations of race and gender in technology. In this introduction, I describe algorithmic analysis further, while chapter 1 uses algorithmic analysis to describe trans of color poetics in greater detail.

One of the intentions of this book is to expand transgender studies by articulating an alternative genealogy for the field, adding a root to the rhizome. Understanding trans of color experience as far older than the word *transgender*, the book stitches a thread through decolonial theory, women of color feminism, and queer of color critique. Much of the beginning of transgender studies, as a field that has been developing in the US academy for the past thirty years, emerged out of a consideration of the visibility of white transgender people in Western contexts.[7] Sandy Stone's essay "The Empire Strikes Back: A Posttranssexual Manifesto," often cited as the origin of contemporary transgender studies, focuses on trans women in England

and California.[8] Still, Stone cites Gloria Anzaldúa's concept of mestiza consciousness as an inspiration for her idea of post-transsexual. Susan Stryker's book *Transgender History*, while very important to the foundation of the academic field, focuses largely on social movements in the United States. It does chronicle many important moments in the history of US trans of color art and activism, including Marsha P. Johnson and Sylvia Rivera's organization Street Transvestite Action Revolutionaries (STAR), a direct-action organization founded in New York in 1970 that provided food, housing, and support for trans people who had recently been released from jail.[9] *Transgender History* discusses intersectionality and mestizaje as foundational concepts for understanding transgender phenomena.[10] With the publication of the *Transgender Studies Reader 2* in 2013; the later formation of *TSQ: Transgender Studies Quarterly*; and the publication of *Queen for a Day* by Marcia Ochoa, *Black on Both Sides* by C. Riley Snorton, and *Trans Exploits* by Jian Neo Chen, significant effort has been made to expand trans of color scholarship.[11] *Poetic Operations* continues this trajectory, working toward decolonizing transgender studies by focusing on nonwhite trans people, trans people with ancestry outside Europe, people who have histories of colonial violence, and places outside the United States and Europe where one can see gender variance beyond rigid gender binaries. Doing so changes a discussion of the possible uses of digital media for trans justice, in that global South countries continue to have less access to the internet.[12] In addition, doing so troubles any simple definition of trans, because non-Western practices that are similar to transgender, such as two-spirit and travesti, rely on ontologies that defy Western conceptions of a single, unitary, separate self.[13] Destabilizing the persistent hegemony of global North countries over people in the global South by destabilizing the terminology through which those people's gendered, racialized bodies are understood is a method of decolonization. Trans of color poetics attempt to do this by destabilizing the concepts of trans and transgender by including gender-non-conforming people such as travestis, stitching together a new poetic formation based in global solidarity.

Campuzano's trans Latinx futures are imagined through his own travesti practices of shifting his appearance, showing different images of his face on the two alternate images on his speculative national ID card. Campuzano's usage of the lenticular is a reclaiming of the ability of the travesti to inhabit multiple genders, which he reads in Incan mythology. In an interview with the performance studies scholar Lawrence La Fountain-Stokes, Campuzano describes the travesti as "a transformative postidentity that replaces clean racial and racist lines with superimposed ethnicities, from the perspective

of feminist and postcolonial studies."[14] In place of a rigid concept of racialized gender identity, Campuzano offers superimposition and multiplicity activated by movement:

> We can trace a transvestite genealogy between the androgynous ritual Moche and the Inca "men disguised as women." . . . The connection between the ritual androgyne and transvestite dancers as cultural mediators; in the hair, from sacred indigenous and colonial offerings to the mode of subsistence for the modern transvestite hairdresser; in the feathers shared by the Inka Manco Capac of the man-woman caste, the colonial androgynous archangel and the contemporary transvestite showgirl. Fragmentary thought and supposition as a challenge to a supposedly lineal, continuous and progressive knowledge. The transvestite as a revolution of the pretenses of originality and unity determined by dominant history and ethics.[15]

Campuzano's usage of "travesti" imagines a deep precolonial history of beings with the power to change their genders at will. The travesti's ability to shift between genders challenges the Western conception of identity, where one must have a single, static body and gender. It also challenges US-centric conceptions of transgender that would exclude transvestites or even see the term as derogatory.

While the word *travesti* is often translated as *transvestite*, as it is in this interview, that translation has been disputed by scholars who claim that the word is untranslatable.[16] Writing about Campuzano's usage of the word in her artwork, Malú Machuca Rose describes travesti as a methodology and an epistemology in their essay "Giuseppe Campuzano's Afterlife."[17] Rose claims travesti as their own identity and describes travestis as *curanderas* (healers) and *brujas* (witches). Campuzano, describing his *Museo Travesti del Perú* (*TMP*) project, says that it "travestida de museo, para travestir al museo" (it *transforms* into a museum in order to *travesti* the museum). La Fountain-Stokes translates this as "it cross-dresses as a museum in order to cross-dress the museum."[18]

Campuzano is using "travesti" the way that "trans" and "queer" are used as verbs. Here the grammar is important. "Travesti" becomes a verb; it is used as an *operation*, akin to saying "to queer" or "to trans." This specifically trans of color methodology of travesti could be read as describing the act of cross-dressing the museum, or of transforming the museum through healing rituals of performance. In the oft-cited introduction to the "Trans-" issue of *Women's Studies Quarterly*, Susan Stryker, Paisley Currah, and Lisa Jean Moore

ask, "What kinds of intellectual labor can we begin to perform through the critical deployment of 'trans-' operations and movements?"[19] They argue for a usage of "trans" as a conceptual operation similar to the way that "queer" has been used as a conceptual operation when writers say they are "queering." Campuzano's "travesti" is an example of trans of color poetics that contain the operations of cutting, shifting, and stitching while still having their own specificity, including a larger repertoire of gestures. I propose that this process of identifying operations is part of a method I call algorithmic analysis.

Algorithms do not require digital technology and were invented far earlier than digital computers. They are similar in form to both recipes and rituals. Algorithms are not new. The word *algorithm* is a derivation of the name of the scholar Muhammad ibn Musa al-Khwarizmi, who lived from 780 to 850 AD and is credited with inventing algebra in his book *Dixit algorismus*.[20] His name was translated from Al-Khwarizmi in Persian to Algorithmi in Latin, which later became "algorithm" in English.[21] He proposed methods, algorithms, for solving calculations with uncertain quantities.

By starting with a list of parts and adding a list of operations, instructions for how those parts interact, one can create an algorithm. When I speak of algorithms, I am talking about code. I started writing algorithms in the fourth grade, then later studied computer science for my bachelor's degree and worked as a software engineer for five years. But to understand algorithms, you do not need to be a programmer. You can also understand an algorithm as a recipe. A recipe has ingredients and steps, just as an algorithm has variables and instructions. Think of the algorithm for cooking chicken: get the chicken, oil, spices, and a pan. Preheat the oven. Oil the pan. Put the chicken in the pan. Spice the chicken. Put the pan in the oven. The ingredients in the recipe correspond to the variables, and the steps correspond to the instructions, lines of code that describe how the variables are related. Throughout this book, I demonstrate three methods of algorithmic analysis: the identification of operations and operators, a method of breaking down a problem into its basic elements and instructions; the analysis of existing algorithms in media and technology, including reverse engineering; and the creation of new algorithms, in functional computer programming languages, pseudocode, or code poetry. I propose that algorithms can be useful for the study of arts and humanities, deepening our ability to theorize social formations, including race and gender. Algorithmic analysis examines algorithms, uses algorithmic methods such as identifying components and actions, and uses algorithms as tools for analysis and creative practice. The goal of algorithmic analysis is not to attempt to describe artworks with totalizing preci-

sion, but to see how algorithms can help to better understand art and poetry, as well as the social dynamics embodied in artworks. Adding a consideration of algorithms present in a work does not displace other ways of analyzing that work but adds to the many methods of analysis available to those engaging in critical analysis.

In his study "Symbols in African Ritual," Victor Turner defines ritual as "a stereotyped *sequence of activities* involving gestures, words, and objects, performed in a sequestered place, and designed to influence preternatural forces on behalf of the actors' goals and interests."[22] Similarly, algorithms include a set of instructions that are repeated in order to function. Algorithms may seem to influence preternatural forces when they accomplish tasks beyond human capacities, such as rapid data processing or recalling data from the internet far beyond the reach of a single human memory. Often rituals include specific ingredients, such as a wedding ring and wedding dress in the Western ritual of marriage. Similarly, algorithms often require specific input data to run properly. These rituals are culturally specific algorithms. Consider how a Jewish wedding might include the ingredient of a glass to be broken and a *chuppah* (wedding canopy). Wedding rituals also include a series of steps to be performed in order, such as a procession of the bride, the saying of vows, and an appeal to a supernatural power to bless the union. Performance studies scholars have considered ritual extensively to understand performance as acts that gain meaning through repetition. Computer scientists regularly describe what algorithms do with the verb *perform*.[23] In this book, I extend the precise ways that algorithms are used in computer science to a more indeterminate, poetic application. My aim is to challenge the way that algorithms have been limited by some fields, such as software engineering, which often ignore nonbinary genders and intersectionality, and largely ignored by other fields, such as trans studies and many humanities fields.

Poetic Operations learns from women of color feminism to articulate an algorithmic method of analysis and propose new operators of thought and action to work for the survival of trans people of color. Algorithmic analysis learns from and extends intersectional and assemblage models of thinking from the women of color and queer of color thinkers Kimberlé Williams Crenshaw and Jasbir Puar, respectively. The algorithmic model is intended not to replace intersectional or assemblage models, but to enhance and add to them. One of the largest contributions of women of color feminism is Crenshaw's concept of intersectionality, which states that by looking at the intersections of axes of oppression, formerly unseen forms of violence are revealed.[24] One can understand intersectionality as an algorithm, originally

imagined with two elements—race and gender—and the operation of simultaneous coexistence in the same space of a body. It is important to note that the trans studies scholar Simon D. Elin Fisher has written about how Crenshaw's formulation of intersectionality was informed by Pauli Murray's concept of *Jane Crow*, showing that trans of color scholarship is not a recent development, but a constitutive part of the history of women of color feminist thought.[25] Murray was a gender-non-conforming Black journalist and activist who wrote in 1944 about the interactions of white supremacy and male supremacy.[26]

Puar has proposed assemblage as an extension of intersectionality to account for "forces that merge and dissipate time, space and body against linearity, coherency and permanency."[27] While Crenshaw used a mental image of an intersection of lines to understand the violence black women face, Puar applies Gilles Deleuze and Félix Guattari's concept of assemblage as a model for theorizing South Asian queer subjects.[28] Puar points to the original meaning of the word *assemblage*: "The original term in Deleuze and Guattari's work is not the French word *assemblage*, but *agencement*, a term that means design, layout, organization, arrangement, and relations."[29] An assemblage can be envisioned as a mental figure of a collage, an arrangement of parts and their relations. I am proposing that algorithms can be, as intersectionality and assemblage have been, a powerful way of figuring complex processes of identity and oppression. Just as intersectionality and assemblage provide important mental models for theorizing oppression, violence, and resistance, algorithms provide another model, one with infinitely more operations and elements. If one understands intersectionality as a list of axes of identity, and their relation as one of coexistence in a single location, or person, that is one model that can be described as an algorithm with an operation of simultaneity. Assemblage addresses the ways that conceptions of identity can be thought of as rigidly divided, instead offering a model of a system or machine with many parts in movement and many kinds of relation among the parts. This can also be expressed in algorithmic analysis, as the elements of algorithms can be variables that can have many relations expressed by different operators.

The category of trans people of color is complex and in motion, like the digital poetics I write about in this book. I use the concept *trans of color* here to refer to a grouping of experiences that is itself in a constant process of shifting. While there are many people who identify under the acronym QTPOC (queer and trans people of color), each of these categories is still contentious and rife with its own political contradictions. My motivations to focus on

the formation "trans of color" are multiple. One motivation is to continue the theoretical trajectories laid out by queer of color scholars, such as José Muñoz and Roderick Ferguson, while exploring areas of trans of color experience for which their work laid the groundwork. Another motivation is to continue the ongoing work of women of color feminism and challenge feminism to create justice for trans people previously excluded by feminists. In her deeply important essay "The Transfeminist Manifesto" (2016), Emi Koyama describes how many feminist spaces violently refused entry to trans women.[30] While there has been important scholarship on the ways that trans and cisgender women worked together in the 1970s, my focus here is on establishing a longer genealogy of trans activism and embodiment by establishing a through line from centuries-old practices of travesti and two-spirit people to gender-non-conformity in people of color today.[31]

Another reason I am using the concept of trans of color, while including modes of being such as two-spirit or travesti (which may be considered other than trans), is to trouble the category of trans by showing its internal contradictions and violence. In *The Ruptures of American Capital*, Grace Hong writes "the category 'women of color' completely disorganizes the very idea of a stable and knowable identity," which also resonates with the categories that make up trans people of color.[32] In this book, I focus on self-identified Latinx, Black, Asian, and Indigenous artists who identify as trans, nonbinary, travesti, or two-spirit. This is not an attempt to be representative of all trans of color artists.

I understand the term *people of color*, like *women of color*, to be a political identification, not a biologically or geographically determined assignment. The term originated from a group of Black women at the National Women's Conference in 1977 who proposed the Black Women's Agenda and were willing to expand their proposal to build solidarity with other women present, including Asian, Indigenous, and Latinx women.[33] There are many people who might visually appear as a person of color who do not identify as a person of color or act in solidarity with the project of women of color feminism. Many Indigenous and Latinx people have skin tones that appear to be white and European, due to histories of colonization. I understand people of color to be defined by having histories of experiencing colonial violence that continue to this day in the forms of racialized, gendered violence.[34] Nevertheless, it is still helpful to identify distinctions in color and hair and body types because people who are more easily visibly identified as part of an oppressed ethnic group face more violence than those who do not. Among trans people, Black trans women are repeatedly the group that is the most targeted

for murder. People who often pass as white, such as myself, experience the privileges associated with whiteness, including safety and economic gain, when they are perceived as white. There is much to say on these distinctions, and some activists have adopted the acronym QTBIPOC to acknowledge that Black and Indigenous peoples in the United States experience different levels of violence and may not want to be grouped together with the broader term *people of color*. As an action, rather than an inherent category, we could understand the terms *people of color* and QTBIPOC as algorithms in themselves or as shifting placeholders to be mobilized in larger algorithms.

Latinx is a category within the category of people of color, which is vast, incorporating a multitude of body types and cultures. The word *Latinx* is in flux, a recent adoption that moves beyond the gendered binary of the Spanish language. Spanish words ending in *a* or *o* are gendered feminine and masculine, respectively. To avoid this, activists have taken up the word *Latinx*, which replaces the *a/o* with an *x*. This formulation also uses an algorithmic syntax in which *x* can be understood to mean anything, like a variable in algebra or in computer code. As an assemblage, one might imagine Latinx to refer to South American and Central American peoples, their diasporas, and the relations among them, or to Latina, Latino, and nonbinary Latinx people. Yet if we understand Latinx as an algorithm that can be expanded into permutations of Latin-, with anything after it, we might imagine Latinx to include Latina, Latino, Latin@ (an earlier formation attempting to subvert the binary limitations of the Spanish language), Latine (a recent suggestion to follow Latinx as it is more easily pronounceable by Spanish speakers), and other words yet to be imagined.[35] The openness of variables as placeholders allows for future possibilities, as well as the future ways that algorithms may be performed.

The term *transgender* originates in Western medical definitions of transsexuality and can be a colonial imposition on non-Western trans subjects and people of color in Western countries.[36] While the word *transgender* was originally used in a medical context, it was soon taken up by activists in resistance to the term *transsexual*, which was seen as medicalizing.[37] Many people have adopted other terms, such as *trans* and *trans**, to refer to a broader coalition of identities grouped around experiences that might be described as transgender. Trans* (trans with an asterisk) uses a digital command line syntax to indicate trans-anything: transgender, transsexual, nonbinary, and more. In this term we can see how the logics expressed by algorithms describe the multiplicity of embodiment expressed in forms of movement that trans people of color have been living for centuries. When an asterisk is used

in a command line—such as "*ls trans**" in MacOS, iOS, or Android OS—it means "list any files whose names begin with 'trans' and are followed with anything else." Here the asterisk operation is one of expansion and a way of indicating uncertainty. In this I see a reflection of the multiplicity of embodiments that have come together in coalition in the contemporary trans movement. Further, I understand the openness indicated by the asterisk to indicate a possible futurity in which other forms of embodiment are also referenced by trans*. The asterisk can also indicate a footnote, as Christina Sharpe describes "the asterisked" human as the human left behind, yet she also sees *trans** as an expansive term. She states, "The asterisk speaks to a range of configurations of Black being that take the form of translation, transatlantic, transgression, transgender, transformation, transmogrification, transcontinental, transfixed, trans-Mediterranean, transubstantiation (by which process we might understand the making of bodies into flesh and then into fungible commodities while retaining the appearance of flesh and blood), transmigration, and more."[38] Her description of the asterisk signifying transformation resonates with the operation I have called shifting, and I return to discussions of fungibility in relation to shifting in chapter 3. The "more" she references points to the unknown potential referenced by the command line asterisk. Sharpe uses the asterisk to link the excess that is Blackness to trans forms of embodiment, linking racialization and gender non-normativity in ways I explore through trans of color poetics. Beyond that, the openness of the asterisk points to the ways that trans studies has expanded beyond a concern with only transgender or transsexual experiences, out to the many vectors that require consideration in the ongoing construction of those categories, such as species boundaries, colonization, slavery, and racial capitalism. In this book I most often use the word *trans*, without the asterisk, to refer to people who feel that the gender they were assigned at birth does not always correspond to their lived gender, or their desired gender. This understanding draws on Strkyer's statement that the term *transgender* names "any and all kinds of variation from gender norms and expectations," a capacious definition that reflects her commitment to expanding transgender studies beyond its US-centricity.[39] I understand this expanded definition to resonate with the concept of trans* without having to indicate the asterisk in every usage. Still, the asterisk in *trans** can refer to trans of color, calling attention to the fact that we cannot theorize the multitude of trans* phenomena without taking into account how race is a technology that reifies and disrupts gender along colonial lines.

The asterisk in *trans** denotes a process, an action that must take place for the word to be given meaning. Throughout this book, my focus is on movement, gesture, operation, rather than on fixed categories. Writing in *TSQ*, Eva Hayward and Jami Weinstein write that trans* is "the movement that produces beingness"; it is "not a thing or being, it is rather the processes through which thingness and beingness are constituted."[40] With this process-oriented ontology in mind, *Poetic Operations* focuses on the movements, the operations at work, in trans of color poetics rather than on rigid categorizations. Algorithms are processes made up of operations, with elements in relation, and they are the focus of this study. Hayward and Weinstein describe the operation of the asterisk in *trans** as "the expressive force *between, with,* and *of* that enables the asterisk to stick to particular materializations."[41] The expressive force is the poetics that move with powerful effect in the expanded space opened up by the asterisk operator in trans*.

The profoundly interdisciplinary work of Gloria Anzaldúa is another important precursor for trans of color poetics, although she is often left out of narratives of the history of transgender studies. The original title of Anzaldúa's first book—"Borderlands: The New Mestiza = La Frontera"—reads like a simple algorithm, poetically conjuring relations among the English-speaking spaces of the border, the Spanish-speaking spaces, and the mestiza woman as the medium between them.[42] In the preface to *This Bridge We Call Home*, a follow-up to the important women of color feminist anthology *This Bridge Called My Back*, Anzaldúa writes, "For positive social change to occur we must imagine a reality that differs from what already exists."[43] Her *consciencia de la mestiza* (mixed-race consciousness), "a consciousness of the Borderlands," is linked to her description of being "half and half, mita' y mita' . . . both male and female . . . having an entry into both worlds."[44] Her work mixes English, Spanish, Nahuatl, poetry, history, theory, and personal narrative, using language as a technology to stitch together many passions. She describes shifting between states as an important part of her writing method. Similarly, this book includes theory, poetry, first-person accounts, source code, video, and interactive elements. I shift among writing modes throughout the book as a way to write theory poetically and challenge the assumptions of academic writing. In my earlier book *The Transreal*, I propose that transgender experiences of shifting can inform how viewers understand media art that spans multiple realities, including augmented reality, alternate reality, and mixed reality artworks.[45] Anzaldúa's description of creating new realities resonates with my formulation of transreal aesthetics as political aesthetics that cross

multiple realities. I return to the transreal in later chapters. Interdisciplinary, performative, cross-genre writing, a mode heavily used by Anzaldúa, is an important part of my method, because the subject of this book is deeply personal to me.[46]

While algorithms are not new, what is new is the massive scale at which they have been deployed and adopted into the everyday lives of so many people around the globe. The ways that algorithms shape our lives today have come to widespread attention due to media coverage of Russian hacking of the 2016 election. To date, it has come to light not only that Democratic National Committee servers were hacked, but social media also was widely exploited to influence the campaign.[47] The Cambridge Analytica case allowed the public to see how a single firm, working with former Trump advisor Steve Bannon, was able to use Facebook's application programming interface (API) to access the data of millions of Americans.[48] The project sought to influence emotions and voter outcomes and effectively turned Facebook into Bannon's psychological warfare tool.[49] Still, the damage that algorithms have done to democracy are only part of the harm that has been caused by their misuse, which includes everyday acts of discrimination literally coded into objects and software used by millions.

Researchers including Kate Crawford and Joy Buolamwini have published articles in the *New York Times* about how racism is encoded into facial recognition systems and artificial intelligence (AI) image processing systems that have been widely deployed in many countries.[50] These scholars, along with scholars such as Safiya Umoja Noble and Virginia Eubanks, have articulated the violence of algorithms.[51] My intention is not to eschew or ignore that violence. Describing her method as Black feminist technology studies, Noble shows how search results benefit corporations and harm women of color.[52] She describes in great detail how top search results can be changed by paid advertising and search engine optimization methods that exploit Google's algorithms, leading to a lowest common denominator effect for sorting results by popularity and sensationalism. One of the images in her book shows a screen shot of a Google search the day after the election of Donald Trump with a top result pointing to a fabricated news site claiming that he won the popular vote, which is false.[53] The work of these scholars applies important intersectional critiques to the algorithms that infiltrate our daily lives. Still, I refuse to cede the power of algorithms to oppressive forces. It is precisely because of the violence that algorithms inflict on our lives that it is urgent to understand them, and to be able to use them for analysis and expression. Critique is not enough.

My usage of algorithms in this book is not intended to be positivist or re-ductive of unquantifiable phenomena into calculable numbers and formulae. Many of the arguments in this book will be unacceptable to computer sci-entists who understand algorithms as being defined by their predictable out-comes and lack of ambiguity. Instead, my offering here is to say that algorithms can be a useful model for thinking through issues relevant to artists and hu-manists, as well as for instructing computer scientists about how trans people of color are, and have been, using algorithms for their survival for centuries.

After the visibility of trans people of color increased in the United States in 2014, the violence seemed to worsen dramatically. The number of mur-ders of trans people grew in 2015 by 50 percent. While fourteen transgender people were murdered in the United States in 2014, twenty-one were mur-dered in 2015, and these numbers reflect only the documented cases.[54] By the time Trump was elected in 2016, the number of murders of trans people was higher than it ever had been, up to twenty-seven.[55] The National Coalition of Anti-Violence Programs (NCAVP) reported, "As of August 23, 2017, NCAVP has recorded reports of 36 hate violence related homicides of LGBTQ and HIV affected people, the highest number ever recorded by NCAVP," with transgen-der women and people of color experiencing the highest rate of violence.[56] Transgender Europe reports that, globally, more than two thousand trans people were murdered from 2008 to 2016.[57] The continued increase in mur-ders of trans women of color underscores the deep need for political strat-egies other than simple visibility or invisibility, which the anthology *Trap Door*, referring to the trap of visibility, addresses.[58] While the global situation is dire for trans people of color, their continued survival is a demonstration of powerful survival strategies.

Poetic Operations holds that the survival strategies of trans and gender-non-conforming people of color can serve as a powerful basis for both theory and artistic practice. This book offers alternative proposals for responding to a situation of violence that seems to be getting worse daily but that is, in fact, a continuation of centuries of colonial violence, as the editors of *Trap Door*—Tourmaline, Eric Stanley, and Johanna Burton—argue.[59] One can see a parallel between a perceived increase in violence against trans people and the increase in attention to their murders. In contrast to Katy Steinmetz's nar-rative of increasing acceptance for transgender people in her *Time* magazine cover story "The Transgender Tipping Point," the actress Laverne Cox has described the present moment as a "state of emergency for trans people."[60] Cox's description of the situation for trans people of color resonates with Mbembe's concept of necropolitics. Mbembe describes how governments

work today as necropolitical because they no longer promise to ensure life for citizens; they also guarantee death for those deemed "Other" based on the ways that contemporary colonial capitalism is a continuation of slave plantations and colonies. Cox's statements express how the lived experiences of trans people of color demonstrate Mbembe's formulation.

The frequency of murders of trans women and the fact that the murders are often ignored indicate the importance of Mbembe's model of necropolitics for understanding trans lives. Under necropolitics, the state decides who will die, and nonstate actors often carry out the killing.[61] In "Trans Necropolitics," Jin Haritaworn and C. Riley Snorton argue that "visibility, legibility and intelligibility structure a grid of imposed value on the lives and deaths of black and brown trans women" and that, in certain instances of antiviolence activism, "trans women of color act as resources—both literally and metaphorically— for the articulation of visibility of a more privileged transgender subject."[62] Their claim underscores the need for more in-depth analyses of race within transgender studies, as well as the importance of contributing to the agency of trans women of color to control their own visibility and other material conditions, such as their economic position. *Poetic Operations* focuses on contemporary trans of color artists using digital technologies, in sharp contrast to the frequent occurrence of studies that refer only to trans people who have died. In this book, I focus on these artists' brilliant engagements with technology, language, movement, and embodiment.

Poetic Operations works to decolonize the digital by understanding the communicative capacities of digital technologies as an outcome of the settler colonial socioeconomic support structure of the United States. My project *Local Autonomy Networks* (*Autonets*), which I describe in chapters 2 and 5, attempts to make those capacities available through other means that do not rely on the same violent foundations. *Autonets* was a project I created to build abolitionist networks for safety for queer and trans people of color, starting with wearable electronics such as bracelets and hoodies, and using those prototypes in workshops and performances. Another decolonial method at work here is to reveal the communication methods of the body that predate digital technologies and show how they are embodied in current computing and communication metaphors.

This book learns from Chela Sandoval's methodology of the oppressed and the *particle group*'s science of the oppressed, both of which center oppressed subjects as agents of knowledge production in a process of anticolonial struggle. In *Methodology of the Oppressed*, Sandoval links her concept of differential consciousness, the ability to shift between "oppositional forms

of consciousness," to both trans people and the digital when she says, "The differential maneuvering required here is a sleight of consciousness that activates a new space: a cyberspace, where the transcultural, transgendered, transsexual, transnational leaps necessary to the play of effective stratagems of oppositional praxis can begin."[63] Her grouping of trans and the digital together, in a Chicana feminist theory of decolonial social change, opens the way for a trans of color poetics that can use digital poetic gestures for the survival of trans people, in resistance to colonial drives to eradicate those who can move between genders. The *particle group*, a new media artist collective I have collaborated with, articulated science of the oppressed by reimagining science in the interests of oppressed people.[64]

Scholars writing about digital media art have often left the social dimensions of the work undertheorized, but this project is aligned with theorists engaging directly with issues of race, gender, and sexuality. New media criticism by Wendy Chun and Lisa Nakamura brilliantly engages intersectional analyses of race and gender, even though these concerns are often still marginalized in a larger field of digital studies. Queer new media critique is emerging in essays published by Zach Blas and Kara Keeling, who names this new configuration in her essay "Queer OS," citing a historical lack of such scholarship.[65] These feminist and queer approaches are addressing areas of concern that have been left unaccounted for by well-known digital scholars who eschew discussions of embodied difference in digital media, such as Lev Manovich. Part of my intent in using algorithmic analysis to describe trans of color poetics is to engage with media studies from the perspective of a trans person of color and to shape that intervention around the concerns of trans people of color, including, but not limited to, safety, violence, hypervisibility, surveillance, migration, incarceration, and access to health care.

Practice-Based Research

Poetic Operations engages in a materialist approach to understanding social change that begins with trans people in movement and uses their experiences to imagine more just futures. My approach is a hybrid of theory and practice, motivated by art and activism as much as by theory. Discussing my own practice-based research projects developed from 2011 to 2015, including *Autonets* (2011–14), *Pregnancy* (2015) and *Redshift and Portalmetal* (2015), as well as media made by other artists and authors, I consider the strategies for social change prototyped by media art, speculative design, and science fiction. Black female androids, communicator bracelets, and alien landscapes

provide visions of possibility beyond the violence of the present moment. I discuss Janelle Monáe's androids in chapter 3 and communication bracelets and alien landscapes in my own work in chapters 4 and 5. Walidah Imarisha writes in *Octavia's Brood*, "Whenever we try to envision a world without war, without violence, without prisons, without capitalism, we are engaging in an exercise of speculative fiction."[66] Imarisha's joining of political and cultural work continues the path of women of color feminism. *Poetic Operations* also takes inspiration from the media justice movement made visible at the annual Allied Media Conference (AMC), whose politics aim to be visionary, as opposed to grievance-based, and who avow, "We presume our power, not our powerlessness."[67] I see this mode of working toward building alternatives instead of only focusing on critique as central to my methodology.[68]

The deep concern with safety and survival in these artworks is a kind of materialism, a move away from pure abstraction in art. To say this is materialism may seem at odds with how materialism has been used by media theorists such as Sarah Kember and Joanna Zylinska, whose book *Life after New Media* includes very few mentions of race or racial categories. Kember and Zylinska look to Karen Barad's materialism as a way to move beyond identity categories that have been tied to demands for representation. Yet Barad's move toward considering the agency of matter does not make concerns about race and gender less important. On the contrary, Barad states that their concern is with developing a theory of matter that reflects the social and political reality to create change. Discussing gender performativity as a process of materialization, Barad states, "What is at stake in this dynamic conception of matter is an unsettling of nature's presumed fixity and hence an opening up of the possibilities for change."[69] Barad has proposed a relation between identities based on these principles that she refers to as "intra-action," describing agency as co-constitutive between people and objects.[70] Their concept of intra-action describes a world where matter is not fixed but is changing over time in relation to the matter around it. As Barad states, the matter in our bodies is in a constant state of change. While trans people of color in digital media make shifting visible as a survival strategy, it is also an existential condition for everyone. Like the variables in an algorithm, we are in flux within a set of parameters. With this in mind, my concern is to understand the material factors facilitating the murder of trans women of color and to work toward preventing those murders by analyzing how digital media is used for violence and for survival.

While trans women of color have been a primary target of violence among LGBTQ communities, they are still left out of a great deal of scholarship. Yet

simply writing about trans people of color is not enough to improve their situation. Action is also necessary. This book questions the division between theory and practice, between high theory and activism, and between the academy and the community by working directly with affected communities and understanding activism as always already engaged in theorizing. My aim as an interdisciplinary scholar is not to provide authoritative answers based on reading all the works in a given discipline so much as it is to ask questions, make connections, and create concepts.

Practice-based research is a form of research driven by creating art, media, performance, networks, or community engagement instead of relying only on close study of archives of text or media. For example, in his essay "Gaming the Humanities," Patrick Jagoda describes how the creation of digital games can be a rich site of experimentation for practice-based research in digital humanities.[71] *Poetic Operations* engages modes of practice-based research that include community-based design, community-based art, and performance-led research, which are well suited to the needs of trans politics and strive to go beyond representation. Community-based design has been described powerfully by Una Lee as a process in which community members, not just designers, have input into the design of technologies that impact them, a process I used in both *Autonets* and the *Transborder Immigrant Tool* (TBT). Lee is a co-organizer of the AMC and creative director of the And Also Too design studio in Toronto.[72] Community-based art practices involve dialogical processes of conversation, as described by Grant Kester, which are very present in my work on *Autonets*.[73] The artist collective Blast Theory has described a method of "performance-led research in the wild," in which artistic questions drive technological research, which resonates with my research practice.[74] Theorists such as Angela Davis, Dean Spade, and Colectivo Situaciones write from their experience of engaging in activism.[75] Learning from their work, this book emerges from a sustained practice of social engagement. My own art projects described in this book have addressed many different audiences during the practice-based research that led to this writing. The workshops I facilitated were intended for members of affected communities. The performances I cocreated were intended for numerous audiences, including art audiences and public audiences on streets. This book is intended to engage academic audiences by drawing on histories of women of color feminism to theorize trans of color poetics, while also hoping to inspire activists, artists, and anyone interested in trans of color lives to take action.

Poetic Operations resists the linear form of a book. The reader will note the frequent shifts in register in this book from first person to third person.

Because it is based in practice-based research, I often write from my experience of movement, performance, writing code, and creating electronic objects. Rather than separate these out, they are woven through each chapter, an integral part of my thinking. Chapter 4, "The Experience of Shifting," addresses how I see experience as a basis for creating art and theory. In chapter 4, I write about the digital games *Mainichi*, by Mattie Brice, and *Redshift*, which are both based on personal experiences of shifting one's appearance or location to avoid transphobic violence. Betsy Wing, the translator of *Poetics of Relation*, writes of Glissant, "The structure of *Poetics of Relation* is based more on associative principles than on any steady progress toward irrefutable proof; it is an enactment of its own poetics."[76] Similarly, this book contains cuts to media, frequent shifts, and the stitching together of concepts into a network of relations.

Algorithms also are not always linear; they can contain flow control statements that include event handlers, function calls, and break statements. In programming languages based on the C language, such as C++, a function is a named group of instructions. Functions can be activated by referring to their names. Events, such as a mouse click, can be linked to specific functions called event handlers, creating nonlinear flows through a particular piece of code.[77] A loop is a set of instructions that repeats until a certain condition is met, but by using the keyword *break*, code can force an exit from a loop.[78] I encourage readers to interrupt their reading when URLs for the online companion are mentioned, as the supporting media for this project are extensive and consisted of years of research creation. This book's digital components are available at http://scalar.usc.edu/works/poetic-operations.

The use of the Scalar digital authoring platform allows performance documentation to be featured alongside this text. As the project includes technological artifacts, performances, and workshops, the materials presented in the book include text, source code, photos, video, sound, and technical diagrams. In this way, the form of the project embodies the interdisciplinary approach that *Poetic Operations* takes to understanding trans of color art in digital media while also revealing the social and cultural implications of trans of color lives. The creation of this book's digital companion involved writing Cascading Style Sheets (CSS), HyperText Markup Language (HTML), and JavaScript code and working with database systems and digital video, image, and sound editing software. Encompassing both the print book and the online companion, this book is in itself an act of trans of color poetics, in both the language and the form it takes. Readers should understand that

the media in the companion are as important as the text for experiencing the fullness of the arguments in this book.

The projects I describe here emerged through a process of exchange, overlap, and feedback among reading, performances, workshops, writing, presentations, and technological creations in hardware, software, and wearable electronics. My research questions were formed in—and continue to evolve through—the mixing of these practices. While my work explores intersections of theory and activism, performance and media art are also important to my methodology as parameters that provide direction, as archives for inspiration, and as sites for presentation.[79]

Operations: The Cut, the Stitch, the Shift

Poetic Operations is organized in a way that strives to enact the poetics it describes. Each chapter uses trans of color poetics to stitch together theory and practice while shifting between first-person and third-person registers when discussing artworks. The introduction begins by proposing the method of algorithmic analysis, which is used throughout the rest of the book. Using algorithmic analysis, chapter 1 proposes trans of color poetics as seen in the poetry of trans women of color, as well as the conceptual installation artwork of Giuseppe Campuzano. Chapter 2 goes more deeply into trans of color poetics by using the method of algorithmic analysis of identifying specific operations. The cut is the first operation introduced because it is the operation that allows one to break a problem into smaller components and operations. Once the operation of the cut is demonstrated, the operation of the shift is introduced in chapter 3 and elaborated in chapter 4. This operation provides a fundamental building block for writing algorithms, the variable. From there, chapter 5 introduces the stitch, which allows one to combine variables into algorithms, extending out beyond individual bodies. In the conclusion, I consider the contemporary relevance of algorithms in light of recent studies of algorithmic bias, digital redlining, and the emerging forms of visionary trans of color activism. The overall structure of the book, then, enacts algorithmic analysis in the way that it is organized by following the logic of writing an algorithm.

Trans of color poetics are perceptible in the gestures of the cut, the shift, and the stitch. Chapter 1 establishes the theoretical foundation for trans of color poetics, arguing that poetics can be part of the struggle for decolonization in that they can contribute to the survival of people harmed by colonial processes by transmitting survival strategies and building affective networks

of care. The chapter begins and ends with the trans women of color poets Esdras Parra and Kai Cheng Thom grounding trans of color poetics in linguistic poetry to extend it to media and movement in later chapters. The chapter also considers Campuzano's *El Museo Travesti del Perú* in more depth to reveal a poetics of survival used by travestis. The differentiation between trans and trans of color is deepened in this consideration of travestis and two-spirit people via Campuzano's and Qwo-Li Driskill's descriptions of decolonial poetics with which trans of color poetics is in dialogue.

Chapter 2 applies the cut to describe methods for decolonizing digital technologies through collaboratively developed performances in public space that create embodied networks. The cut corresponds to the first method of algorithmic analysis: that of taking a problem and breaking it down into its components and operations. The chapter discusses *Autonets*, a project to create wearable communication networks for trans of color safety, inspired by the prison abolition movement, that do not rely on prisons, police, or corporations. In *Autonets* I created working prototypes of mesh network clothes and accessories that used signal strength to detect the proximity of other *Autonets* garments and display it to the wearer (figure I.3). I use the operation of the cut to analyze a performance of *Autonets* in São Paulo, Brazil.

Chapter 3 proposes a new operator of trans of color poetics, the shift, a form of movement in which one transforms one's shape, color, or location. The shift provides elements such as variables, which are not rigidly defined as static entities, that can be combined in algorithms. A body in the process of shifting can be understood to parallel a variable in an algorithm that can take on different values. The chapter argues that shifting is a form of movement particularly relevant to necropolitics, where simple visibility is replaced with modulation, sensors, AI computer vision algorithms, invisibility, and holograms. The chapter demonstrates shifting through the performance of the Black gender-non-conforming artist Janelle Monáe and the music videos for her science fiction concept album *Metropolis*. Considering examples that make shifting perceptible, including Monáe's music videos, as well as examples of my code poetry (poetry that uses the syntax of computer code as part of its poetics), I show how the shift can be used in algorithmic analysis. Shifting demonstrates how trans people of color were using algorithmic methods long before digital algorithms codified them.

Chapter 4 argues for the value of personal experience in trans of color theory through the example of games that use a first-person form of storytelling to portray the daily lives of trans people of color. Digital games are the paradigmatic example of algorithmic media. Direct experience can be a powerful

I.3 Jovan Wolfe of Gender Justice LA wearing *Autonets* mesh networked hoodie designed by micha cárdenas and Ben Klunker. Photograph by micha cárdenas.

basis for creating digital games about the survival of trans people of color. Personal games can bring audiences into those experiences—not to build empathy, but to work toward solidarity. Brice's *Mainichi* is analyzed in the chapter, a game about the daily life of a Black trans woman. Seeing the problem with audiences' attempts to gain empathy by playing the game, sidelining her ideas and focusing only on her suffering, Brice used *Mainichi* in an embodied performance to make players more directly implicated in their interactions with her.[80] Chapter 4 also considers the value of embodied experience from the point of view of a light-skinned, mixed-race Latinx trans woman of color, my own point of view, in my online game *Redshift* (figure I.4). I describe the poetic choices I made in the game to share my experiences in a way that blends with science fiction elements to allow audiences to consider choices I have to make while still protecting my own boundaries. In addition, I discuss the live performance of *Redshift* I created in collaboration with the two-spirit Black Cherokee performance artist Rayvn Wngz and how the performance brought algorithmic poetics to life through a collaborative gesture of decolonial solidarity.
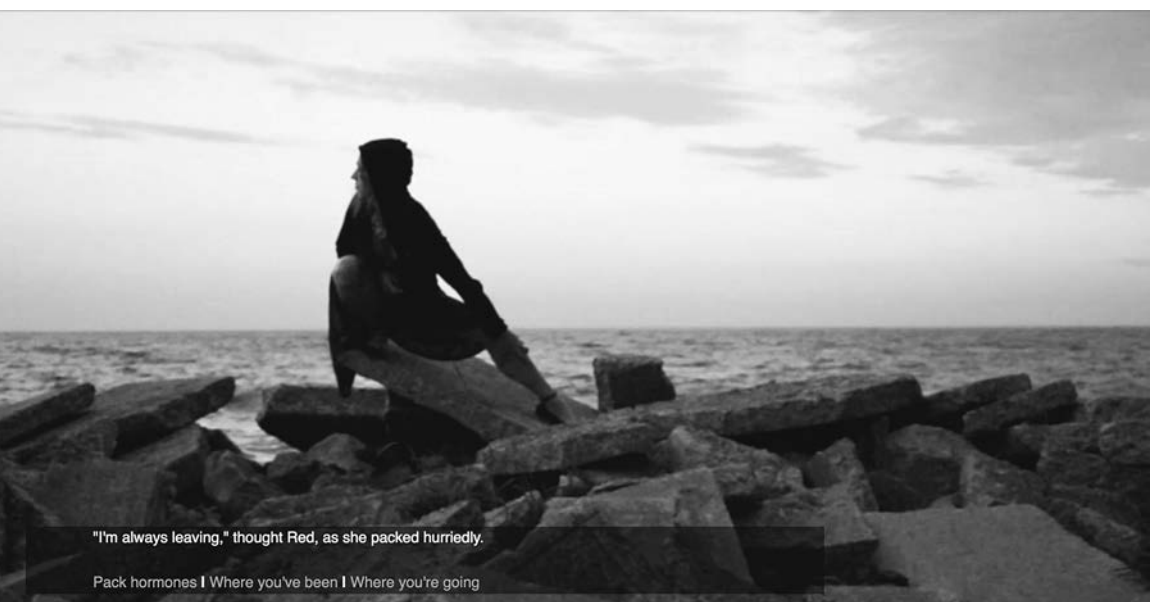
I.4 Screen shot of the online game interface from *Redshift and Portalmetal*, by micha cárdenas.

The stitch is a method of connecting elements by sewing, which I elaborate in chapter 5. Stitching is another operation of trans of color poetics that allows the poetics to extend beyond the individual experience to bring about both opacity and relation. Returning to Campuzano's *Museo Travesti del Perú*, the stitch is shown to emerge from ancient embodied practices of gender transgression and continue into media art practices today. Stitching reveals intra-action, undoing the illusion of separateness that Western ontologies have enforced. Chapter 5 considers applications of opacity, escaping surveillance through wireless mesh networks, wearable electronics, and mobile phone applications. Contemporary artists use algorithmic media to create speculative design and contestational design projects, including *The Transborder Immigrant Tool (TBT)*, by the Electronic Disturbance Theater; *Stealth Wear*, by Adam Harvey; *Facial Weaponization Suite*, by Zach Blas; and *Autonets*. The TBT used cheap recycled cell phones to help people find water on the US-Mexico border through a custom global positioning system (GPS) application. *Stealth Wear* is part of a larger set of works created by Harvey, including *CV Dazzle*, in which the artist designs clothing, hairstyles, and makeup that can defeat AI-based computer vision (CV) algorithms. Blas's *Facial Weap-*

onization Suite is rooted in a philosophical consideration of Glissant's concept of opacity, using algorithmically generated masks to move queer politics beyond demands for representation. The chapter also demonstrates how trans of color poetics can be performed by people who do not identify as trans people of color, as Blas and Harvey do not identify as part of that group. The artists discussed in the chapter use technologies of stitching to avoid surveillance at the algorithmic level. Trans of color poetics demonstrate how contemporary AI systems for CV, which are based on colonial assumptions such as the idea that gender is only binary, are fundamentally wrong. Computer vision algorithms do not see travestis, shifting between bodies. While this can be exploited, it also reveals the violence of exclusion at the epistemological level that is being encoded into these technologies. In contrast, the stitch can be used to create relation, decolonize digital communications, and build solidarity among people.

In the conclusion, I return to the words of Sylvia Rivera, a visionary activist working for trans Latinx futures, to consider the importance of developing poetics as a means of stopping the murders of trans women of color. I consider the emerging popular awareness of algorithms and more recent scholarship on the violence of algorithms. I follow the line from Rivera's vision for a trans movement to an expanded abolitionist vision described by Ravyn Wngz at a Black Lives Matter press conference in 2020.

In this book, I reflect on the process of continuing to face the deaths of my community members every day. To do so, I engage with the theory of necropolitics, which brings considerations of racism and colonialism into dialogue with highly technological contemporary forms of war and neocolonialism. To this theory I add trans of color experience and a visionary model of politics demonstrated in contemporary art, speculative media, and science fiction. I look to women of color feminism and queer of color critique to find modes of thought that can express the many dynamics of processes of identity in algorithmic analysis. By proposing trans of color poetics, I hope to open a space for many operations to be articulated, which can bring our experiences to life through poetry and performance. By proposing that the lives of trans people of color are an important basis for theory and art, I hope to create space for many more unimagined configurations of gender, sexuality, and other forms of difference, as well as the forms that have been said not to exist for so long.

NOTES

Introduction. Algorithmic Analysis

1. *Travesti* has been translated as transvestite, referring to a person who cross-dresses, but I, and others, argue that it has a meaning that goes beyond that, as I discuss later in this chapter. "Travesti, Miguel A. López," *Glossary of Common Knowledge*, June 2015, accessed September 5, 2018, http://glossary.mg-lj.si/referential-fields/subjectivization/travesti. For more, see the "Trans Studies en Las Americas" issue of *Transgender Studies Quarterly* 6 (2) (May 1, 2019), Durham, NC, Duke University Press.

2. Rose, "Giuseppe Campuzano's Afterlife," 243.

3. MAL, "Linha da Vida: Museu Travesti do Peru, 31a Bienal," accessed March 17, 2015, http://www.31bienal.org.br/pt/post/1543.

4. It is possible, if unlikely, that this artwork was created without digital tools, but the artist passed away in 2014, and I am unable to find documentation describing its creation. Even if the work was created in analog, its engagement with the digital algorithms of ID scanning technologies is undeniable. Campuzano's death is referenced in "São Paulo Art Biennial Will Feature Transvestite and Transsexual Artists," *Folha de S. Paulo*, June 16, 2014, accessed September 6, 2018, https://www1.folha.uol.com.br/internacional/en/culture/2014/06/1471085-sao-paulo-art-biennial-will-feature-transvestite-and-transsexual-artists.shtml.

5. Mbembe, "Necropolitics."

6. Aristotle, *Aristotle's Poetics*; Glissant, *Poetics of Relation*.

7. Stryker and Aizura, *Transgender Studies Reader 2*, 8.

8. Stryker, *Transgender History*; Stone, "The Empire Strikes Back," in Stryker and Aizura, *Transgender Studies Reader 2*.

9. Stryker, *Transgender History*, loc. 1664.

10. Stryker, *Transgender History*, loc. 159, 2256.

11. Stryker and Aizura, *Transgender Studies Reader 2*; Chen, *Trans Exploits*; Ochoa, *Queen for a Day*; Snorton, *Black on Both Sides*.

12. Graham, "Inequitable Distributions in Internet Geographies," 17.

13. Dutta, "An Epistemology of Collusion."

14. Lawrence La Fountain-Stokes, "Giuseppe Campuzano and the Museo Travesti del Perú," *E-Misférica* (blog), 2013, http://hemi.nyu.edu/hemi/en/campuzano-interview.

15. La Fountain-Stokes, "Giuseppe Campuzano and the Museo Travesti del Perú."

16. Jarrín, "Untranslatable Subjects."

17. Rose, "Giuseppe Campuzano's Afterlife," 243.

18. Lawrence La Fountain-Stokes, "E6.2—El Museo Travesti Interview," Hemispheric Institute of Performance and Politics, accessed April 17, 2019, http://hemi.nyu.edu/hemi/en/campuzano-interview.

19. Stryker et al., "Introduction," 13.

20. Field, "The Unhelpful Notion of 'Renaissance Man.'"

21. National Aeronautics and Space Administration, "How Algorithm Got Its Name," *Earth Observatory* (blog), January 5, 2018, https://earthobservatory.nasa.gov/images/91544/how-algorithm-got-its-name. See also John N. Crossley and Alan S. Henry, "Thus Spake Al-Khwārizmī: A Translation of the Text of Cambridge University Library Ms. Ii.vi.5," *Historia Mathematica* 17 (2) (May 1, 1990): 103–31, https://doi.org/10.1016/0315-0860(90)90048-I.

22. Turner, Victor W. "Symbols in African Ritual," 1100, emphasis added.

23. Aha et al., "Instance-based Learning Algorithms"; Grefenstette, "Genetic Algorithms for Changing Environments"; Monge and Elkan, "The Field Matching Problem."

24. Crenshaw, "Mapping the Margins."

25. Fisher, "Pauli Murray's Peter Panic."

26. Fisher, "Pauli Murray's Peter Panic," 95–96.

27. Puar, *Terrorist Assemblages*, 212.

28. Crenshaw, "Mapping the Margins"; Puar, *Terrorist Assemblages*.

29. Puar, "I Would Rather Be a Cyborg than a Goddess," 57.

30. Emi Koyama, "The Transfeminist Manifesto," in *Catching a Wave*, 248.

31. Heaney, "Women-Identified Women."

32. Hong, *The Ruptures of American Capital*, loc. 45.

33. Lisa Wade, "Loretta Ross on the Phrase 'Women of Color,'" *Society Pages*, March 26, 2011, accessed March 3, 2020, https://thesocietypages.org/socimages/2011/03/26/loreta-ross-on-the-phrase-women-of-color.

34. Rivera-Servera, *Performing Queer Latinidad*, 25.

35. Ecleen Luzmila Caraballo, "This Comic Breaks Down Latinx versus Latine for Those Who Want to Be Gender-Inclusive," *Remezcla* (blog), October 24, 2019, https://remezcla.com/culture/latinx-latine-comic.

36. Dutta and Roy, "Decolonizing Transgender in India," 334; Aizura et al., "Introduction," 308.

37. For discussion of the complex history of these terms, see Stryker, *Transgender History*; Valentine, *Imagining Transgender*.

38. Sharpe, *In the Wake*, 30.

39. Stryker, *Transgender History*, loc. 623.

40. Hayward and Weinstein, "Introduction: Tranimalities in the Age of Trans* Life," 196.

41. Hayward and Weinstein, "Introduction: Tranimalities in the Age of Trans* Life," 197.

42. That is the title as it reads on the copyright page of the fourth edition: Anzaldúa, *Borderlands/La Frontera* (2012).

43. Anzaldúa and Keating, *This Bridge We Call Home*, 5.

44. Anzaldúa, *Borderlands/La Frontera* (1999), 41, 99.

45. cárdenas et al., *The Transreal*.

46. Undoubtedly, such personal work takes a toll. Still, I strive for it to be healing for myself and others.

47. Ellen Nakashima and Shane Harris, "How the Russians Hacked the DNC and Passed Its Emails to WikiLeaks," *Washington Post*, July 13, 2018, accessed September 4, 2018, https://www.washingtonpost.com/world/national-security/how -the-russians-hacked-the-dnc-and-passed-its-emails-to-wikileaks/2018/07/13 /af19a828-86c3-11e8-8553-a3ce89036c78_story.html?utm_term=.843eebdd1a09.

48. "Steve Bannon: Five Things to Know," Anti-Defamation League website, accessed February 7, 2020, https://www.adl.org/resources/backgrounders/steve -bannon-five-things-to-know; David Smith, "Q&A: What Are Trump and the White House's Links to the Far Right?," *Guardian*, August 14, 2017, https://www .theguardian.com/us-news/2017/aug/14/donald-trump-steve-bannon-breitbart -news-alt-right-charlottesville; Kevin Granville, "Facebook and Cambridge Analytica: What You Need to Know as Fallout Widens," *New York Times*, March 19, 2018, https://www.nytimes.com/2018/03/19/technology/facebook-cambridge -analytica-explained.html.

49. Levi Sumagaysay, "Steve Bannon Named in Facebook-Cambridge Analytica Lawsuit," *Mercury News* (blog), April 6, 2018, https://www.mercurynews.com /2018/04/06/steve-bannon-named-in-facebook-cambridge-analytica-lawsuit.

50. Kate Crawford, "Artificial Intelligence's White Guy Problem," *New York Times*, January 20, 2018, https://www.nytimes.com/2016/06/26/opinion/sunday /artificial-intelligences-white-guy-problem.html; Joy Buolamwini, "When the Robot Doesn't See Dark Skin," *New York Times*, June 22, 2018, accessed August 14, 2018, https://www.nytimes.com/2018/06/21/opinion/facial-analysis-technology-bias.html.

51. Noble, *Algorithms of Oppression*; Eubanks, *Automating Inequality*.

52. Noble, *Algorithms of Oppression*, 171.

53. Noble, *Algorithms of Oppression*, 184.

54. Khorri Atkinson, "More Transgender People Reported Killed in 2015 than in Any Other Year," MSNBC.com, November 20, 2015, http://www.msnbc.com /msnbc/more-transgender-people-reported-killed-2015-any-other-year.

55. Alex Schmider, "2016 Was the Deadliest Year on Record for Transgender People," GLAAD.org, November 9, 2016, https://www.glaad.org/blog/2016-was -deadliest-year-record-transgender-people.

56. Emily Waters and Sue Yacka-Bible, "A Crisis of Hate: A Mid Year Report on Lebian, Gay, Bisexual, Transgender and Queer Hate Violence Homicides," Report for the National Coalition of Anti-violence Programs, accessed November 7, 2017, http://avp.org/wp-content/uploads/2017/08/NCAVP-A-Crisis-of-Hate-Final.pdf.

57. Transgender Europe, "Transgender Day of Visibility 2016—Trans Murder Monitoring Update," press release, March 30, 2016, https://tgeu.org/transgender -day-of-visibility-2016-trans-murder-monitoring-update.

58. Burton et al., *Trap Door*.

59. Burton et al., *Trap Door*.

60. Katy Steinmetz, "The Transgender Tipping Point," *Time*, May 29, 2014, accessed July 29, 2014, http://time.com/135480/transgender-tipping-point; Sarah Hughes, "Laverne Cox: 'We Live in a Binary World: It Can Change,'" *The Independent*, May 31, 2014, accessed August 28, 2017, http://www.independent.co.uk/news /people/laverne-cox-we-live-in-a-binary-world-it-can-change-9461564.html. Cox's formulation invites a consideration of the contemporary political theorist Giorgio Agamben's idea of the state of exception as it applies to human rights discourses for transgender people. To understand contemporary governance, Agamben re- lies on the French philosopher Michel Foucault's notion of biopolitics, which is based on the idea that governments maintain authority through the promise of life by managing populations' health. In response, the Cameroonian theorist Achille Mbembe describes the present situation of violence for colonized subjects as necropolitical. Populations targeted by governments today include noncitizens who attempt to cross national borders, racialized groups, and trans and gender- non-conforming people. While Agamben argues that contemporary governments operate with impunity through a permanent state of exception as the basis for their sovereignty, Mbembe extends his argument by saying that sovereignty today includes the right to kill, using the slave plantation and the colonized country as models for this form of power.

61. Mbembe, "Necropolitics."

62. Stryker and Aizura, *Transgender Studies Reader 2*. To describe trans necropo- litics, Haritaworn et al., *Queer Necropolitics*, and Snorton, *Black on Both Sides*, build on the description of queer necropolitics in Puar, *Terrorist Assemblages*.

63. Sandoval and Davis, *Methodology of the Oppressed*, 807.

64. Hemispheric Institute of Performance and Politics, "E6.1—*particle Group* Berlin Script," accessed October 6, 2020, http://archive.hemisphericinstitute.org /hemi/en/nanogarage.

65. Keeling, "Queer OS."

66. Imarisha and brown, *Octavia's Brood*, 3.

67. Allied Media Projects, "Network Principles," *Allied Media Projects*, accessed March 17, 2021, https://alliedmedia.org/network-principles.

68. I discuss the AMC's specific influence further in the conclusion. In addition, American studies is an important framework here, focusing on social movements

as a mode of theorizing and theory that works alongside and in solidarity with social movements. I have attended American Studies Association conferences for many years and shared much of the writing in this book there. Both of these conferences are vital sources of community and inspiration where other trans and queer people of color are using technology to build new worlds.

69. Barad, *Meeting the Universe Halfway,* loc. 1392.

70. Barad, *Meeting the Universe Halfway*, loc. 785.

71. Jagoda, "Gaming the Humanities."

72. See the website for the collaborative design studio And Also Too, accessed November 27, 2018, https://www.andalsotoo.net.

73. Kester, *The One and the Many*, 10.

74. Benford et al., "Performance-Led Research in the Wild."

75. Davis, *Are Prisons Obsolete?*; Spade, *Normal Life*, 19; Colectivo Situaciones, *19 & 20.*

76. Glissant, *Poetics of Relation*, xii.

77. "How to Work with Events in a C++ Class," *CodeGuru*, posted by Slavko Novak, November 18, 2002, accessed May 3, 2019, https://www.codeguru.com/cpp/cpp /cpp_mfc/events/article.php/c4075/How-to-Work-with-Events-in-a-C-Class.htm.

78. "Break Statement in C," TutorialsPoint.com, accessed May 3, 2019, https:// www.tutorialspoint.com/cprogramming/c_break_statement.htm.

79. In chapter 1, I describe two performance art pieces about rituals of safety for queer and trans people of color that I created as part of the *Autonets* project. In chapter 2, on shifting, I describe performances of my game *Redshift and Portalmetal*. Chapter 3 on stitching considers media art projects that counter algorithms of surveillance by Adam Harvey, Zach Blas, and me.

80. Mattie Brice, "Empathy Machine," *Mattie Brice* (blog), July 1, 2016, accessed October 8, 2020, http://www.mattiebrice.com/empathy-machine.

Chapter One. Trans of Color Poetics

Epigraph: Esdras Parra, in *The Collected Poems of Esdras Parra*, 11.

1. Lawrence La Fountain-Stokes, "Giuseppe Campuzano and the Museo Travesti del Perú," *E-Misférica* (blog), 2013, http://hemisphericinstitute.org/hemi/en /campuzano-interview.

2. As I described in the introduction, I alternate pronouns for Campuzano to reflect her constant shifting between genders.

3. Peterson and Tolbert, *Troubling the Line*, 16.

4. Peterson and Tolbert, *Troubling the Line*, 488.

5. Parra, *The Collected Poems of Esdras Parra*, 259.

6. "Quizás Quizás Quizás," August 15, 2017, accessed March 22, 2021, https:// desdeotromar.tumblr.com/post/164215961666/desdeotromar-desdeotromar-ill-just -say-it. The translation of Parra's poem also adds uncertainty: while Berrout understands the last line to mean "to be human once more," another translation could be "to be a new man."

7. Parra, "Introduction," 4–5.