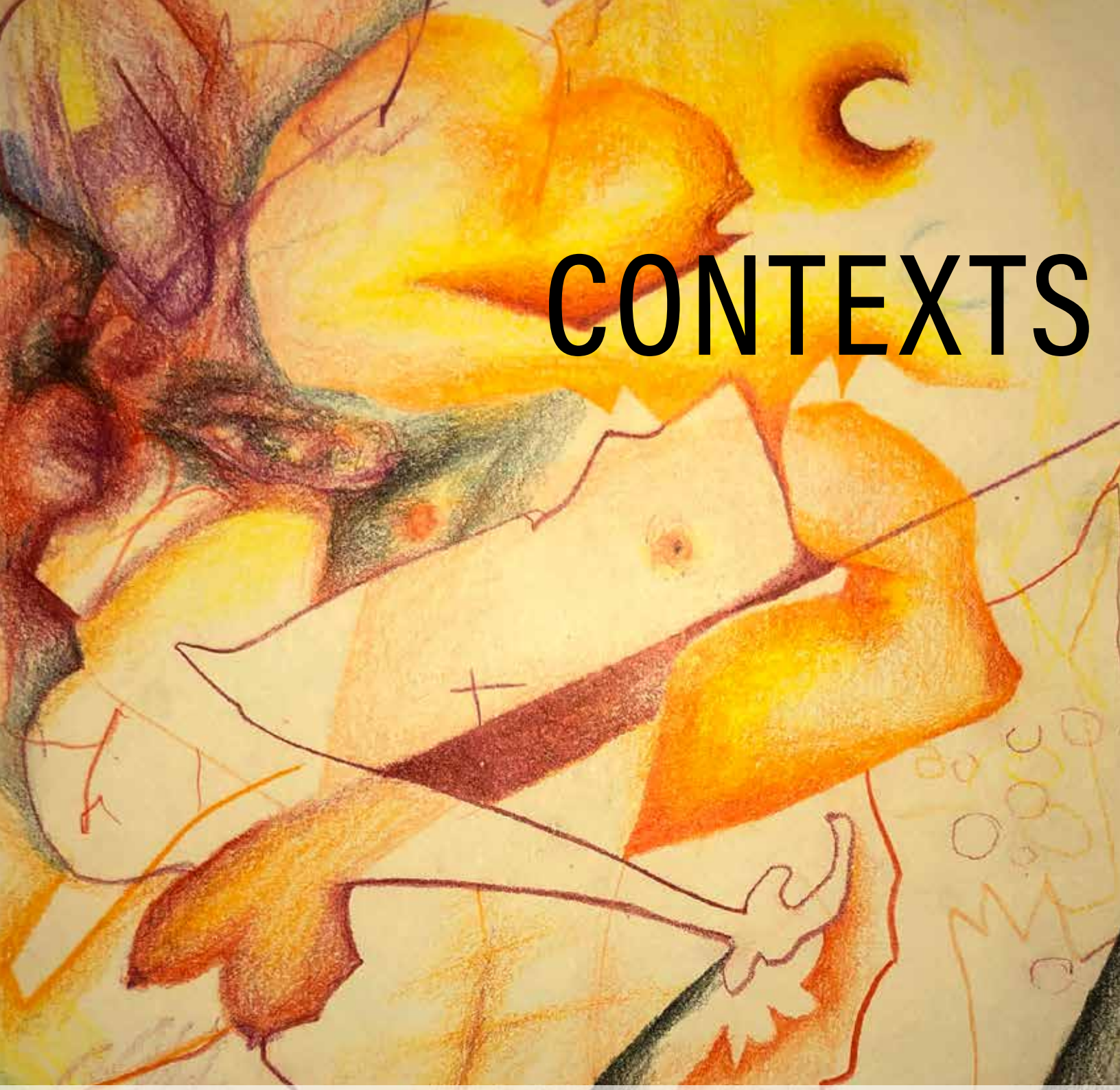

CONTEXTS

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Configurations: Relationality & Identity

STANFORD'S UNDERGRADUATE RESEARCH JOURNAL IN ANTHROPOLOGY

Contexts is a peer-reviewed publication that creates space for undergraduates to thoughtfully engage with anthropological methods and topics.

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CONTEXTS

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Configurations: Relationality & Identity

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LETTER FROM THE EDITORS

Dear Reader,

This year's editorial team is proud to present the 14th installment of CONTEXTS, Stanford's Undergraduate Research Journal of Anthropology.

Every year, CONTEXTS showcases exceptional student research and artwork in anthropology and the social sciences that asks larger, critical questions within the discipline and beyond. Their work encourages us to rethink, reframe, and reimagine dominant narratives.

Our authors for this year's publication focus upon Configurations: Relationality & Identity. The world has rapidly changed these past 2 years: technologically, economically, politically, and socially. Given these transformations, what and how things-in-the-world are configured has shifted as well. From borderlands consciousness to medical neoliberalism and developmentalist projects, we showcase brilliant works which touch upon the dynamic relations-at-play when discussing individual, national, medical, and other various forms of identity. We hope to demonstrate that identity is not essential or static, but constantly produced and reproduced given situational relations.

The works included in this journal will be the first works produced back on campus after being away for 4 academic quarters in light of the COVID-19 pandemic. We would like to thank all of the submissions received and to our authors for their countless hours researching, writing, and editing their work. We admire the ability and willingness to produce brilliant work while re-acclimating to a post-quarantine world and the pandemic still raging on.

We also thank the Anthropology graduate editor, Teathloach Wal Nguot, for his wonderful insights and guidance, and our student services officer, Tina Jeon, for her exemplary passion and support for our undergraduate community. Finally, we thank you, the reader, for supporting this publication and broader undergraduate anthropological research at Stanford.

We hope you enjoy this year's issue.

Warmly,

The Editorial Team

Aaron Adriano '25 | Elias Aceves '23 | Caroline Skwara '24

Rompiendo Fronteras:

The (R)evolutionary Education of Transnational Students in the U.S.-Mexico Borderlands

Kimberly Gonzales-Zelaya

Abstract: *Stretching the 2,000 mile divide between the United States and Mexico, the Borderlands region is a highly contested space holding unique communities defined by the inescapable national borders and multicultural exchanges permeating their daily lives. Transfronterizxs, residents of the Borderlands, synthesize a world of borders into a borderless culture. Transborder students, children of these residents, develop a third intellectual space of education and identity as a result of their varied national experiences and the boundless realities of their lives. In this paper, I seek to understand the resistive and (r)evolutionary nature of this process as a decolonized method of learning. I explore how it develops through gathered transborder funds of knowledge and literacies of surveillance acquired within transborder students' daily struggles across the border. I conclude that the formation of Nalnemi consciousness and regular confrontations with agents of state define the foundations of the Borderlands education and contributes to the construction of transborder identity.*

"Quiero recordarle al gringo: Yo no crucé la frontera, la frontera me cruzó. América nació libre, el hombre la dividió."
— Los Tigres del Norte[1]

The moment is rehearsed a thousand times, almost twice as many as it is performed. My eyes count the huddled figures lined up against *el caracol*[2] before reaching for my passport stuffed in my coat pocket. In only a few minutes, a surge of bustling movement would push me forward into the newly built *Aduanas* (Customs) headquarters. Once inside, a Customs and Border Protection (CBP) officer reaches over to scan my passport, sparing me a quick glance. I hold my breath in anticipation of today's set of questions. *I am 16 years old. I am going to school. I do not have anything to declare.* I repeat these three sentences like a mantra, depending on their perfect translation for hope in passage. Receiving a curt nod and a '¡*Pasale!*' (Go Ahead!), I head towards the last inspection point between the United States and México. Within a matter of minutes, I am face to face with a familiar star-spangled banner and begin the second half of my journey.

Throughout my middle and high school years, I spent hours existing in the midst of two nations, trekking across the U.S. and Mexico Borderlands to make it to the classroom. In a dance across international boundaries, my global citizenship provided a transfiguration of identity in which my education became intrinsically dependent on the hidden curriculum of navigating both nations. Unknowingly, my travels engaged me in a performance of identity: I molded myself into who I needed to be at the request of the state. At the time, such shapeshifting felt natural; however, my existence was involuntarily contributing to a third space of consciousness found within the borderlands.

INTRODUCTION

Existing as an expanse of in-betweens, the borderlands is a 2,116 mile stretch alongside the southern U.S-México frontier. Within this space exists an exceptional traveler, neither immigrant nor visitor. *Transfronterizxs*[3] are residents of border towns who regularly commute across national boundaries for a variety of reasons (Mendoza 2019). Colloquially referring

[1] Los Tigres del Norte are a culturally iconic Mexican band whose songs center the experience of immigrants and Mexican American diaspora. This verse is from their popular song, "Somos Más Americanos (We Are More American)." The English translation is: "I want to remind the White American / I did not cross the border / The border crossed me / America was born free, man was the one to divide her."

[2] 'El Caracol' is a metonymy I use to describe the spiral staircase leading into the American Customs building at the El Chaparral U.S.-Mexican port of entry in the Tijuana/San Ysidro border region.

[3] Tranfronterizxs directly translates into 'to cross borders; to traverse them.' I will be using 'x' as a replacement for the o/a gendered suffixes of Spanish language to recognize and honor the spectrum of genders present within the Latinx/transfronterizx community.

to movement between borders as '*crossing*,' the border itself as *La Frontera* (The Border), and the United States as *El Otro Lado* (The Other Side), transfronterizxs' proximity to distinctive nation-states compel a hybridization of language, identity, and culture that rejects explicit separations between the U.S. and México. Because of this, they build multicultural communities dependent on their access to the border and in relationship with the land they inhabit.

Within the transfronterizx community exists a subgroup of youth who cross the border at a higher frequency than average commuters. Transborder students are children or young adults who regularly cross *La Frontera* as part of their journey to school. Many students travel between the two nations up to twice a day to attend school and return home. In these daily trips, students must learn to navigate state-sanctioned surveillance and violence while simultaneously facing regular criminalization and racism. In turn, they form identities of contradictions that disrupt colonial understanding of borders and other imposed binaries through their refusal to be *ní de aquí ní de allá*[4].

At the border, transfronterizx youth epitomize mastery of their multicultural identities "reflecting an understanding [of] their worlds [as] not neutral but rather embedded in existing power relations (Nuñez 2020)." Acknowledging the exclusions and binaries that establish a "this side/that side" narrative at the border, students actively disrupt colonial logic by weaving literacies of surveillance into a single language. They understand the importance of quickly adapting to the rigid processes of inspection and easily shift their personas to fit what is required of them. In doing so, their resistive identities allow them to survive another day as they depend on an accumulated and (r)evolutionary education of the borderlands. Transcending national separations whilst also confronting the physical ruptures it imposes, students traverse countries through complex identity negotiations forging third spaces of consciousness. Positioned as border pedagogues, these children reveal the importance of literacy and cultural capital in combating oppressive power structures.

In this research, I confront the (in)elasticity and coloniality of the U.S.-México border to propose the existence of transformative pedagogies within the Borderlands. Through a comprehensive examination of consciousness and surveillance, I explore how transborder students utilize literacies of surveillance across the U.S.-México borderlands to construct a third space of (r)evolutionary education and most importantly, construct identities dependent on this third space.

BORDERLANDS

The U.S. Mexico Border

Fully established by 1819, the border between the United States of America and the United Mexican States is an expanse of a little over 2,000 miles. Separating communities and biospheres into two sides of belonging. This border runs bidirectionally, beginning in the western states of California and Baja California and ending with Texas and Tamaulipas. A total of twenty-five American counties and thirty-eight municipios Mexicanos (Mexican municipalities) exist on each side of this international border, creating what is known as the borderlands, communities ruptured by una herida abierta[5], as Chicana studies scholar Gloria Anzaldúa (1987) describes. There are forty-eight ports of entry facilitating over forty million annual legal crossings[6] between border twin cities such as Tijuana and San Diego (Nuñez 2021). These various ports of entry make the borderlands a unique phenomenon occurring only in the southwestern regions of the U.S. and the northern states of México.

Transborder Students

Transborder students make up a sizable portion of daily border crossings, traveling up to twice in a single day between both countries.

(UCSD). Figure 2. Digital Print Media.

While no precise figures[7] exist on the amount of transfronterizx youth who cross for educational purposes, numbers at individual ports of entry, such as the Tijuana—San Diego border, reflect common trends. As shown in the graph below, 62% of 9th and 10th-grade

[4] Direct translation: Neither from here nor there.

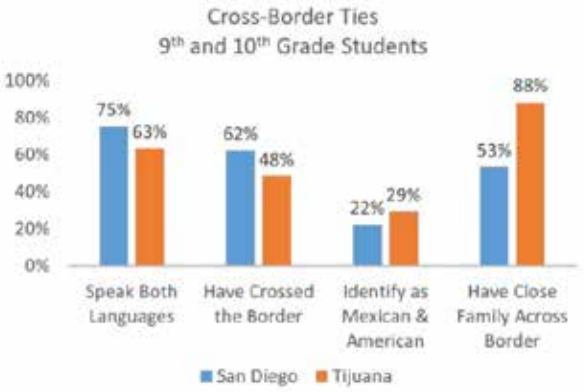
[5] Direct translation: An open wound.

[6] Legal crossings are defined as lawful travel through the United States and México requiring proper documentation such as citizenship authentication or statements of permissible entrance.

[7] Transfronterizx youth are often instructed not to disclose their identities in fear of potential deportation, school expulsion, or severe consequence from state officials and school administration alike. Numbers are accounted for through ethical inquiry and depend mostly on private school students who have more freedom to disclose their travel as they pay for their education and thus face little to no consequences.

students interviewed in San Diego high schools express having crossed the border to get to school" (UC San Diego Center for U.S Mexican Studies). With such a great proportion of students engaging in cross-national travel, transborder students are a considerable part of regular border traffic.

Potential risks imposed by the journey north make the efforts of transborder education all the more dangerous. Apart from human trafficking rings and gang violence in the United States,



(UCSD). Figure 2. Digital Print Media.

Mexican cartels monopolize violence at international lines. In 2017, "over 170,000 people were reported killed and 32,000 have disappeared as a result of the drug cartel violence" (Nuñez 2021). At the border, violence comes alive as "Mexican cartels [fight] to obtain control of drug corridors, production, and territory for distribution" (Nuñez 2021). Violence dominates the border landscape, making fear common for transfronterizxs who become soldiers in a war they did not consent to. Violence is not the only hardship students face crossing *La Frontera*. Blurring preconceived notions of nationality and language, transborder youth face constant questioning on their allegiance and belonging on either side of the border. Racism, xenophobic views on immigration, and suspicions of gang affiliation stereotype students "as being culturally deficient due to their relationship to México" (Mendoza 2019), making them "more susceptible for inspection and harassment" (Bejarano 2010). Furthermore, deculturalization within the school system and forced assimilation oblige transborder students to develop certain particularities at an early age. Learning to manipulate their international mobility into cultural capital, students negotiate their identities in various social spaces as a means of survival.

In this paper, I explore how transborder students construct literacies of surveillance and movement from this identity negotiation through two key foundations: formations of resistive consciousness and literacies, and informed experiences of violence and surveillance.

CONSCIOUSNESS AND LITERACY

"Border thinking derives from 'the moments in which the imaginary at the modern world system cracks.' It is the knowledge that stems from dealing with borders and living in the borderlands."
— Gloria Anzaldúa, 1987, Idalia Nuñez, 2021.

Nalnemi Consciousness

It the borderlands, transborder students straddle the boundaries between centuries of colonial logic and (re)emerging ideas of abolition to birth new spectrums of existence. The layered complexity of their identities is determined by social arrangements defining who they are at any given time. Constantly (re)constructing and legitimizing themselves through their pluralistic existences, transborder students amalgamate their experiences into a lens of resistance, pedagogy, and identity. Their exposures to various social worlds allow them to become agile, questioning the monocultural fabrications of society. Through perpetual oppression, transborder students find validation in a higher understanding of colonial systems and learn to navigate them to their favor. As they live between these margins, duality becomes their nature. Their dependency on recognizing and navigating such rigid structures of oppression leads to the development of a marginalized consciousness I term *nalnemi*[8] (to travel through and live this way).

Nalnemi is a pedagogy and lens of decolonization and resistance transborder students develop as they continuously journey through nations and systems of coloniality. In the borderlands, students are racialized and criminalized for their movement, repeatedly asked to legitimize their identities, and exposed to various forms of violence and surveillance. In the classroom, these students are obliged to assimilate and at home, they are expected to preserve cultural values. To travel through these various worlds and "produce knowledge by being within a system while also retaining the knowledge of an outsider" (Anzaldúa 1987) gives way to an awareness founded upon survival and (r)evolution. I assert *nalnemi* as one of the principles from which the third space of the borderlands is configured.

[8]Nalnemi is a Nahuatl word formed of the prefix 'nal,' meaning to travel through and 'nemi,' meaning to live this way. Together, they translate into 'to travel through (or cross) and live through this manner.'

Transborder students combine this navigation of systems to formulate a third space of consciousness in response to the violence they face in their daily transgressions. This third space gives way for resistive methods of education founded upon interactions with surveillance, literacy, and community.

(Re)defining Literacy

The borderlands are also a site of the (re)imagination of hegemonic knowledge that centers colonial narratives. These narratives impose binaries through exclusionary practices that transborder students must confront in their daily passage. Opposing ideas of borders existing to separate and viewing spaces of boundary as elastic, transborder students develop decolonized canons of learning by working "to understand the 'histories, experiences, and the cultures of their immediate environments'" (Nuñez 2021). Thus, transfronterizx youth engage in resistive literacies in their journeys across the border.

Western conceptualizations of literacy have long deemed the validity of this act as solely based in reading and writing. However, indigenous or otherwise non-white canons of literacy define it through various means: dance, song, oral story-telling, and other forms of communicating and understanding the worlds around us. Within my research, literacy is understood as the perpetual education and cultural productions of life on the borderlands constructed by language, surveillance, and movement. Decolonizing this definition of literacy and recognizing it as an active and retributive process dependent on culture and lived experiences is imperative to understanding transborder education—a perpetual act of "literacy events and literacy practices [that] function as semiotic processes for the performance of identity" (Nuñez 2020). Most importantly, it provides the necessary framework to conceptualize the interweaving of *nalnemi* consciousness into the fluid capacities of literacy practices that transborder students embody.

LITERACIES OF SURVEILLANCE

Surveillance is an embellished and unavoidable characteristic of the border landscape. With "overpowering flashes from surveillance cameras in every lane, K-9s used to conduct random inspections, speedbumps, and port-entry barriers to slow down or stop all vehicles crossing the border, light used to control the flow of traffic, and *papeles* (papers) to prove 'legal' status" (Nuñez 2020), it is hard to escape, much less move discreetly, the watchful eye of border security. Advances in modern biometric technology and ruthless discretionary methods of authority combine to enforce a surveillance state where a single word can become decisive, particularly in one's entry to the United States. Moreover, border infrastructure is designed to parallel war zones with excess militarization and legal exceptions as Customs and Border Protection (CBP) officers have ready access to warrantless searches, personal data, and absolute and unchallenged discretion when assessing individuals through inspection (Castañeda Perez 2019).

For transborder students who regularly brave this landscape, surveillance exists as a present form of violence imprinted on their skin, an inevitable reality of entering a nation fueled by mass incarceration. At the border, students are stripped of bodily agency when repeatedly searched and surveilled and are psychologically exposed to "what Foucault (1977) referred to as 'the gaze'—the feeling of constantly being watched" (Nuñez 2020). Occurring through routine inspections and checkpoints, policing at the border functions as a literacy event where transborder students observe and employ different skills to enter the United States.

These points of access embody the constant scrutiny students face which becomes an integral part of their identity building and language construction. The culture of questioning and identification upheld by CBP officers forces transborder students to (re)construct their identities. Subjugated as the 'trespasser' and racialized because of their ethnic backgrounds, transborder students are criminalized into fugitive identities due to the stigma attached to border crossing. More, transborder students understand themselves as simultaneously belonging to the United States and México while not having the cultural citizenship or acceptance in either. Because they must validate these identities to be granted access across either border, their identity becomes a performance. This performance requires transborder students to develop literacies of surveillance through translanguaging and behavioral agency as a way of easily traveling between nations.

Translanguaging

What language do you speak when you belong to no nation? Informed by their existent binational identities, transfronterizx students develop literacies of surveillance through the creation of border language: a linguistic strategy combining their various native languages and navigation of policing systems. This language forms part of *nalnemi* consciousness, integrating the experiences in the borderlands into a (re)imagination of space, systems, and sovereignty. In a place "where language is used to marginalize people" (Nuñez 2018), dialect becomes sword and shield for transborder students, protecting them from authoritative figures as well as used to defend their existences.

In such, language becomes an essential tool in the borderlands, particularly, the act of translanguaging. Translanguaging is the involuntary and fluid action of multilingualism that bi(multi)national people naturally resort to as a regular method of communication. Through the diverse intersection of distinct cultural practices and languages, transborder students configure a language of the borderlands: a combination of Spanish, English, diasporic vernaculars, indigenous lexicon, and accompanying mannerisms. Students orchestrate translanguaging by switching between these various languages to meet the demands of border inspectors at American or Mexican checkpoints. This amalgamation of language is intrinsic to movement at the border as constant surveillance enforces these intentional executions of dialogue. Moreover, the need for compliance during inspections and scrutiny configures an identity of compliance for transfronterizxs through this language construction. Translanguaging further contributes to third spaces of education "as a cultural medium for meaningful learning and for positioning transfronterizx students as knowledge producers" (Nuñez 2020). Not only do they understand when and where to appropriately employ their linguistic capacities but are stronger and more adaptable communicators in their everyday lives because of it (Nuñez 2020). Utilizing this skill, transborder students easily master the multiplicity of language to navigate the surveillance in the borderlands as a method of cultural pluralism, identity configuration, and communication.

Behavioral Agency

At the border, admission is dependent on meeting grounds of permissibility which are authored under extreme conditions of scrutiny. Border inspectors "tend to look for what people do not have" (Nuñez 2020) where "no tolerance for ambiguity" (Nuñez 2020) is given to daily tres/passers. Lacking proper documentation of citizenship or even not sustaining respectful eye contact can mean a person attempting to cross into the United States will be sent back. Excessive surveillance sediments the distinction between permissible and permissible entry. Such a process is dehumanizing, especially for children whose education is subject to this surveillance. From the intensive scrutiny of their bodily expression to what they choose to take in their lunchbox, surveillance forces the kaleidoscopic existences of transborder students into restrictive identities. Packaged and repackaged, inspected and probed, students are processed through American borders like fruits of produce. Much of my experiences crossing the border mirrored this procedure of examination; though my roots grew resiliently in the soil of two countries, I contorted myself to slip in between the jagged fences of national boundary. To eventually traverse this barricade, I obliged myself to a hidden code of conduct, one I learned through observation and practice in my years of travel. This behavioral agency is known as the literacies of surveillance.

This taut process of inspection leaves narrow room for mistake when attempting to travel into *El Otro Lado*. A single error could mean having to spend another few hours in secondary examination, or worse, possible detainment and school expulsion. Since students cross up to twice a day, the repeated practice of interactions with CBP officers aids them in internalizing what has been considered sanctioned behaviors for passage. This information acts as a semiotic tool for transborder students "to agentively make decisions on how to perform their identity" (Nuñez 2020), while facing inspections. When confronting this, youth must embody surveillance literacies to gain access into the United States.

Border literary scholar Idalia Nuñez conducts several field studies where this invisible code of conduct is examined and identified. In "Literacies of Surveillance: Transfronterizo Children Translanguaging Identity Across Borders, Inspectors and Surveillance," embodied practices of permissibility are described as "wearing [a] seatbelt, making eye contact with the inspector, not speaking unless spoken to, turning off electronics and media devices before the inspection, [and] hiding snacks" (Nuñez 2020). More than just this, the nature of which children were able to easily code switch as they were questioned showcased an acute capacity for registering when and where surveillance literacy should be employed. In the following excerpt from a case study, this agility is best seen in three young transborder students, Irma, Jaime, and Alma's, behaviors during primary inspection at the Tamaulipas and Texas border.

> Officer looks at the kids through the back window. Irma was sitting nearing the right passenger's door, Jaime was sitting in the middle, and Alma (Irma's younger sister) was sitting on her car seat on the left side. They were all wearing their seatbelts. When the officer approached the window, Irma and Alma looked back at the officer and smiled. They were both quiet. Jaime was still playing his game; he briefly stopped and looked up at the officer (Nuñez 2019, 128).

Within this excerpt, Irma, Jaime, and Alma are

waiting for approval to cross into the United States. Before reaching the inspection point, they were rambunctious and chatty, filling the car with Spanglish conversation. However, once the CBP officer engages with them, their demeanor changes. Irma, Jaime, and Alma remain silent, speaking only when spoken to, and maintaining respectful eye contact with the officer when cued to do so. Drawing upon *nalnemi* consciousness, these children automatically configure an identity of compliance. Their movements are learned practices of surveillance literacy, developed after many years of living within the borderlands. This literacy grants them access and privilege into the United States where they can continue their education. Thus, via translanguaging and behavioral agency, transborder students configure literacies of surveillance in their daily ventures across the border as they navigate violent relationships between agents of state and cultural erasure.

LITERACIES OF MOVEMENT

Within the borderlands, movement is an unavoidable obligation. Transfronterizxs are constantly in flux as they travel between nations and cities. Making it through vehicle and pedestrian traffic, they must also face harsh environmental conditions such as rough terrains and freezing temperatures. However, much of this movement is without strict impositions; most transborder students "orient both Mexican and U.S. lands through a notion of spatiality that transcends nationalistic boundaries" (Gonzales et al. 2020).

Ideas of settler spatiality squeeze the borderlands into three zones: the U.S., the Wall, and México. However, this sentiment contrasts transborder perspectives on land distribution within the borderlands. Instead of relying on a trifecta division of nation, wall, nation, transfronterizxs often read land through significant landmarks or specific territorial knowledge depending on its connection to the individual. This conceptualization of the borderlands aligns with indigenous spatiality, a framework referring to the deep land connections formed for indigenous communities and the role land plays in their identity configuration. (Gonzales et al. 2020). Drawing from these land theories, the transfronterizx lens of spatiality is born.

Using *nalnemi* consciousness, transborder students traverse the borderlands with a sense of unique navigation. They depend on conceptualizations of the border as a metaphysical space, one not contingent on nation but personal connections and culture. As colonized bodies in a postcolonial world, they are subjugated to intense exclusion through the physical construction of walls between the two nations they call home. Their survival and identity become dependent on (re)defining the borderlands to fit their needs of movement and self. Thus, they work to (re)imagine spaces between the United States and Mexico as a world reflecting the pluralism they embody.

This (re)imagination acts as a guide influenced by the syncretism of their ambivalent natures. In "Multimodal Cuentos As Fugitives," a study conducted at different K-12 institutions at the Ciudad Juarez—El Paso Borderlands, transborder youth of various ages describe their understandings of culture, community, and travel through multinational spaces. In this study, students refuse to acknowledge each nation as a separate entity, rather, viewing both as an expanse accessible through their personal identities. When tasked to describe their venture to school, transborder youth "focused on landmarks that did not represent a single home or dwelling, instead connect[ing] to the broader landscapes surrounding the borderland" (Gonzales et al. 2020). By means of attributing significance to certain landmarks, transborder youth learn to read the borderlands to their advantage.

Within my firsthand experiences residing at the Tijuana—San Diego border, I often utilized these methods of spatiality to quicken my travels. I dubbed the spiral leading into American Headquarters '*el caracol*' and the entrance between the United States and Mexico as '*la entrada*' (the entrance) or '*la puerta*' (the door). Each served as a rough increment in my journey which would determine how much more time I had left before I would be late to school. If I arrived at '*el caracol*' at six in the morning, I would be sure to have enough time to get to class. Anything after seven, I would miss the school bus and have to take public transportation. This meant I would show up late to school.

Below is a young transborder student, Lilia's, depiction of the borderlands. She bases her understanding of the border through her spirituality, connecting both nations through *La Virgen de Guadalupe*, an important Mexican religious figure, and conceptualizing each by important landmarks she passes on her journey there. Her work centers three landmarks: La Estrellita (the star), La Equis (the X), and La Catedral (the church). Each represents a point in Lilia's journey. La Equis and La Catedral, residing on Mexican soil, let Lilia know her proximity to home. On the other hand, La Estrellita represents passage into the United States, indicating Lilia has

(Gonzales). Figure 3. Digital Print Media.

made it through the tedious process of international crossing. Combined, each function as a symbol in Lilia's journey and, in turn, encapsulate the semiotic processes of spatiality transborder students must configure.

This spatiality of the borderlands configures literacies of movement that assist transborder youth in their (r) evolutionary education as they add territorial familiarity to their arsenal of knowledge. While this literacy of movement is initially constructed through individual connections to land, it is exemplified through community structures and informed violence. Navigating the physical terrain is only part of the journey to *El Otro Lado*.

Community-Building through Violence

Transfronterizx communities depend on communal structures of family and neighborhood that are common to Latinx culture. Families within the borderlands configure networks of support and camaraderie in their friends, coworkers, peers, and even, strangers, to establish solidarity in the face of oppressive structures. Connected by the common struggle of borders, transfronterizxs are sympathetic to one another's journey and depend on each other to safely navigate the borderlands. For students, this network of security provides them with an added sense of safety as they transpire *La Frontera*. This community structure is imperative to the protection of families at the border and consequently, transborder children. Depending on the concept of *la gente rumora* (the people are 'rumoring'), transborder students rely on the ventures of other transfronterizxs, word of mouth, and social media to facilitate safe trips to *El Otro Lado*. As *nalnemi* consciousness, transborder students are tasked with the primary objective of survival—part of this survival requires a keen awareness of the streets and its inherent violence. When *la gente rumora*, news of potential threats, gang violence, border shutdowns, and other challenges within the borderlands spreads quickly. They serve as sources of knowledge from which transborder students configure their daily pedagogies. Social media such as Facebook allow for transfronterizxs to rapidly disseminate information and updates on any dire situation through public community pages (Nuñez 2021). Typically, families digitally congregate to share news on border times; however, as presented in the Facebook screenshot of Texan-Tamaulipan Borderlands residents, these spaces prove helpful in providing needed alerts of threats at the border. Detailing the horrors of *balaceras* (shoot-outs) and *desapariciones (*kidnapping) of the week, Facebook pages are few of many examples of borderlands community-building structured through violence.

Once warnings of shoot-outs, long lines, and border shutdowns begin to emerge, transfronterizx families begin shifting reconfiguring travel and day plans in response to this violence. This particularly impacts transborder students as most of their border crossings are in early mornings and late afternoons on weekdays, times that are already extremely busy due to traffic flow and routine border exercises. Still, parents make the decision to send their children across the border because "education and school attendance [remains] a priority and they know that violence is not going to spill to the U.S. side of the border" (Nuñez 2021). In turn, transborder students must engage with *nalnemi* consciousness as a form of protection while crossing the borderlands. Using their literacies of surveillance and movement, violence becomes informed as their familiarity with the borderlands alerts them of potential disruptions in their journey.

(Nuñez). Figure 4. Digital Print Media.

Combined with spatiality, structures of community aid transborder students in their journey across the borderlands. Added to this arsenal of knowledge comes a literacy of surveillance and movement which informs their navigational skills. Together, transborder students build multicultural capital and transformative methods of resistance characterized by the emergence of *nalnemi* consciousness. This complex pedagogy is a unique phenomenon displaying an intrinsic relationship between (r) evolutionary education and survival.

(R)EVOLUTIONARY EDUCATION AND RESISTANCE

Throughout this paper, I explored several factors contributing to the construction of consciousness within the borderlands. Between inherent *nalnemi* thought and literacies of surveillance and movement, the trek across borders results in several learning events for transborder students who accumulate a wealth of cultural and social knowledge in their daily travel. They develop an agency allowing them to self-author identities defining a 'third space' within the borderlands.

To live in the margins, on the border between worlds, one must learn to exist as chameleons do. To shift into new colors at the hint of an incoming tide and swim in the change of moving spaces. For transborder students, identity becomes a performance in the work of belonging. Stitching themselves into pieces of different puzzles, they destroy notions of 'self/other' to simultaneously belong in places that home all sects of who they are. Their self-authorship is "constantly (re) constructed, (re)embodied, and (re)imagined" (Nuñez 2021), as is the borderlands.

As transborder students learn to make home of multiple nations and cultures, often facing persecution in doing so, their identities embody the diversity and (r) evolutionary aspects of the border itself. As "they [straddle] the literal borderlands of competing nation-states while cross[ing] over psychological and developmental spaces of youth and adulthood" (Bejarano 2010), the challenges they encounter in their constant (re)construction of configures births a third space of (r)evolutionary education and resistance. At the borderlands, learning becomes second nature, a perpetual state of living and protesting systemic methods of exclusion, suppression, and violence.

In this research, this learning was displayed through various processes. Opening with my personal experiences crossing La Frontera, I explored the context and construction of the United States and Mexican international border as well as the phenomenon behind transfronterizx communities in this southwestern/northern region.

Inspired by personal self-actualization within my path to school, I put forward *nalnemi* consciousness, drawing upon multiple fountains of thought to conclude marginalized transborder students experience a heightened awareness of systems of coloniality, identity, and nation. This sentiment is one driven by informed violence, necessitating a sense of urgency in their constant analysis of environment and literacy as a method of survival.

To better frame this consciousness in action, I paralleled my theories with transborder literacy. I asserted two forms of literacies exist at the borderlands: surveillance and movement, each founded upon different events contributing to students' sociocultural capital. Literacies of surveillance are adopted because of the hyper militarized landscape and intense inspection points transfronterizx youth constantly engage. Politicizing interactions with CBP officers, students depend on performing language and compliant behavior as a way of safely gaining access to the United States. From observing what exchanges are granted entrance, transborder students internalize this information and through personal agency employ it, when necessary, throughout their journeys in the Borderland. Furthermore, students develop literacies of movement through their cultural values and community. Building upon indigenous spatiality, transborder students assign personal significance to specific landmarks on their journey to *El Otro Lado* as a way of reading and conceptualizing their environment. This allows for a unique attribution to their learning as interactions with physical environments grant transborder students perspective while they confront violence on their journey. This violence is navigated by methods of community structures. Students are dependent on ideas of *rumores* to safeguard their paths to school; at the hint of violence or upheaval at the border, students must cooperate with their parents to quickly adapt and shift their plans. In this, literacies of surveillance and movement structure the classroom of the borderlands, doubling as learning experiences and survival skills.

These border literacies allow youth to survive at the borderlands and prove learning is rooted in survival. This dichotomy between resistance and survival allows for the (re)shifting of transborder identities to aptly navigate binary spaces created by national boundaries and enforced violence. Thus, borderlands education is a (r)evolutionary and constant pedagogy defined by experience, observation, and multiculturalism. As it inadvertently creates resilience within their weathered journeys, transborder youth become sites of (r)evolution themselves, taking on the role of pedagogues as they break traditional conceptions of border, identity, and learning.

A few years ago, a teacher from my elementary school was interviewed about the existence of transborder students as border crackdowns from the former Trump administration began to take a serious toll on the transfronterizx community. This teacher, when questioned on whether our realities were fair, responded, "'Those kids are American citizens. They have a right to live here. That they don't live here now doesn't mean they won't live here someday'" (Levinson 2017).

For me, that someday is now, at Stanford University. However, thousands of other children are still making their way across the borderlands, rising with the early sun, and illuminating a world of possibility in which borders no longer separate our communities and who we are. My hope is that with this research, not only do we begin to prompt questions in the validity of what counts as an 'education,' but begin to see the value of the invisible: worlds of (re)imagination and possibility in the in-between.

"This is my home this thin edge of barbed wire."[9]

[9] Quote from Gloria Anzaldua's "Borderlands/La Frontera: The New Mestiza Consciousness."

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The Colonial Difference:
Left Nationalism and a Cultural History of Cuban Statehood

Jessica Femenias

Abstract: The Cuban revolution and its leading practitioners engaged in a battle over the national past. The notional foundation of the revolution was a historical allegory that determined the nation had been postponed by colonial force. The revolutionary allegory, roughly, was as follows: through imperial dispossession and larceny, Cuba serially escaped Cuban hands. Revolutionary nationalism promised to deliver the nation anew – though the project and its promises were never solitary: where western nationalists define the terms of their cause by distinguishing the nation and determining national interests over and against a crowd of potential belligerents, the anti-imperial foundation of the revolutionary mythology ambiguates the national border. The revolution identified its promise of national sovereignty with the advancement of a global political project, constituted by reparation for the dispossessed. For the revolutionary project to cohere with its anti-colonial notional base, the "nation" would need to be a transnational nation with a borderless identity. In this paper I track Cuba's battle for the past and associate the history of its transnational nationalism with historical allegory and colonial dispossession.

The origin of Latin American nationalism is an object of international speculation. On some accounts, the economic and political fragility of Latin American nations make them susceptible to rule by unflinching fascist despots. Even less charitable accounts attribute Latin American nationalism to an imagined predisposition for brutality, a "problem of subversion,"[1] or a kind of innate "irresponsibility."[2] Few nations on the planet have been the object of as much of this speculation as Cuba, who's socialist, nationalist, internationalist revolution shook the international system itself by confronting its influence on the nation's own history. In the 1950s, Che Guevara and Fidel Castro wanted to galvanize a generative national pride. In their articulation of the revolution, Cuban pride had a material final purpose: achieving liberation, first for Cuba, and eventually for all colonial subjects. On a first pass, the base of Fidel, Che, and Jose Martí's revolutionary nationalism is recognition of the colonial threat against the nation's sovereignty, and Cuba's constant historical capture by imperial force. In the allegory Cuba has serially denied her right to establish herself. The nation was without memory of authentic sovereignty, and without national mythology. I hope to demonstrate, among other things, that the history of Cuba's nationalism is a history of reaction to -- and against -- colonialism.

We can point to soil; we can gesture to people; we can talk coherently about geography and culture; but because it is a configuration, we cannot meaningfully isolate "the Nation."[3] Despite their contingency, our nations feel essential and inevitable. Our sense of personal identity is permeable to them — we form sentimental attachments to the configuration; assume its interests as our own;

[1] Graham Hoven Special to the New York Times, May 26 1977. *Nixon saw Cuba and Chile Enclosing Latin America*. Quote attributed to Richard Nixon in conversation with David Frost

[2] Stewart Brewer, *Borders and Bridges: A History of US - Latin America Relations*. (Westport Conn,: Praeger Security International 2006). Full quote: "I don't see why we need to stand by and watch a country go communist due to the irresponsibility of its people. The issues are much too important for the Chilean voters to be left to decide for themselves." Henry Kissinger in conversation with Nixon, June 27 1970

[3] When we say that the nation "celebrates Columbus Day;" "commemorates the anniversary of the Nakba;" "has been secularized;" "wins x olympic gold medals;" "debates public housing," we mean to say something about the noncontingent elements -- the people -- that constitute it. Declarative statements about what the nation does, and feels are frequently muted claims about which of its people belong to it. If the nation celebrates Columbus Day and you are not celebrating; if the nation debates housing accessibility and you are homeless, you must be outside of the nation. This is how "nations" are configured.

determine our place in the world through our approval or dissent of this or that national project. We use the term "nationalism" to capture a particular stripe of relationships an individual or polis might have with their state.

Its most basic element is a positive attitude towards the nation, but in the popular framework it also involves national pride, reverence for national leaders, political aestheticism and sentimentalism, and antagonism towards perceived enemies of the national mission. In advocating strictly and resolutely for that mission, nationalism also aims towards a type of isolation. It is irreducible and simple: national interests are defined against other types of interests, and ultimately prioritized over them. In Benedict Anderson's framework, nationalism, which emanates "from the state and serving the interests of the state first and foremost," accrues relevance "at the moment when revolutionaries successfully take control of the state."[4] Following Anderson, the measure of the revolutionary's success in assuming control of the state is a national consciousness that identifies the nation's interests with those of the revolution; or identifies the revolution as the nation.

Revolución con Pachanga

For Che and Fidel, art, literature, and cultural education were necessary to foment a national consciousness. For all its contradictions, the regulation, production, and dissemination of popular culture in revolutionary Cuba was a profound priority for Fidel Castro and Che Guevara. The literacy and revolutionary vigor of the Cuban population would require direct, democratized, public access to culture of the right kind, and especially to the right kind of music. The commercial music industry, including radio stations, concerts and recording companies, were widely nationalized, and in its first ten years the revolution attained "remarkable improvement of material facilities for cultural expansion"[5] – a testament to the importance of song for the revolutionaries.

Music, and in particular the music produced by the *Nueva Trova* movement, was uniquely important to the configuration of the new national identity. *Nueva Trova* is a Cuban musical tradition that responds directly to the revolution. By blending the traditional Cuban *trova* movement with emerging styles across the Americas and lyrically incorporating the nationalist, revolutionary poems of the nineteenth century, *nueva trova* self-knowingly revived Cuba's otherwise lost history, and put it into contact with the aims of the revolution. This association –between the historical allegory of serial dispossession and the revolution's promises of total recapture– was the center of Cuba's revolutionary nationalism. The movement was self-consciously accessible, in both aesthetic and content. *Nueva trovadores* "appear on stage in street clothes, refuse to be made up, and strive to communicate with their audience in a natural, honest fashion"[6] –an embodiment of Castro's explicit antagonism for the prevention of some USian music. Through a fusion of street slang and anti-imperial poetry; in loose jeans and worn shoes, the *nueva trovadores* provided the raw material for a *we-consciousness,* for and about Cuba.

Carlos Puebla

Carlos Puebla, also known as *El Cantor de la Revolución,* was perhaps the most important *nueva trovadores*. Puebla's music spans the full range of the given elements of nationalism. In *Hasta Siempre, Comandante,* and *Y en Eso Llego Fidel,* he venerates national heroes who come to embody the advancement of intimate national interests. In *La Cuarentena* he sings to a national enemy shared in common: *A la hora señalada nos encontrará dispuestos, cada Cubano en su puesto y las armas engrasadas*. (At the final hour you will find us ready, every Cuban in his post with his rifles greased). But this enemy –the United States— is not strictly a national enemy: in *Yankee, Go Home!* Carlos Puebla sings: *El inglés que yo tengo es muy escaso, pero entiendo a los pueblos cuando exigen: Yankee Go Home! Lo dicen en Manila y en Corea, en Panamá, en Turquía y en Japón. El clamor es el mismo en todas partes: Yankee go home!"* (My English is very scarce, but I understand the people when they demand: *Yankee go home!* They say it in Manila and in Korea, in Panama, in Turkey and in Japan. The cry is the same everywhere: *Yankee go home!*). Puebla is advocating for something that transcends the nation itself, and here the popular view of nationalism, or its

[4]Anderson, Page 159
[5]Mesa-Lago, pg. 106
[6]Peter Manuel

assignment to Cuba, faces a challenge. His enemy is shared not only with the nation, but with a group of colonial subjects. Puebla is transcending national interests, and because of nationalism's inherent simplicity, "transcendent nationalism" seems contradictory. Puebla is not simply a nationalist: he is an anti-imperialist[7]. *Yankee Go Home!* is gesturing towards a universal language for anti-imperialism: Puebla's facticity is that he is Cuban and speaks Spanish, and what animates this song is subscription to a rallying cry that *essentially* transcends that facticity. The universal language is English because the universal subjects are colonized by "Yankees." He is aligned not with Cuba *per se,* but with a border-blind movement defined negatively by protest of colonization, and positively by advocacy for an already-denied self-determination.

Puebla's anti-imperialism is reflective of the attitudes of Cuba's revolutionaries and allies, as anti-imperialism was part of the socialist project. During his 1961 May Day celebration speech, Fidel said: "If Mr. Kennedy does not like socialism, well we do not like imperialism! We do not like capitalism!"[8] Anti-imperialism and its implied internationalism was part of the meaning of being a Cuban revolutionary. These commitments to third world solidarity were materially realized: Cuba's civilian aid programs "became the largest in the world, surpassing even… the United Nations or the World Health Organization."[9] In 1978, Jorge Dominguez wrote, "Cuba is a small country, but it has a big country's foreign policy." And as he left Cuba to assist Bolivia's revolution, Che wrote to Fidel: "I carry to new battlefronts the faith that you taught me, the revolutionary spirit of my people, the feeling of fulfilling the most sacred of duties: to fight against imperialism wherever it may be."[10] Cuban "national interests" as such were contingent to the project of the revolution, whose ideology emphasized internationalism (and consequently transcended national interests themselves). Clearly, the internationalism of the revolution overrode the singular loyalty and national pride generally characteristic of nationalism. In keeping with the spirit of *Yankee Go Home!* Cuban national pride was meaningful to Che only as far as it contributed to the installation of anti-imperialist movements abroad. He writes, "Adequate propaganda [from Cuba] will enable the recruits to see the justice of and the reasons for the struggle… New conditions will make the flow of these revolutionary movements easier as they give the masses consciousness of their destiny and the certainty that it is possible."[11]

Transnational Nationalism

But clearly Cuba's anti-imperialism is all bound up in national fervor. Castro's May Day speech ends: "Long live the Cuban working class! Long live the Latin American sister nations! Long live the nation! Fatherland or death! We shall win!"[12] A decade earlier, he defended the revolution in court with an anecdote about a woman who was tortured by Batista's army. "She, who loved her valiant brother above all things, replied full of dignity: 'If you tore out an eye and he did not speak, much less will I.' Later they came back and burned their arms with lit cigarettes until at last, filled with spite, they told the young Haydée Santamaría: 'You no longer have a fiancé because we have killed him too.' But still imperturbable, she answered: 'He is not dead, because to die for one's country is to live forever.' Never had the heroism and the dignity of Cuban womanhood reached such heights."[13] And later in that very speech: "We were taught that the 10th of October and the 24th of February are glorious anniversaries of national rejoicing because they mark days on which Cubans rebelled against the yoke of infamous tyranny. We were taught to cherish and defend the beloved flag of the lone star, and to sing every afternoon the verses of our National Anthem: 'To live in chains is to live in disgrace and in opprobrium,' and 'to die for one's homeland is to live forever!' All this we learned and will never forget, even though today in our land there is murder and prison for the men who practice the ideas taught to them since the cradle." In Castro's speeches and in the revolution's flag-waving parades, it seems like we recover the recognizable, simple nationalism described earlier.

If we maintain that the Cuban revolution was a nationalist movement, the "nation" of imminent interest must be strangely configured: it is a border-blind nation of colonized subjects, spanning Asia, Africa, and South America. But this configuration is motivated: it does not advocate "national" interests for the nation's own sake, but because the advancement of "the nation"

[7] Yankee Go Home! Is the final track of his album "Cancones para Nuestra America," which includes "Canto a Puerto Rico," "Ya Esta Despertando el Negro," Por Panama," "El Ejemplo de Vietnam" and "Canto al Chicano."
[8] Castro, Cuba is a Socialist Nation
[9] Chomsky
[10] Guevara, Farewell letter to Fidel Castro
[11] Ernesto Che Guevara, Cuba: Historical Exception or Vanguard in the Anticolonial Struggle? April 19 1961
[12] Castro, Cuba is a Socialist Nation
[13] Castro, History will Absolve Me

is requisite for the realization of a particular political view of global justice, which concerns very much more than Cuba alone. An articulable ideology and a particular view of history (as opposed to an irreducible nationalism) determined the shape of the revolution. This is how Piero Gleijeses interprets Cuba's foreign aid, which required Cuba to sustain significant risks in Africa and elsewhere. He writes: "For no other country in modern times has revolutionary idealism been such a key component of its foreign policy."[14]

Associating Cuba's national interests with a specific political view of global justice was an explicit decision made by the revolutionary practitioners. In Che's words: "it would be suitable to say that revolutionary theory, as the expression of social truth, surpasses any declaration of it; that is to say, even if the theory is not known the revolution can succeed if historical reality is interpreted correctly and if the forces involved are utilized correctly."[15] Because its strangeness is its dealing with a nationally transcendent ideology, our understanding of the development of Cuba's nationalism must emphasize that ideology itself. Central is its operating view of history.

Memory and Allegory

Here, the role of memory and history in the configuration of sensed identity (national, personal, and their intersection) should be addressed. Since Locke, memory constitutes the basis of various theories of identity. He writes: "... in [consciousness] alone consists personal identity, i.e., the sameness of a rational being; and as far as this consciousness can be extended backwards to any past action or thought, so far reaches the identity of that person; it is the same self now it was then; and it is by the same self with this present one that now reflects on it, that that action was done."[16] The mission of nationalist revolutions like Cuba's is bifurcated by the essential elements of nationalism and revolution, respectively. In an absolute sense, revolutions (and especially decolonial revolutions for national sovereignty) aim to configure a new nation entirely. They aim for a break in the "continuity of consciousness" that is apparently so essential for sensed identity. Nationalism, on the other hand, aims to leverage that very continuity to reinforce the resulting sensed identity. Che and Fidel want to move the Cuban proletariat to break the described continuity *because* of a feeling of pride toward Cuba and its history. There was an imperative to identify personally with Cuba's independent national history, but because no such history was available (which I will discuss later in this paper), the revolutionaries identified personally with the struggle to establish one. In so doing, the contradiction of the national mission was resolved.

The revolutionaries made constant appeals to Cuba's past and worked to integrate the revolution itself into it. Fidel says: "Chronicles of our history, down through four and a half centuries, tell us of many acts of cruelty: the slaughter of defenseless Indians by the Spaniards; the plundering and atrocities of pirates along the coast; the barbarities of the Spanish soldiers during our War of Independence; the shooting of prisoners of the Cuban Army by the forces of Weyler; the horrors of the Machado regime, and so on through the bloody crimes of March, 1935. But never has such a sad and bloody page been written in numbers of victims and in the viciousness of the victimizers, as in Santiago de Cuba… He was not content with the treachery of January 1934, the crimes of March, 1935 and the forty million dollar fortune that crowned his first regime. He had to add the treason of March 1952, the crimes of July, 1953, and all the millions that only time will reveal."[17] In his celebratory May Day speech, Fidel says: "How different today's parade has been! How different even from the first parades after the revolution triumphed. Today's parade shows us how much we have advanced. The workers now do not have to submit themselves to those trials; the workers now do not have to implore deaf executives; the workers now are not subject to the domination of any exploiting class; the workers no longer live in a country run by men serving exploiting interests."[18] And later: "It has never happened in history that a revolutionary people who have really taken over power have been defeated. What would have happened this May Day if imperialism had won its game? That is why we were thinking of all we owed those who fell." Given the ostensibly incongruous impulses of national pride and revolution, Cuba's spoken history enabled the revolution to articulate itself coherently: its martyrdom as a subject of colonial violence and eventual vanguard

[14]Piero Gleijeses, Statement to the Closing Plenary Session of the National Congress for the Full Normalization of US-Cuba Relations
[15]Guevara, Notes for the Study of the ideology of the Cuban Revolution
[16]Locke, Book 2 Chapter 27
[17] Fidel Castro, History Will Absolve Me
[18] Fidel Castro, Cuba is a Socialist Nation

for the entire third world was the most essential component of both the new national mythology, and for national pride.

Carlos Puebla was an especially important articulator. His song *Hasta Siempre, Comandante* is written in response to Che's farewell letter to Fidel, and in it he sings: *Tu mano gloriosa y fuerte sobre la historia dispara, cuando todo Santa Clara se despierta para verte*. (Your glorious and strong hand shoots over history, when all of Santa Clara wakes to see you). What is this history that Che *shoots over*? Why did the ideology of Cuba's revolution develop such that anti-imperialism was just as essential as anti-capitalism itself, and how does this determine the character of Cuba's nationalism?

The Colonial Difference

The difference-maker between the socialist revolutions of eastern Europe and the Global South is the history of colonization. Cuba's pluralistic, transnational "nationalism" is only strange if one is blind to the context of colonization, and also to the fact that Cuba's revolution is part of a lineage of "nationalist," anti-imperialist socialist revolutions in the Global South. Cuba poses a particularly interesting case study for left wing complex nationalisms because of its success and consequent ability to materially realize its mission via foreign aid, but socialist revolutions of various colonial subjects have Cuba's strange nationalism in common. Ho Chi Minh's 1952 program to victory included the imperative "to closely link patriotism with internationalism,"[19] and elsewhere he writes, "... the VietNam Workers' Party has always grasped the identity between the interests of the struggle for the liberation of all peoples from imperialist yoke and those of the struggle for the liberation of the toiling masses from exploiting capitalism… genuine patriotism can never be separated from proletarian internationalism, and that the fraternal alliance between all fighters for a common cause - liberation of mankind, building of a classless society, peaceful co-existence and lasting peace - is unshakable."[20] In his victory speech Salvador Allende says, "Thousands and thousands of Chileans sowed their pain and their hope in this moment which belongs to the people. From beyond these borders, from other countries, people look with deep satisfaction onto our victory. Chile is opening a path that other peoples across America and the world will be able to follow. The vital power of unity will break the dams of dictatorships and open the course for other peoples to be free and to build their own destiny."[21] Similarly aligned movements in Mexico, El Salvador, Ghana,[22] Guinea-Bissau[23] and elsewhere also emphasized an internationalist nationalism.

These nationalisms–importantly absent from the socialist movements of Germany and Spain, which were non- or anti-nationalist—share a history of imperial and colonial subjugation, and they are consequences of that inheritance. Wilhelm Liebknecht, a founder of Germany's Socialist Democratic party, advocated searingly for demilitarization. He writes, "The talk of a universal military service in Germany is hypocritical nonsense. If military service were *universal,* as it is in Switzerland, the German Empire would not be what it really is – a half-feudal military despotism on the same level as the autocratic despotism of semi-barbarian Russia."[24] Contrast this with Fidel's universal call for Cubans to raise arms out of national fervor. Moving on to Spain: Manuel Azaña organized the coalition that would become Spain's Popular Front. In his novel *La Velada en Benicarló,* protagonist Morales, widely understood to be Azaña's mouthpiece, says: "A nation so conceived, with its own life superior to the life of its nationals… requires a system of morality contrary to its members. On behalf of that system of morality, I maintain that everything happening in Spain... remains noxious and fatal to our existence as a nation."[25] Contrast this with Che's insistence on national interests being definitionally identical to the interest of Cuban nationals. And Pablo Iglesias Posse founded the Spanish Socialist Workers Party (which joined the popular front during the civil war) on the principles of anti-nationalism. These non-nationalists were committed leftists, and all but Azaña described themselves as Marxists. Their ideas determined the shape of the socialist movement in Germany and Spain. Therefore, we should understand the internationalist nationalism of the socialist Global South not as demonstrated commitment to Marx (whose philosophy advocates internationalism over simple nationalism, and not a confluence of the two), but in terms of the

[19]Ho Chi Minh, The Imperialist Aggressors Can Never Enslave The Heroic Vietnamese People
[20]Ho Chi Minh, Consolidation and Development of Ideological Unity among Marxist-Leninist Parties.
[21]Allende's Victory Speech
[22] Nkrumah, Neo-Colonialism, the Last Stage of Imperialism
[23] Cabral, The Weapon of Theory
[24]Liebknecht, On Militarism
[25]Azaña, pg 121

history of colonial subjugation. The internationalism of the Soviet Comintern, for example, did not share the nationalist element of Cuba, Chile, Mexico, and Vietnam's internationalism. Such is the colonial difference.

Rootlessness

Cuba's revolutionary nationalism is a consequence of its history of colonial subjugation, and its resulting rootlessness. Anti-Americanism, anti-interventionism and anti-corporatism were not strictly (though they were) indispensable elements of Cuba's revolutionary ideology: they were also the requisite tools for the configuration of the nation itself, such that by advocating revolution one was also advocating the "simple" interests of ordinary nationalism. The "nation" was configured against the foreign interests that throughout its history threatened or suppressed its survival.[26] In this way, Cuban nationalism was a self-knowing reaction to colonial subjugation. As Che frequently said, the revolution would "build the new Cuba." The history of colonialism and interventionism was articulated as a threatening or abrogating force against the nation itself, and from here, the nation had to be either reinforced or re-installed via a new configuration and subjectification.[27] Cuban nation building, then, is contingent not just with Cuban history broadly defined, but specifically with the history of colonialism and interventionism.

The revolution of the 1950s is only one instantiation of a long history of Cuban nationalism as a reaction to its rootlessness. Martí was at once Cuba's foremost *pensador* and its crowning revolutionary, and Fidel and Che share his genealogy in common. On all counts he was the chaperone of Cuban nationalism during the independence movement of the 19th century. When colonial Spain successfully repressed *La Guerra de los Diez Años, La Guerra Chiquita* and the *Oriente* rebellion, Martí articulated—and finally tried to actualize—a new nationalism. Martí rises to prominence in the midst of something like a cultural stalemate in Cuba. By the 1880s nationalist liberation movements were fragmented and recovering silently from the blows of the early century, and in the throes of occupation Cuba was empty of national mythologies outside of its relationship with Spain. In the United States, our affection for the so-called "Founding Fathers" originates with the feeling that the nation began with them. Alienated by 3 centuries from the requisite agency of independence, Cuba was without a clear beginning (and so it had no past to build a nation on in the first place). From nothing—from the occluding rubble of colonialism—Martí was determined to make one.[28]

His magnum opus *Nuestra America* reads: "We can no longer be a people like foliage, living in the air, heavy with blossoms, bursting and fluttering at the whim of the light's caress, or buffeted and tossed by the tempest: the trees must form ranks so the giant with seven-league boots shall not pass!"[29] To be "like foliage" is to be moveable in an absolute sense. Marti illustrates that Cuba as a *nation* had no available memory of itself, and so it was incapacitated to act on its own behalf. For the trees to break from paralytic passivity and "form ranks," they must attain the memory and self-consciousness of national myth. Martí, then, saw his nationalism and national pride as requisite for liberation from colonialism. At the outset of the 1895 revolution, he writes, "We have no doubts about Cuba or its ability to obtain and govern its independence, we who, in the heroism of death and the silent foundation of the *patria*, see continually shining forth among the great and the humble gifts of harmony and wisdom, which are only imperceptible to those who, living outside the real soul of their country, judge it, in their own arrogant concept of themselves, to possess no greater power of rebellion and creation than that which it timidly displays in the servitude of its colonial tasks."[30] As with Che, the final purpose of Martí's nationalism was pluralistic. *Nuestra America* is trying to galvanize the *continent* to national pride and coordinated action against exploitation. Since Cuba had no independent national mythology Martí's pride was confined to the

[26]And by "survival" I mean "rightful ownership by the Cuban populace." These have identical meanings for people configuring nations (doing so is determining who belongs to it, and who owns it). Again, declarative statements about nations, statements about what nations ought and ought not to be, and statements about their survival are always reducible to their non-contingent element: people.

[27]The revolution was articulated in these very terms, which imply the contingency of nations themselves (if we react properly to our history, a new nation can emerge on this very same soil!). Such was the revolution's "self-knowledge:" by incorporating the reactive paradigm into the configuration of the nation, the theory of nation-building was itself underscored via the revolution's own practice of it.

[28]Recall the earlier discussion about the role of memory/historical knowledge in the formation of national identities.

[29] Martì, *Núestra America*

[30] José Martí and Máximo Gómez, Montecristi Manifiesto

history of colonization, which led inevitably to his immanent internationalism and sense of solidarity. Like the revolutionaries of the 1950s, Martí could convert Cuba's potential energy into kinetic energy only by identifying with it.

From his exile in New York, Martí founded the *Partido Revolucionario Cubano* and organized what would later become the Cuban revolution of 1895. A year into the war, Spain's Valeriano Weyler y Nicolau, remembered as *El Carnicero* (The Butcher), helped squash the revolution and forced a third of Cuba's population into the world's first concentration camps.[31] As the war for liberation ended the Spanish-American war loomed on the horizon, and by 1898 the United States had completely replaced Spain as Cuba's occupying force. The US left only on the conditions of the Platt Amendment, which preserved (among other things) the US's ongoing right to uninhibited intervention. Cuba gained its official "independence" in 1902 only by sacrificing its sovereignty, and the privative, unresolved rootlessness that motivated Martí's nationalism remained. Cuba's beginning would need to be postponed. In the 50 years that followed, the United States exercised that codified right liberally.[32] If they wanted to install a new national pride, Che and Fidel would have to configure a mass national identity from the privative raw material of an endlessly postponed beginning. In other words: without a national mythology outside of the colonial struggle, Cuba's nationalism depended on her martyrdom to it. Barred from beginning its own history, this nationalism needed to set its eyes outside of itself.

Conclusion

I have described Che, Fidel, and Martí's nationalisms as a reaction to a colonial cultural crisis, which distinguishes their respective revolutions from the anti-nationalist socialist movements of the Global North. That their nationalism was reactive and culturally grounded does not require it to be unexamined or immaterial, especially given its congruence with anti-imperialism. In Lenin's framework, imperialism emerges and inherits its form from the domination of capital: its function is identical to capitalist exploitation, and it mirrors the familiar capitalist relationships between workers, owners, and the means of production. Along with most socialist revolutionaries in the Global South, Fidel Castro described himself as a Marxist-Leninist and adopted his assessment of imperialism and capital. For Lenin, the "economic essence" of imperialism is scaled monopoly capitalism: "If it were necessary to give the briefest possible definition of imperialism, we should have to say that imperialism is the monopoly stage of capitalism."[33] On his account capitalism matures into imperialism as follows: first, highly concentrated capital leads to monopolies. These monopolies merge with banks, leading to an institutionalized capitalist oligarchy which exports not commodities, but productive means and capital overseas. International monopolies loom over the global economy, and lead to a labor division between *nations*. If imperialism and colonialism are macro-scaled instantiations of capitalist exploitations, then Cuba's nationalism was a demonstration of a type of class consciousness—and her internationalism a type of class solidarity. Here, the revolution regains its self-consciousness.

Joseito Fernández's *Guantanamera* hit radio in the middle of the interim between revolutions, and after Castro, the song—which takes lyrics from José Martí's *Versos Sencillos*— exploded to international fame. Borrowing from the third *Verso Sencillo*, Fernández sings, "*Con los pobres de la tierra / quiero yo mi suerte echar: / El arroyo de la sierra / Me complace más que el mar* [With the poor of the Earth / I will cast my destiny: / The mountain stream / Pleases me more than the sea]. Streams are transportive, but regional: a mountain stream might carry you, but only as far as the home of a neighbor whose life you can recognize. The sea is a torrent. It might cast you forcefully into the furor of confrontation with an antagonistic stranger, and it will require strain and attention directed beyond the neighbor on the other side of the mountain. A mountain stream might enable concerted, mutually beneficial action with someone whose interests you share. This fluidity—having limited geographic reach but infinite

[31]Andrea Pitzer, Concentration Camps
[32]Florida International University Cuban Research Institute, Chronology of US-Cuba Relations
[33]Lenin, Imperialism: The Highest State of Capitalism

social potential, and enabling contained, self-identifiable movement—is the very structure of internationalist nationalism. It is borne from colonial history. We share interests in common with our neighbors because we drink from the same water and breathe the same air; we are affected by the very same political systems, social phenomena, weapons of exploitation, and infrastructures of exclusion. Subjects of colonialism find themselves distanced geographically, but under the imposition of common imperial forces—so they are righteously pleased by mountain streams.

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Gender in the Cosmos:

Understanding the Evolution and Lack of Gender Diversity in Space Exploration

Eleanor Prince

Abstract: *In late March 2019, news rocked television, newspapers, and social media outlets as the National Aeronautics and Space Administration (NASA) announced that what would have been the first all-female space walk in history was canceled due in part to "spacesuit availability." Regardless of the veracity of attributions to sexism, the controversy brought to light the gender gap in space exploration. Over humanity's nearly sixty years of space travel, women's bodies have not been equally welcomed in space psychologically or physically. Few academics dispute this, as statistics show the clear-cut disparity: Despite making up almost 50 percent of the world's population, women have made up less than 11 percent of space explorers historically ("How Many" 2019). Instead, the question remaining is how these barriers to an equal female presence in outer space were constructed psychologically and materially. Although undoubtedly affected by the overall scarcity of women in STEM, space exploration as it stands today remains unwelcoming to women's bodies because of intertwining historical and design-centered barriers. This paper will examine how, despite being assumed to be one extension of the much larger disparity of women in STEM fields, women's bodies are not equally welcome in space because of forces unique to humanity's history and relationship with the galaxies. To do this, this paper will examine the existing assumption that the outer space gender gap exists only as part of the larger STEM disparity, discuss crucial gendering forces unique to space travel, explore how these intertwined historical and material barriers were constructed simultaneously, and discuss how a better understanding of how society decided whose bodies do and don't belong in outer space will better equip us to handle and make conscious decisions about expanding into the universe ethically.*

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In late March 2019, news rocked television, newspapers, and social media outlets as the National Aeronautics and Space Administration (NASA) announced that what would have been the first all-female space walk in history was cancelled due in part to "spacesuit availability." The organization had only prepared one medium-sized spacesuit, a process which takes up to twelve hours. So, when both astronauts Christina Koch and Anne McClain needed a size medium to comfortably leave the International Space Station, NASA chose instead to rearrange the schedule, replacing McClain with astronaut Nick Hague and rescheduling McClain's spacewalk for weeks later. News outlets, social media icons, and even public figures like Hillary Clinton spoke out, decrying blatant sexism while NASA and other aerospace affiliates pointed out that this shuffling was routine and the most practical, cost-efficient solution. In fact, neither NASA nor the astronauts involved had realized the planned Koch-McClain walk would be a historic first until it was pointed out by outsiders.

Regardless of whether the incident was blatantly motivated by sexism, however, the controversy brought to light the gender gap in space exploration. Over humanity's nearly sixty years of space travel, women's bodies have not been equally welcomed in space psychologically or physically. While NASA provides an apt American example, this issue extends to other powerful forces in space history including Russia as well.

Few academics dispute this, as statistics show the clear-cut disparity: Despite making up almost 50 percent of the world's population, women have made up less than 11 percent of space explorers historically ("How Many" 2019). Instead, the question remaining is how these barriers to an equal female presence in outer space were psychologically and materially configured.

To understand the origins and nature of the barriers that exist today to a greater female presence in space exploration, one must examine both the history and technical complexity of space travel simultaneously. Since the very creation of the astronaut in 1961 when Yuri Gagarin became the first human to enter outer space, gender has been entangled in the history, design, and development of what became the "astronaut." At the same time, however, an equally worrying gender gap exists today in all STEM fields: US women hold only around 30 percent of the nation's STEM degrees and only about 25 percent of the nation's STEM jobs (Ornes 2018). Can space exploration's unique dilemma be separated from this overall deficiency in technical fields? Is the absence of gender equality beyond Earth's atmosphere a mere extension of the same problems we face back on the planet, or are forces particular to the extremes of travel beyond Earth's orbit significant enough to merit separate study?

Although undoubtedly affected by the overall scarcity of women in STEM, space exploration as it stands remains unwelcoming to women's bodies because of intertwining historical and design-centered barriers. In what follows, this paper will examine how, despite being assumed as an extension of the much larger disparity of women in STEM fields, women's bodies are not equally welcome in space because of configurations unique to humanity's history and relationship with the galaxies. This paper will examine the existing assumption that the outer space gender gap exists only as part of the larger STEM disparity, discuss crucial gendering configurations unique to space travel, explore how these intertwined historical and material barriers were configured simultaneously, and discuss how a better understanding of how society decides whose bodies do and don't belong in outer space will better equip us to handle and make conscious decisions about ethically expanding into the universe.

THE STEM GENDER GAP: AN UNDENIABLE ADVERSARY

All STEM fields today are plagued by a severe shortage of female workers. Although figures are slowly rising year by year, only around a quarter of US STEM jobs are currently held by women (Ornes 2018). STEM fields that specifically lead to careers in space exploration undoubtedly suffer from the large disparity in gender representation along with all other STEM fields, and many of the same forces seem to cause these gaps. In their eight-year Longitudinal Study of Astronomy Graduate Students (LSAGS), Rachel Ivie, Susan White, and Raymond Y. Chu measured whether women leave the field of astronomy at different rates than their male counterparts, and if so, their reasons for doing so. They found that women leave astronomy more frequently than men because of two factors especially: imposter syndrome (the belief that one's accomplishments, unlike those of talented others, came about through luck, not genuine skill) and the two-body problem (the difficulty for dual-career couples to find two professional/physics jobs in the same geographic location) (Ivie, Rachel, et al. 2018). These dilemmas appear in all scientific positions today; the societal pressure for women to accommodate their partners' occupations and the socially constructed inferiority complex set up for women in science certainly pertain to fields more general than space-related endeavors. Beyond this generally "leaky pipeline" of women in STEM, overall gender bias also effects publication practices in space-related fields. In their 2017 *Quantitative Evaluation of Gender Bias in Astronomical Publications from Citation Counts*, Neven Caplar, Sandro Tacchella, and Simon Birrer found that females still have only authored around 25 percent of recent publications, with the percentage reaching only 17 percent in the most prestigious journals. Beyond participation, however, the researchers show that female authors receive 5.6 ± 1.0 percent fewer citations on publications. These trends mirror tendencies in all STEM fields: women authors publish less, receive less exposure in prestigious settings, and are cited less frequently. With fewer publications and citations under their belt, just as in any other scientific field, women have less authority with which to approach the space industry.

Gender disparities in space, however, cannot be fully explained by these overarching STEM trends, as feeder fields that lead to careers as astronauts consistently rank as some of the worst fields in terms

of gender diversity. Only about 19 percent of physics doctorates awarded in the US go to women, only 2.5 percent going to women of underrepresented minorities ("Not All" 2017). In a 14-year study, researchers at the University of Melbourne found that not only do physics, astrophysics, and astronomy, all critical fields for female scientists looking to travel to space, rank near the very bottom when it comes to female-to-male paper author ratios, but their rates at which the gender balance is evening out are distressingly the slowest of any fields (Holman 2018). At its current rate, astrophysics will reach a gender equilibrium in 131 years, one of the slowest rates of any STEM field. Most alarming is physics: With only around 13 percent female authors currently, the researchers predict it will take 258 years before the gender balance of senior positions is even within 5 percent of parity. Considering research publications contribute extensively to career prospects and visibility in the scientific community as well as individual confidence and belief, the worrying stagnation in improvement in space-related STEM fields suggests that while all women in STEM are fighting an uphill battle, women pursuing physics and astronomical fields face even more daunting obstacles. It is glaringly obvious: There is a gender problem in STEM. It is even worse in astronaut classes, however. In fact, feeder fields for astronaut classes like physics exhibit some of the grimmest statistics. Are there more forces at play in outer space gender disparities beyond general STEM discrimination? Even if STEM forces contribute to this problem, the gap is worst in space-related fields, prompting us to look at other forces unique to space exploration for answers.

HISTORICAL CONTEXT AND THE SPACE RACE

To examine the historical configurations fueling outer space's gender disparities, one must first understand the history of the Space Race. In 1945, as the Second World War ended, Stalin began Russian expansion of control into European countries (Kolbe 2017). This worried the democratic, capitalist United States, leading President Truman in 1947 to pledge financial and military support to countries threatened by the Soviet expansion, triggering the beginning of the Cold War. The two powers clashed ideologically, traded threats, and fought proxy wars. The Space Race, however, began when the US declared its intent to launch the first artificial satellite into outer space. The Soviet Union, eager to gain any technological upper hand, responded by saying they would do the same "in the near future," beginning a struggle for outer space superiority watched by the entire world. The Soviets prevailed in their original objective: In October of 1957, the USSR successfully launched the satellite Sputnik 1 into space. Even further damaging American pride, in 1961, Soviet astronaut Yuri Gagarin successfully orbited Earth, becoming the first human in space. Only a month later, President John F. Kennedy ambitiously vowed before a joint session of Congress to put an American man on the moon before the decade ended. Less than a year later, John Glenn successfully matched Gagarin's feat of orbiting earth, further fueling the race to the moon. The next year, in 1963, Russia sent the first woman to space: the young engineer and parachutist Valentina Tereshkova. Finally, on July 20, 1969, Neil Armstrong fulfilled the visionary American goal as he took the first steps on the moon: "That's one small step for [a] man, one giant leap for mankind." 723 million people worldwide watched the moon landing from home and heard those famous words with jaws dropped, but fifty years later, Armstrong's inadvertent mention of gender leaves one to wonder the effects of him and nearly all other pioneering cosmonauts being male.

MYTHS OF MASCULINITY ROOTED IN AMERICAN HISTORY

Any examination of the historical growth of the masculine astronaut must begin where the narrative itself began. Since the very creation of the astronaut in 1961 when Yuri Gagarin became the first human in outer space, gender has been entangled in the human space explorer's cultural mythology and iconography and the discussion surrounding it. The extreme nature of space—the extreme distance, the physical demands, solitude, desolation—amplified masculine-associated stereotypes of men beyond the stereotypes found in earth-bound STEM fields. In his book *The Astronaut: Cultural Mythology and Idealised Masculinity*, professor of media Dr. Dario Llinares argues that the astronaut fell in line with deep-seated American myths that therefore transferred their excessively masculine undertones. At its core, the astronaut was a man leaving his home to fight the bad guys, to earn a living for the family, to explore the unknown, and to colonize what he believed was his.

The extreme distance astronauts traveled and the grandiose scale of their task both fit into and magnified the stereotype of men as the breadwinners of the family who had to leave their subordinate, less capable family back home while they provided for their dependents. To provide for their family, they did not leave town or the country, but the entire planet. Even one of the original writers of the *Life* magazine feature Llinares analyzes saw the nuclear family roles baked into the astronauts' narratives, calling them "seven attractive and demonstrably intrepid Americans with bright photographable wives" (*Life*, 1986, qtd. in Llinares). *Life* even used uncamouflaged declarations of the man-of-the-house role taken on by astronauts like John Glenn, explaining "John Glenn is very much a 'family man' and the relationship between him and his wife and their teenage son and daughter is deep and solid." Astronauts during their early days were painted as breadwinning husbands providing for their dependent families to seem like any other American father. This down-to-earth, paternal image of the astronaut played into the democratic, patriarchal American narrative of the nuclear family and made for a happy story in *Life*, but in the process clearly cemented the role of an astronaut as inherently male.

The astronaut also fits perfectly with another classic American and stereotypically male archetype: the pioneer. The astronaut became a westward expander, a "pioneering cowboy" that, instead of heading to the final frontier of the West, headed to the final frontier over our heads (Llinares 2011). Like the cowboy of American lore, astronauts were rugged individualists venturing off into unknown land that to them (whether true or not) was uninhabited, unclaimed, and rightfully theirs. They could tame it, subdue it, make it in their own image, and leave when they were ready. They brought civilization and progress—hallmark values of the Space Race—to the space's uncultivated void. Unlike other STEM fields, outer space provided a new frontier on the most massive scale, allowing Americans to project their male-biased stereotypes of cowboys and pioneers onto astronauts.

Finally, the astronaut slid perfectly into stereotypically male myths of the zeitgeist of Cold War America: The astronaut was the American hero, the capitalist, democratic patriot going off to fight the Communists. The media and politicians of the 1950s and 1960s continually depicted the Soviet Union as the "Red Menace" out to bomb innocent families, instilling a ubiquitous sense of paranoia in daily life and discussion. Therefore, when *Life* magazine ran front covers in 1962 with John Glenn and his wife Annie waving and giving a thumbs-up amid a cheering parade, bisected by a vibrant American flag and accompanied by President Lyndon B. Johnson, readers immediately bought the depiction of the astronaut as a national hero defending America against the President's and America's enemy, the USSR (Llinares 2011). *Life* even quotes astronaut Gordon Cooper as stating, "If we don't keep moving, maybe the Russians are going to win a few of these blue ribbons" (Llinares 2011). The astronaut became a defender against Russian space superiority and, by association, all Russian communist threats. Unlike in other STEM endeavors, the otherness of outer space and the exaggerated "us versus them" mentality of the Cold War that developed at the same time as the conception of the astronaut created a public figure that was synonymous with a hero going off to fight the evil "red menace" and protect American capitalism and democracy. This image, however, is filled with masculine undertones: Men fought as soldiers, as spies, and as defenders. The astronaut seemed to be no different.

FEMALE ASTRONAUTS: THE HISTORICAL ANOMALY

All of these historical myths and archetypes are indisputably loaded with stereotypically masculine undertones. During a time in US history when Americans wanted an everyday, pioneering, comforting, truly American hero, a male seemed to fill that spot. The default image for a savior in outer space became a male. But how did the exact chronology of American outer space efforts further this historical barrier to women in space? Incidentally, the US almost achieved further gender equity in the 1960s when thirteen American women, coined the "Mercury 13," underwent screening tests to become astronauts through a privately funded program. The group of qualified female pilots underwent rounds of testing including injections, dizziness training, and more to determine their fitness for space (Friedman 2014). However, continuing the Mercury 13 program and the training of female astronaut candidates was considered "social experimentation" compared to the scientific work in which male astronauts were already involved. On May 25, 1961, President John F. Kennedy spoke in front of Congress and set the goal

of getting to the moon by the end of the decade. Since the US at that point had only achieved 15 minutes of suborbital human spaceflight, NASA and the entire country had a ginormous goal ahead. All resources, personnel, and efforts would have to be directed towards this single national effort, not social experimentation. Thus ended any chances at "experimenting" and putting women in space; questions about whether women could be astronauts became perceived as potential distractions. The Mercury 13 were scheduled for further testing at the Naval School of Aviation Medicine in Pensacola, Florida, but NASA declined to allow the visit, and the Navy subsequently cancelled their trip. The quintessentially American and overly ambitious push for a man on the moon, the way America always seemed to operate in space, pushed women to the side in the name of achieving a national goal.

This masculine myth of the American astronaut is still pervasive today. This psychological obstacle played out on a national scale during the 2007 arrest of astronaut Captain Lisa Marie Nowak, who, after being charged with kidnapping, battery, and destruction of evidence surrounding her relationship with a boyfriend, was depicted in the news consistently using two contrasting photos: one, her NASA publicity photo, orange spacesuit and all, and the other, her post-arrest mugshot. Social media and news outlets jumped at the chance to use a photo with two such seemingly disparate characters. It "play[ed] upon and reaffirm[ed] a gendered discourse in which the identities of 'woman' and 'astronaut' have historically been constructed as antithetical" (Llinares 2011). Even when the two identities coexist, their coexistence is an anomaly: One does not have to search far to find the slew of articles on women astronauts that employ terms such as "Astonautrix" or "Spacegirl" to highlight their unusual femininity. The media, informed by years of stereotypically male archetypes of space explorers, characterized women as women first and astronauts second by stressing differences in biological sex. Portrayals and myths in American lore, historical NASA discourse, and today's media come together to create a historically crafted psychological barrier to women (and any gender-diverse individual) trying to enter the world of space exploration: Any individual that does not project a stereotypically masculine identity will be seen as "wrong," not fitting, and out of place.

PHYSICAL DESIGN: GENDERED INNOVATIONS AS BARRIERS

Many academic voices attribute the gender disparity in outer space to a systemic issue in how our culture has viewed and views gender. Psychological configurations unique to space do not wholly take responsibility, however. Many of the barriers to an increased female presence in space are literal, physical barriers like overly bulky suits or an extra few inches preventing women from operating machinery. While many academics and researchers attribute outer space's lack of diversity to systemic ideological and cultural barriers, many other experts in the industry disagree and blame physical design barriers for creating an outer space environment unwelcome to women, the 2019 spacesuit controversy being just the beginning. An examination of this history of physical and technological design that closely followed the already discussed nation-wide historical developments is crucial.

What began as a historical policy obstacle to females in space later gave way to a design obstacle in the journey to space itself. When NASA selected its first astronauts, US laws stated that all candidates must have engineering degrees and pilot's licenses from military testing programs. The military, however, strictly banned women from being test pilots (Blakemore 2019). Not only did astronaut applicants indirectly have to be male since women could not meet the requirements due to military policy, but aircraft design was built with the male anatomy in mind. In her article *Manufacturing Gender in Commercial and Military Cockpit Design*, Rachel N. Weber argues that aircraft cockpit design has protected flight as a male occupation: All aircraft, both commercial and defense, was built and designed originally for men. In fact, today, even with slightly adjustable seats, many women (and smaller men) lament hard-to-reach controls on the right side of the control panel (required when the system must be manually operated) and heavy equipment that is difficult to use with statistically less upper body strength (Weber 1997). The predominance of male-serving design during previous times in history when the only users were male is not surprising; What should sound the alarms is that, as women were incorporated into astronaut classes in the 1970s and up to today, many designers still did not and are not manufacturing for women. Although government and military aircraft have slowly begun to

adapt and redesign due to cost efficiency and standardization, private companies still seem to drag their feet to make their aircrafts conducive to female pilots. "Left to their own devices," Weber explains, "private contractors do not design cockpits to fix female anthropometry because there is no incentive to raise their own costs." Although airplane cockpits are technically an aerospace and not astrospace design concern, women astronauts must fly planes in the atmosphere extensively to obtain pilot's licenses, and the hostile design specifications still continue in spacecraft once they gain access.

In the late 1970s, with the passage of US anti-discrimination laws concerning gender, female astronauts became a possibility, the first being Sally Ride. Internal spacecraft design, however, was unprepared. Female bodies were physically unwelcomed in space because sanitation design initially made their travel in space impossible. The first urine-catching devices used in space travel were latex "roll-on cuffs" that resembled condoms, coming in three sizes but often leaking (Friedman 2014). Even if women had been given the chance to fly alongside their male counterparts earlier on, their basic bodily functions would not have been accommodated. It was only once women slowly began to join astronaut classes that NASA was forced to create the Disposable Absorption Containment Trunk, a sort of absorbent diaper-like bike short that at the very least kept outer layers of clothes and spacesuits dry (Brueck 2018). Until Sally Ride's flight, there was no women's locker room. Before then, women would have had no physical privacy whatsoever to change or relieve themselves. With her also came the commodes: Finally, women's bodies could at the very least eliminate waste in space even though men were already operating with ease. Even solutions for feminine hygiene were thrown-together firsts, one grossly uninformed male engineer even asking, "Is 100 tampons enough for one week?" (Friedman 2014). Until it was government-mandated and urgent because of flights by pioneering women like Ride, women were unwelcomed in space because sanitation design in spacecraft physically prevented them from performing everyday bodily functions.

Not only do physical design barriers to women in space exploration reveal historical biases that existed during space innovation, but they divulge the underlying common misogynistic fear when it comes to women's bodies: that a woman's body is volatile, unable to be preserved in extreme environments, and needs to be protected and contained. This misconception is certainly not specific to space, but the setting of space magnifies it beyond any doubt. Outer space is the most extreme of settings, and therefore the fear of an uncontrollable female body in an extreme environment is amplified. Why design for women in space when they will need more protection and control? Biology, however, does not confirm this; in fact, it shows the opposite: Women are fine in space. Both sexes experience differing minor changes in zero gravity. Studies show that male astronauts on average experience worse vision loss, while female astronauts on average experience worse orthostatic intolerance, or inability to stand for extended periods of time (Mahoney 2016). The differences in adaptation to zero gravity between the sexes seem insignificant with the research gathered thus far. In fact, mission managers today can theoretically prepare overall for a journey to Mars without considering the crew members' sexes (Warren 2015). Women in many ways are even the ideal astronaut: They outperform men in isolation tests, have better average cardiovascular health, and are smaller in average size, thus requiring less food, water, and oxygen (Weitekamp 2017). Somehow society has configured an image of a woman's body as a fragile, volatile thing. A woman in the wild is somehow unsupportable, unpredictable, and uncontrollable, and an extreme environment like space amplifies this delusion.

CONCLUSION: STAKES AND THE EASE OF CATEGORIZING AND CHECKED BOXES

Space is an easy thing to celebrate. We look back on the individual Space Race achievements as victories for humankind. We all tune in to watch SpaceX launches to this day. Each achievement is monumental and one-of-a-kind, likely not to be seen again for years to come. The milestone-focused nature of space endeavors, however, can be a detriment to increasing any sort of diversity. The fact that every mission takes decades of work, everything is a milestone, and everything is sensationalized by national media means that, both historically and now, sending women to space can more easily be seen as a "token" or "checked box." When the Soviet Union's Valentina Tereshkova became the first woman in space in 1963, many NASA engineers dismissed her flight as a "political stunt" (Weitekamp 2017). The same would never be said for male astro-

nauts' flights: They instead were seen as achievements for their nation or mankind. This need, to check boxes, continues today for better or for worse: With the Trump administration pushing for an American moonwalk by 2024 and a therefore increased budget, NASA has announced their new mission Artemis, which hopes to put the first woman on the moon (Chang 2019). On one hand, having women achieve the same monumental moonwalk as men did is a step towards gender parity, but at the same time, a trip to the moon is not necessarily the most scientifically advantageous step, and the same women could take the helm on any other current groundbreaking space travel endeavors. Tokenism and the dangerous tendency to see diversity as "checked boxes" certainly occurs in all STEM fields, but the milestone-centered, once-every-few-decades nature of space exploration makes it all too easy to see the first woman or the first anything other than white male in space as a checked box, not an underrepresented minority that needs continued attention and support in that field.

Space is equally and dangerously easy to compartmentalize. Following the innate tendency to break up inconceivably vast concepts and objects into smaller, more understandable parts, one inevitably tends to understand outer space history and its gender gap in discrete units: the STEM problem, the historically ingrained stereotypes, the media bias, the chronology of design, and more. In the interest of coherence, this paper has followed this exact structure as if these were discrete categories, opting instead to show their configuration by making connections between historical sections. This paper also, however, aims to use this ease of understanding that comes with its organization as a warning: This itemized thinking in larger contexts of the discussion on gender in space is a dangerous obstacle in our understanding. Space exploration remains unwelcoming to female bodies because of the last half century of intertwining national and design histories. Required is an examination of the many ways by which space is configured for a certain gender. In this, necessary are spacesuits for astronauts of all shapes and sizes, more research on women's and non-binary bodies, a new American astronaut archetype free of gendered associations, and women's interests as included and centered in the establishment of future extraterrestrial colonies.

Why does gender parity in space matter? Beyond diversity, does morality and equality hundreds of kilometers above our heads matter to those of us on earth? The STEM gender gap is certainly easier to feel the effects of: Our doctors often are one gender due to medical school trends, and technological innovations like Siri and Apple Watches suffer in the markets when their male-heavy engineering teams make gender-biased missteps. The gender gap in space seems less immediately tangible but is in fact crucial to life back on earth: Not only is equal opportunity moral, but it also allows for increased medical research data and a gender-representative future of space colonization. Alleviating space's gender inequity will work in conjunction with solving overall gender disparities in STEM fields–through educational initiatives, outreach, mentorship, hiring, and public pressure–but urgency to fix the space-specific issues is just as crucial.

Experiments conducted by astronauts on the International Space Station provide the scientific community with crucial data not only about space itself but about the human body. Observations of how each astronaut adjusts to and survives in the microgravity environment provide valuable insights into how human bodies behave back on earth. However, with so few female astronauts having traveled to space, there is a significant difference in the amount of data on men and women (Mark, Saralyn, et al. 2002). To further female health studies even back on Earth, more female astronauts are necessary. Additionally, space shuttle missions are slowly giving way to more long-duration stays on the International Space Station, meaning that major gaps in knowledge about health in space will have larger effects, but there will also be even more opportunities for long-term study of female body behavior in space if more women are sent.

Gender representation in space exploration is even more pressing because the huge consequences of space discovery offer a chance to reap the long-term benefits of turning the scales. Outer space is the next frontier just as the West was centuries ago. Aerospace companies now work on small-scale missions that will eventually contribute to colonizing space, and increasingly alarming reports from environmental researchers about the state of our own planet suggest that use of other planets may someday be necessary if humans want to continue to live in a hospitable environment.

But a quick glance at the history of human colonization reveals that males colonized Earth. Males—Columbus, Vespucci, Magellan—chose where, when, and who of the human race got to expand, and with that power, patriarchal society and structures oppressive to women were resolidified throughout the globe. The day far in the future when today's scientific advances allow humans to colonize space will provide a second chance to choose the demographics of who sets up shop in the new land we explore. If we have the opportunity to decide who explores and eventually colonizes space, shouldn't we avoid making the same mistake and make sure that our explorers are gender-diverse? If we now know that the current dilemma is a problem of understanding the gender gap in space exploration as unique to space and not an extension of underrepresentation in STEM, then we can move forward and approach and solve the problem as one unique to space and our relationship with the cosmos.

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Shades of Gray between Care and Abuse:

The Hybridity of Black Medical Mistrust

Iyanu Dare

Abstract: *The origins and continuation of medical mistrust felt by African Americans is often reduced to a single cause: historical inequitable medical care for African Americans. The impact of medical mistreatment of African Americans during slavery, forced sterilization by medical professionals during the eugenics movement, and unconsented experimentation had on the black patient-doctor relationship is addressed in this research paper. However, this research paper goes beyond most other mistrust studies to examine how scientific racism, race-based medicine, and doctors' implicit biases continue to thrive today, demonstrating that racial inequity in the healthcare system is not only a relic of the past, but also a feature of the present, and thus continue to fuel black medical mistrust. Given this, it is essential to consider how this research paper explores the hybridity and complexity of black medical mistrust as a result of past and present black medical mistreatment, as well as the use of mistrust as a self-preserving tool against systemic race-based inequities in medical institutions and health professionals in the United States, in order to develop effective solutions to black medical mistrust.*

Introduction

"Your wife just isn't a priority right now."

Charles Johnson received this response while anxiously waiting by his pregnant black wife's side. They were in Cedars-Sinai Medical Center on April 12, 2016, for the birth of their second child. He recalls holding her hand as he watched her foley catheter—intended to drain her urine—incrementally "turn pink with blood" (Pahr 2020). As the critical seconds turned into minutes that turned into hours, his fearful pleas concerning his wife's health were relentlessly ignored by the surrounding clinicians. Finally, at 12.30 am the next morning, it was decided that his wife, Kira, would be taken to surgery. "When they took Kira back to surgery and opened her up, there were three and a half liters of blood in her abdomen from where she'd been allowed to bleed internally for almost 10 hours. Her heart stopped immediately," Mr. Johnson painfully recalled. His wife's identity as a black woman is what he felt led to the astute disregard for her health and the carelessness of her doctors regarding her treatment had led to Kira's avoidable death. The Johnsons are not alone in their grief. Cases of such flippant treatment of African Americans, dismissals of their health concerns, and trivialization of their pain by their medical professionals are ever-present. African Americans have been and continue to be mistreated by medical professionals in the United States. A poll in October 2020 found that 70% of Black Americans say they are treated unfairly by the health care system and 55% say they distrust it (Hostetter and Klein 2021). There is a lack of trust that medical professionals care and want the best for black patients, see them as humans who have emotions and feel pain and happiness and deserve access to the best quality care tailored to their needs. This has shaped the prevalent medical mistrust of US medical professionals and institutions rife in many African American communities. Medical mistrust is the absence of trust that healthcare providers and institutions genuinely care for patients' interests, are honest, practice confidentiality, and are effective.

This research paper explores black medical mistrust in the United States to highlight the gaps in our understanding of its configuration, examine how mistrust is used as a survival mechanism, and suggest how a more holistic understanding of mistrust could shift the focus of current

solutions to more fruitful ones. Current researchers understand black medical mistrust as a product of historical black medical mistreatment. This is discussed first as an awareness of this history as crucial to understanding black medical mistrust. However, current discourse often omits the fact that black medical inequities still occur in the present-day whether in the form of overt racial biases such as those demonstrated in Kira Johnson's traumatic death or implicit biases of both doctors plagued by their unfounded race-based assumptions (diverging pain thresholds or health classifications) and their race-corrected medical tools. Therefore, African Americans still face many barriers to receiving effective and equitable care. This fuels the distrust in the ability and desire of medical institutions that are unjustifiably labeled as non-compliant or uneducated about the benefits of western medicine ignoring the broader institutional issues that remain. Thirdly, this research paper prompts the reconsideration of the assumption that black medical mistrust is solely detrimental to health. It shows how mistrust is re-configured as a tool of innovation and self-preservation in African American communities against persistent racial discrimination. These elements represent the hybrid nature of medical mistrust as a composition of these facets interacting. If health professionals, including medical students and health policymakers, have a better understanding of the complexity of black medical mistrust, they will be better equipped to devise effective solutions to establish a more inclusive, equitable healthcare system that African Americans can trust in.

Historic Systematic Maltreatment of Black Bodies

When looking at historical black medical mistreatment, the horrific 40-year Tuskegee Experiment (1932-1972) funded by the US Public Health Service is often depicted as key in the development of black medical mistrust. This was when six hundred African Americans were unknowingly entered into an untreated Syphilis trial and denied treatment so they could be observed until death (Tuskegee University). However, this section goes beyond Tuskegee to show how the mistreatment of African Americans is endemic to America's medical history by considering the two earlier periods of slavery and the eugenics movement. The horrific medical treatment of African Americans demonstrated in this section emphasizes how US medical institutions themselves have stimulated their mistrust of a system that has perpetually abused or disregarded their medical rights.

The Enslavement of African Americans

Since their forced arrival in the United States when the first transatlantic slave ship reached the Americas in 1619, African American bodies have been seen as inferior and the property of white people. The health of African Americans was not valued with either their access to healthcare being exceptionally low, or their bodies being abused or experimented on by health practitioners when it served the white population. Apprehension in Africa to arrival in the United States carried a high mortality rate; for every one hundred black slaves that arrived in America, 40 died in Africa or during the middle passage. Due to the inhumane conditions, the middle passage was especially brutal, and the medical doctors on board provided little to no relief. In fact, because black bodies were considered property, insurance would not cover ill slaves' medical bills, but instead, covered the economic loss of slaves lost by illness. So, medical insurance providers incentivized merchants to throw ill Africans overboard which frequently occurred (Digital History). Black bodies continued to be regarded for their economic potential and had diminished rights compared to their white counterparts. This taught African Americans throughout their apprehension that US institutions did not see them as human beings whose lives were of much value.

Throughout their enslavement, the mistreatment of black bodies expanded to include the use of medicine as a torturous device, evoking a deep distrust of US medical providers. The disregard for slaves' health and well-being worsened upon arrival for those who survived the transportation. Slaves' bodies did not belong to them, but to their masters, and no treatment could be performed on them without the masters' permission. Medicine was commonly used as a form of slave punishment.

For instance, the prevalent dehumanization of black bodies resulted in a rapid increase in experimentation on enslaved black people. Such experimentation is the foundation of many medical breakthroughs in Western medicine, which is why understanding this history is important in understanding the present-day component of black medical mistrust. The abuse of black women's reproductive organs such as experimentalism was particularly lucrative and therefore was a saturated form of abuse. This often took the form of experimental procedures that were not permitted to be trialed on their white counterparts

being trialed without consent or anesthesia on African American women. Renowned as the "Father of Modern Gynecology" (Holland 2018), in the mid-1800s James Marion Sims rose to prominence as a scientist by developing surgical techniques to make childbirth easier. The revolutionary techniques he pioneered were developed through extensive testing on groups of black women he purchased and housed in a remote hospital behind his Alabama home. He did not use anesthesia during the approximately forty surgeries performed on each slave. The experiments were not only painful but also incredibly invasive, as they involved repeated genitalia incisions as he invented the vaginal speculum (Ojanuga 1993).

In 1876, Dr. Sims was elected president of the American Medical Association, and two years later, he was elected president of the American Gynecological Society. Thus, many of the scientists, like Dr. Sims, who engaged in non-consensual experimentation on black slaves, such as Dr. Sims were not outlaws but instead were highly regarded in society as distinguished brilliant scientists. Neither medical journals nor society framed their experiments as medical abuse since it was widely accepted to experiment on and abuse black bodies because they were seen as the scientist's property.

African Americans were seen as more available and more accessible as rendered physically visible by their color but legally invisible due to their slave status and so the historic need for medicine to use bodies for teaching, experimentation, and medical advancements were possible at the detriment of African American bodies (Savit 1892). Throughout slavery, African Americans were undervalued, medically abused, and killed. People who physically and emotionally traumatized African Americans were at the forefront of national American medical organizations and were lauded as innovators in their field, leading African American people to distrust American medical institutions from their first encounter with them. Slavery and black medical mistreatment, while seen as historical, have persisted for most of American history, and such deep-rooted systematic mistreatment of black bodies has long-term consequences that should be recognized in the present day, one of which is black medical mistrust. Now that African Americans have legal autonomy over their own bodies, many reconsider relinquishing that into medical systems that were founded on the abuse of their bodies that were medically unprotected.

The Eugenics Movement and the Rise of Scientific Racism

"We don't allow dogs to breed. We spray them. We neuter them. We try to keep them from having unwanted puppies, and yet these women are literally having litters of children…" (Harris 1990)

The freedom promised to slaves by the Emancipation Proclamation in 1863 (National Archives), while a liberating step forward for African American rights, did not automatically result in equal treatment of African Americans by medical institutions in the United States. In 1883, Francis Galton, Charles Darwin's cousin, coined the term "eugenics," which is derived from the Greek word "*Eugene,*" which means "well-being" or "noble" (The Eugenics Archives). He proposed that the social ills of society could be solved by firmly discouraging the birth of unfit children, referring to black people, indigenous people, and the disabled, whom he considered feeble-minded with poor genetic profiles. Instead, he advocated for the birth of beautiful, healthy children with intelligent characteristics, referring to white babies. This goal was widely accepted by scientists and the popular media in the United States and around the world leading to the Eugenics Movement in the twentieth century. This occurred in tandem with the rise of scientific racism to justify the continuation of the abuse of black bodies that occurred during the eugenics movement because they did not fit the mold of genetic perfection. This movement resulted in medical atrocities to limit African Americans' reproduction such as the systematic sterilization of black women. Many instances of medical abuse in the Eugenics Movement were justified by scientific racism. When proponents of anti-black rhetoric and white supremacy ideologies shape or use science to justify their pre-existing racial biases. This is referred to as scientific racism.

The use of scientific racism throughout the Eugenics Movement to perpetuate the notion that African Americans were genetically inferior led to a rise in unfounded scientific 'facts' about the bodies of African Americans by medical providers that desired to rally public opinion against the health and well-being of African Americans. African Americans could not trust scientific discoveries as most were biased against them through scientific racism and any that did have trust were punished by falling victim to the deception of US medical pro-

viders that hoped to limit black reproduction. Harriet Washington argues in her book *Medical Apartheid* that black women were labeled as "sexually indiscriminate" and "bad mothers who were constrained by biology" to have "defective children." Black men were also stereotyped as having a proclivity for violence, stupidity, and poverty. Overall, black parents were vilified.

One of the most heinous examples of scientific racism in action was the sterilization of black women. US states began to enact sterilization legislation to achieve the vision of a genetically superior society. Despite Hitler's 'Aryan race' agenda being the most notorious connotation of eugenics, even he drew inspiration from the United States, where eugenic sterilization initiatives were already underway (Holocaust Agenda). Many of these untold stories are not widely known or discussed in black medical history publications. Sterilization laws gave leeway to those who sterilized African Americans, which resulted in African Americans of any class or wealth being four times more likely to be sterilized than poor or disabled white women (Institute for Healthcare Policy and Innovation, University of Michigan 2020). Most black sterilizations were carried out illegally and facilitated through the use of deception by medical professionals. Clinicians forged consent forms, lied to patients, and falsified medical records to maximize black sterilization rates therefore the exact number of black women sterilized is unknown (Washington 2008). As time went on, anti-black reproductive tactics grew to include administering inaccurate medical advice. As recently as in the 1970s and 1980s, black women were far more likely to be misled into sterilizations that were not medically justified. This is because hysterectomies were propagandized as the only curative option for many black ailments. All this medical abuse was done against black bodies to prevent black reproduction.

Mistrust of the US medical system grew expeditiously as it became clear to black people that it not only undervalued their bodies but also sought to eliminate them from the gene pool. Even the fundamental integrity of the US healthcare system was called into question as science began to be designed to fit anti-black agendas, as well as black human rights violations became increasingly common. Many campaigns today hope to 'educate' black people about the progressive nature of modern medicine to build trust. However, it is important to note that during the eugenics movement, the demonization of black parents, including forced sterilizations and frequent deception, was viewed as progressive modern science. As a result, black people have developed a critical eye for medical progress (Dr. Williams 2017). So, an awareness of this historical mistreatment is needed to understand why simplistic solutions–such as campaigns presenting modern medicine as progressive–are often ineffective. For African Americans, progress does not always imply improvement, particularly when it comes to the medical treatment of black bodies. As a result, they are still hesitant to trust modern medical advancements today as the 'do no harm' standard for doctors was blatantly disregarded when it came to African Americans.

The slavery and eugenics periods are two crucial eras that exemplify the historical trend of black medical abuse. Scientific racism was repeatedly invoked to rationalize such treatment, leading African Americans to distrust the intentions of US clinicians and institutions. It is often said that these periods are the past, but these ideologies have shaped American society and inter-racial relations for most of the country's history. This research will go on to demonstrate how many of the past legacies of mistreatment–including those just explored–are still negatively impacting African American medical treatment today. For instance, Kira Johnson's death as well as high black maternal death rates stem from historic anti-black reproductive practices and insufficient black maternal care. Thus, past historical black mistreatment gives rise to black medical mistrust.

Present-Day Black Medical Inequities

While past patterns of explicit black medical mistreatment sowed the seeds of black medical mistrust, there is still explicit and, more importantly, implicit discrimination and racial bias in the healthcare system. When examining the components of medical mistrust, current inequities are frequently overlooked. Numerous studies show that African American patients receive differential treatment in medical spaces. They are stereotyped as dangerous, increasing the chances of involuntary restraint at hospitals (Pertsovskaya 2021). They are more likely to receive older, less-tolerated medicine with worse side effects. Such as Clozapine, a superiorly effective drug that is prescribed much less for African Americans with serious mental health illnesses compared to white patients (Kelly et al. 2006). They are more likely to receive less time to share their medical concerns with doctors when compared to white patients with similar health concerns (Karve et al. 2009). They are more like-

ly to be perceived as untruthful when being honest regarding their symptoms (Schrader 2012). Trust works both ways. African Americans are persistently disregarded, distrusted and dismissed in health settings and yet are the object of blame when they respond to that by being distrustful of their clinicians.

Instead, the focus should be shifted to building equitable health institutions free of implicit and explicit biases that African Americans are justified in putting their trust into. All these are examples of implicit and explicit racial biases that occur in the present that limit trust-building between African Americans and their clinicians. This section goes beyond this to explore the far-reaching consequences of race-based medicine, a more sinister yet significant form of modern-day racism discrimination that exemplifies the discriminatory core of many modern health systems. It highlights an often-overlooked discrepancy in that even many medical tools and equipment used today sustain medical race discrimination. Such experiences of contemporary discrimination reduce trust in the ability of the US healthcare system to equitably treat African Americans as the implicit bias is heavily ingrained in the current healthcare system.

Race-based medicine can be considered a refinement of scientific racism and exacerbates black medical mistreatment. Even though anthropology and sociology, among other disciplines, have begun to investigate race as a social construct that is reshaped over time, race is still widely used as a biological reality in medicine. Race-based medicine, also known as 'race correction,' is a system in which race is defined as an integral biological variable that clinicians use. Medical tools and tests frequently classify black, Asian, and other minorities differently based on race. To save time in the diagnostic process, race is used as a proxy for other assumed clinical measures such as muscle mass, fitness level, genetic traits, and enzyme level in these medical settings. However, race is a bad proxy. According to studies, the genome between racial groups is 99.5% to 99.9% identical, which means that there is a 0.1% to 0.5% variation (Yearby R. 2020) between two unrelated individuals in the same racial group and no identifiable racial genomic clusters. So, what is it that causes science to lag other disciplines? Many of the clinical factors that race is supposed to account for have been heavily influenced by generations of scientific racism and racial stereotypes, making black people especially vulnerable to medical error. Unlike more overt racial biases by doctors, the inherent bias in medical tools may be unknown to many clinicians but has real impacts on black patients who suffer the consequences.

Race-based medicine increases the risk of misdiagnosis in black patients. Samuel Cartwright (1793-1863) was a well-known physician who used his profession to substantiate his belief that slavery was beneficial to black people; he once wrote in a medical journal that the "want" of vital red blood cells slaves got from labor would "chain their minds to ignorance and barbarism" if they were free (Cartwright et al. 1860). Other anti-abolitionists frequently cited his ideas to justify slavery's continued mistreatment of black bodies. Cartwright contributed to the refinement of the spirometer, a medical breathing device, which demonstrated his belief that all black people had a significant lung capacity deficiency compared to white people.

Many people may assume that as modern medicine progressed the tools constructed by scientists to support their pre-existing racial biases would have ended with slavery. They would be incorrect. Despite his ideas being undeniably rooted in scientific racism, his tools, along with many others like them, are still used today to perpetuate black medical mistreatment. Spirometers continue to use a race-based correction that assumes black patients have a 10-15% lower lung capacity than white patients (Anderson et al. 2020). Dr. Atul Malhotra, former President of the American Thoracic Society and current Professor of Pulmonary and Critical Care, and other scientists have begun to raise concerns about racial biases in medical tools regarding the pulmonary function of minority patients recovering from COVID-19. The spirometer, used to measure pulmonary function during recovery, is a major source of concern (Anderson et al. 2020). Because the race correction means that lower lung capacities are considered normal for black patients, clinicians are more likely to miss diagnoses of a restrictive ventilatory system, a common problem faced by COVID-19 patients after discharge. Consequently, black patients who require treatment plans such as pulmonary rehabilitation may be denied treatment. This is especially concerning given that doctors are already less likely to refer black patients to pulmonary rehabilitation, despite higher rates of pulmonary-related hospitalization (Anderson 2020). So multiple forms of present inequities mean black patients distrust the ability of their clinicians to treat them.

Furthermore, race-based medicine harms African Americans by diverting resources away from socioeconomic factors that are palpable causes of shocking racial health disparities. Washington argus that race is not a biological factor that naturally induces these health disparities, but a social one. She suggests it is much easier and more lucrative for society to address it with a 'race-specific pill' rather than acknowledging the innate structural inequalities of the US medical system (Washington 2008). For example, systemic biases can be observed in the US COVID-19 response. Symptom guidelines instructed people to look for 'pink and white toes,' with no mention of how to identify such symptoms in non-white patients (Evans et al. 2020). This exclusionary medical description prevented darker-skinned people from receiving appropriate treatment (Benfer et al. 2020). Nevertheless, race medicine chooses to focus on innate racial genetic factors as a root cause of health inequality. Race-based medicine is particularly damaging as it highlights the innate flaws of the current US healthcare system in equitably serving its African American communities. Many well-trained doctors are still unaware of these biased tools and often misuse race as a proxy for other genetic factors which race does not explain. Even African Americans may be unaware of the true damage of race-corrected tools they are being 'treated' with and this calls for a re-evaluation of the historic tools, preconceptions, and understanding of African Americans within healthcare if it is ever hoped to truly reach health equity for all races. As white people remain the medical standard and African Americans the 'race-corrected' category, there is doubt in the ability of the US healthcare system to represent the health inequities of African Americans.

In health disparities research, medical guidelines, and standards of care, race is still used to denote white gene superiority despite the lack of genetic evidence, a clear definition, and links to genes affecting health. Through race-based medicine, the instruments of past racial ideologies have carried over into the present. Such instruments negatively affect African Americans' health, leading to mistrust of these tools alongside the doctors and institutions using them to provide medical care. In *Medical Apartheid*, Washington asks once more: "What if, instead of using race as a crude proxy for some more crucial factor, doctors actually investigated and addressed that more key factor?" (Anderson 2020). This failure to recognize common humanity despite race and misusing race to conceal the true causes of health disparities continues to fuel black medical mistrust.

Black Medical Mistrust Reimagined

Medical mistrust is often portrayed as solely negative as it can lead to lower patient health if African Americans do not accept care. This research paper acknowledges this; however, this section seeks to broaden our understanding of mistrust to also understand it as a tool for survival. Mistrust has shielded African Americans against persistent past and present medical discrimination and stirred them to form social networks of care.

Black medical mistrust of mainstream US health institutions has resulted in the development of African Americans' own innovative medical solutions. According to a recent study, community-based care improves healthcare outcomes for black patients. A total of 1,300 African Americans were assigned to either black or non-black primary care physicians (Komaromy et al. 1999). The findings were profound, including the discovery that African Americans who saw black physicians received 34% more preventative care. According to the researchers, if all black men received the same increase in preventative services as well as the appropriate follow-up care, the black-white cardiovascular mortality rate would be reduced by 19% and the total black-white male life expectancy gap would be reduced by 8%. A major reason for black doctors to recommend more preventative care is due to "increased trust and communication," as doctors listened to patients' concerns and cared for them. This study is not unique; many others demonstrate how black patients receive better care from clinicians who share their racial identity.

In an equitable healthcare system, the race of the doctor should have no effect on the standard of treatment each patient gets. The discrepancy highlights both explicit but more importantly, implicit biases many doctors knowingly or unknowingly have which disadvantage African Americans in such cases. The main difference between these cultivated social networks of community-care often administered by African Americans to African Americans and the lower outcomes of African American health from mainstream settings, as depicted in the study above, is trust. Trust that the medical provider has one's best intentions at heart and will do their best to facilitate the best care. Until health injustices in the mainstream US healthcare system are addressed many African Americans are statistically (Huerto 2020) safer and justified in their attempts to utilize this community-based care as it protects them from biases.

African Americans using alternative forms of care rather than traditional medical institutions can be seen as combatting health disparities. This resonates with other forms of community-care that emerge even outside the US context. *The Encultured Gene* by Duana Fullwiley investigates sickle cell disease in Senegal. Senegal's French colonial history infiltrated their healthcare systems and Senegalese have limited access to sickle cell care. As a result, many Senegalese are wary of any western medicine promoted to them, as their medical well-being was frequently overlooked during colonialism. Although this mistrust is often viewed as a barrier to their treatment, it has fostered creativity through the development of social networks of care. Finding self-identified families among one another, which serve as emotional support networks and caregivers, is one of these. Fullwiley refers to this as the 'biosocial framework' (Fullwiley 2011). In this way, Senegalese have been able to 'live well' (Fullwiley 2011) with the disease despite the huge health disparities they face. A solution rooted in mistrust by the French. This demonstrates how mistrust led to the beneficial development of a supportive culture for the sick. Medical mistrust emerges because of the racial discrimination that many black people face as a result of past and present medical mistreatment. When attempting to combat medical mistrust, it is critical to understand how it has been used as a survival mechanism. Recognizing that mistrust is not always harmful can alter how we frame solutions. When effectively directed, it empowers African Americans to protect themselves and seek better healthcare on a community and societal level.

Conclusion

Black medical mistrust is a multifaceted issue. The popular desire to overly focus on past black mistreatment shifts the onus away from systemic racial biases ingrained in the US healthcare system and onto African Americans to 'be more educated or more receptive' to modern medicine, which is a simplistic solution. Racial medical discrimination exists today and can be addressed in modern-day US society. It is critical that clinicians and health policymakers seeking solutions to black medical mistrust understand its intricacies, including how community-care has aided in the protection of medically oppressed African American communities. It is a complex issue that necessitates complex solutions. These should consider the nuances of the black patient-doctor relationship. An improved patient-doctor relationship would benefit both African Americans and wider society with more equitable healthcare. So, hopefully, in the future, people like Kira Johnson regardless of their identity as an African American will be able to walk into US hospitals and look their doctors in the eye with trust.

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Doula Care for All?

How Expansion Efforts Threaten The Profession

Alina Wilson

Abstract: *The demand for affordable access to doulas as a central component of maternal health care is at unprecedented levels. This growing demand is a response to the disproportionate rates of Black maternal mortality. In a 2013 study, researchers found that birthing people assisted by doulas were significantly less likely to experience birth complications or have a low birth weight Baby[1] . Advocates and researchers alike have turned to Medicaid to increase accessibility to doula care's life-saving benefits. With the three states that currently cover doulas under Medicaid as case studies, this paper examines the barriers that prevent widespread doula access and, ultimately, argues that the current models for doula insurance coverage limit the effectiveness of doulas and fail to expand access to their services. This paper asserts that the current models for Medicaid hinder the doula care profession due to low reimbursement rates, high barriers to certification, and limitations on the type of care that doulas can deliver. Expanding access to doula care could be a promising step in reducing maternal mortality; however, if progressive policymakers continue to advocate for a detrimental and regulatory Medicaid system rather than strengthening communities, meaningful progress on this vital issue will remain elusive.*

[1] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3647727/

Following the age-long tradition for young girls, my parents gave me a baby doll before I could walk. They were the Black parents who went out of their way to find me a Black baby doll whose skin color somewhat matched mine. Still, their thoughtfulness did not stop me from trading dolls for stuffed animals the moment I could communicate that I preferred a plush frog. When I was six, my aunt had a baby. He was born early, so early that there are pictures of him with my uncle's gold ring around his tiny arm with room to spare. Like many older female cousins, I was roped into babysitting him. He was cute. But taking care of him did nothing to fill me with the baby fever that seemed to have infected many of my friends. Consequently, when we watched the miracle of life video in sixth grade and that kid in my class threw up, I said to myself, "That's it. I'm never having kids."

Years later, I sat on the New York subway and gazed upon the cutest child I had ever seen. She reached for me from her stroller with her chubby, mocha-colored arms, and sent me wide-eyed smiles. I thought clearly for the first time, "I want one." This moment catalyzed a shift in my mind. As I learned about the epidemic of Black maternal and infant mortality–as I learned that my cousin's premature birth fell in line with the statistics that Black birthing people were two times more likely to have premature babies and three to four times more likely to die due to pregnancy-related causes, I began to wonder, "How would I ensure that I survive having kids?" (PBS NewsHour 2018).

With the maternal mortality crisis on my mind, I stumbled upon "the doula difference" after only a few minutes of online research. The treasure trove of articles I found slowly shifted my view of doulas from another ridiculous fad of the yoga-going, personal-trainer-having elite to a powerful tool for reproductive justice. Doulas are non-clinical support people who provide physical, emotional, and spiritual support to people going into the birthing process (Bastiaans 2021). Doulas assist birthing people in a nonmedical capacity by creating plans for labor, navigating conversations with providers, and educating birthing people about the process of birth and potential complications (Ransom 2020). Doulas' actions before, during, and af-

ter birth increase the agency of the birthing person (Ransom 2020). Scientific evidence also supports the benefits of doula care.

Research studies show that doulas also result in better health outcomes for birthing people. In a study of 226 expectant birthing people, researchers found that birthing people assisted by doulas were two times less likely to experience a birth complication involving themselves or their baby and four times less likely to have a low-birth-weight baby (Gruber, Cupito, Dobson 2013). A recent Cochrane systematic review of the effects of continuous labor support found that birthing people allocated continuous support were more likely to have a spontaneous vaginal birth, less likely to have intrapartum analgesia, more likely to have shorter labors, and less likely to have a cesarean or instrumental vaginal birth (Bohren et al. 2017). Although more research on the direct benefit that doulas may have on maternal mortality is needed, the data clearly shows that doulas improve birth outcomes for both birthing people and their children. Additionally, the benefits of doulas extend far beyond birth statistics.

Doulas center birthing people in their birthing experiences, working to center birthing people in the birthing experience. There is a plethora of anecdotal information about the power of doulas' advocacy on behalf of birthing people (Ransom 2020). For example, Casey Bastiaans (2021), who worked as a doula for decades, told me during our conversation that,

> *Sometimes [hospital staff] will say, "Oh, it's just a cesarean." It's just a cesarean? Like it's not a major surgery… I try to ask the right questions in a non-confrontational way so that [medical providers] explain the side effects of each intervention.*

Additionally, surveys have found that birthing people who receive doula support overall have less anxiety and lower average pain scores during labor (Moberg 2014). The copious benefits that doulas confer on maternal outcomes and birthing people's overall satisfaction beg the question: why doesn't every birthing person have a doula?

Groups and individuals across the country seem to be asking themselves the same question. Policymakers, researchers, reporters, and health care providers have advocated for the rapid expansion of doula access for all pregnant people, especially pregnant people of color. In order to understand the best way to reclaim doula care as a tool to improve maternal outcomes in communities of color, I begin by examining the current state of doula care and the implication of recent calls for Medicaid coverage expansion. I will then compare traditional birth work in communities of color to modern conceptions of institutionalized birthing and doula care. Ultimately, I argue that the expansion of doula care must occur for, by, and within communities.

EXPLORING THE WIDESPREAD LACK OF AWARENESS AND ACCESS TO DOULAS

Despite the recent surge of articles claiming that doula care is the key to addressing maternal mortality, a sizable percentage of the population is still unaware of doula care and its potential benefits (Noh 2019). In fact, few birthing people in the United States use doulas at all: in 2012, only six percent of U.S. women gave birth using doulas (Kozhimannil et al. 2014). In part, doula use may be uncommon due to a lack of knowledge about doulas (Noh 2019). Studies estimate that as many as 40% or more of women are unaware of doula care and the potential support doulas can provide (Wint et al. 2019). According to a 2003 nationally representative survey, 84% of doulas are white, meaning that most doulas are white middle-class women serving other white middle-class women (Ellmann 2020). As knowledge of doulas is primarily spread by word of mouth, the birthing people who need doulas most often do not hear about their services (Bastiaans 2021). Further, geographic access can also be an issue as half a million births occur in rural areas per year, where doulas are not evenly distributed (Noh 2019). Effectively, doula access is predicated on knowing someone or existing in the same circles as someone who uses or has used a doula, which is rare for marginalized birthing people or birthing people that live in rural areas.

Regardless of these challenges, awareness of the benefits of doula care is rising in communities of color. As Lisa Davis (2021), a Bay Area midwife elaborated,

> There's been a lot of education out there. Black [birthing people] are being made aware of the health disparities. There have been some movies, some high-profile cases like Serena [Williams]. People have educated themselves. Black [birthing people] know they want Black birth workers.

Even with increasing awareness of doula care, hiring a doula today is prohibitively expensive for many birthing people. Doula fees vary greatly, but they frequently fall

between $600 and $2,000 (Nguyen 2021). This added expense to an already costly birthing process leaves many birthing people wanting but ultimately lacking doula care–Black people most of all. A nationally representative survey of birthing people in 2012 found that Black and publicly insured birthing people were almost twice as likely as white, privately insured birthing people to report wanting but not having doula care (Kozhimannil et al. 2014). The argument that doulas are a potential solution to the issue of maternal mortality stands in stark opposition to the reality of access to doula care, especially for those birthing people who could benefit from doula care the most.

To mitigate the inaccessibility of doula care, community-based doulas provide doula support for free or at a reduced cost (Chen et al. 2021). However, the sustainability of the doula care profession hinges on the implementation of a solution that fairly compensates doulas while simultaneously eliminating socioeconomic barriers to doula care. Doulas cannot be expected to provide their services, encompassing a substantial amount of physical and emotional labor, for free. Too many doulas leave the profession because it does not allow them to sustain a living (Bastiaans 2021). Nonetheless, ensuring that every birthing person has access to a doula–and thus personalized care and continuous support during pregnancy–requires that doula services become universally available, especially to low-income and marginalized birthing people. To address these ostensibly irreconcilable goals, maternal health advocates nationwide have been lobbying for more states to cover doulas through Medicaid (Nguyen 2021).

HOW CURRENT MODELS OF INSURANCE COVERAGE ARE DRIVING OUT MARGINALIZED DOULAS

Including doulas as part of statewide insurance has become a near-universal call for reproductive justice advocates but ultimately may hinder the profession due to the many failings of the current insurance coverage models. Medicaid paid for 43% of all US births in 2018, including 65.9% of all births by Black, non-Hispanic birthing people (MACPAC 2020). Consequently, covering doulas under Medicaid has the potential to expand doula care access to those who could benefit the most from it. However, many articles about the potential impacts of doulas urge policymakers to cover access to doula care under Medicaid without considering the negative implications of the coverage–and the inevitable rules, regulations, and bureaucracy that come with it–will have on the integrity, quality, and accessibility of doula care, especially to communities of color. Even in the states where advocates have successfully passed legislation leading to doula coverage, the systems in place result in more harm than good. Although well-intentioned, these policies simultaneously threaten the ethos and central objectives of the doula profession while failing to expand access to doula care to the marginalized communities that stand to benefit the most from doula care. The current models for Medicaid are detrimental to the doula care professional due to low reimbursement rates, limitations on the quality and type of care that doulas can deliver, and high barriers to certification.

In the three states where Medicaid covers doula support, extremely low reimbursement rates push marginalized doulas out of the profession. Few doulas, if any, have actually received Medicaid reimbursement in Minnesota and Oregon (Choices in Childbirth 2016). Since 2014, doulas have supported Medicaid clients through upward of 850 births in Minnesota, and DHS and managed care organizations have spent approximately $415 per birth on these services, including prenatal and postpartum support (Nguyen 2021). Oregon has fared even worse. The Oregon Health Authority has paid doulas less than $200 per birth for supporting Medicaid clients through approximately two hundred births since 2016 (Nguyen 2021). For comparison, these numbers are significantly lower than both the national average cost of doula services, $600 to $2,000, and the $1151 that doulas state they would require for Medicaid reimbursement to be sustainable (Chen et al. 2021).

Without sustainable pay and a living wage, Medicaid reimbursement puts the doula profession at risk. Low reimbursement rates push out those doulas who lack privilege by offering wages that can only be accepted by those with financial privilege. Instead of encouraging an increasingly diverse workforce that matches the demographics of the communities that desperately need doula care, Medicaid coverage further reinforces and actively creates barriers that result in a doula workforce of primarily white, upper-middle-class women. Beyond low wages that threaten the sustainability of doula care, Medicaid coverage of doula care institutes strict rules and regulations that fundamentally

alter both the type and effectiveness of the care that a doula can provide.

For example, states' Medicaid programs impose rigid limits on how many times a doula can visit their client and be compensated, leaving little room for meeting each client's individual needs. Beyond labor support, New Jersey covers eight maternity support visits for parents older than nineteen, Minnesota covers six, and Oregon covers only four (Nguyen 2021). Much of the power of doulas come from their ability to help pregnant people shape and realize the type of birth that makes them most comfortable. Rigid limits on the number of times that doulas can meet with their clients impose a one-size-fits-all approach on doula care that is antithetical to the very purpose of doulas. Especially concerning is the impact that these restrictions may have on community-based doulas, who typically work with low-income clients in their areas and tend to spend more prenatal time with families than independently hired doulas (Haelle 2020). Ultimately, much of the power of doulas come from their ability to help pregnant people shape and realize the type of birth that makes them most comfortable. Insurance strips this power from doulas by creating yet another oppressive structure to stand in the way of future birthing people and their ideal birth experience.

In some states that cover doula care under Medicaid, formalized insurance training and certification mandates present barriers for lower-income doulas-to-be or current doulas who serve lower-income areas. In the words of Lisa Davis (2021), a Bay Area midwife and former doula,

> *The problem with certification is that it has to be regulated. The problem with regulation is that it is inherently biased. Right now, there's favor being given to the routes that may not be culturally centered. But there's more than one way to become a good doula.*

States may select large, well-known doula training programs as proxies for certification. For example, doulas in Minnesota must prove they are certified through an approved doula training organization to get on the state doula registry, which is a requirement for Medicaid reimbursement (Nguyen 2021). Certification stipulations may deter doulas of color from applying to be Medicaid providers because many of the more nationally well-known doula training organizations are white-led and traditionally serve white middle-class doulas and clients (Chen et al. 2021). Moreover, licensure and scope-of-practice regulations will limit access to the doula profession for low-income people and people of color who may have deep knowledge around birth work but lack formal training or licensure (Ellmann 2020). When insurance gives power to only a few gatekeeping organizations, women of color suffer as these gatekeepers rarely share their identities. Not only do these formalized training requirements decrease access to the doula profession, but they also devalue community knowledge in favor of standardized certifications.

The cost of doula certification also presents a significant barrier to low-income applicants. DONA (one of the more well-known doula certification programs) certification can cost up to $700, plus additional fees for materials and coursework (Chen et al. 2021). In Minnesota, it costs $200 to even apply to be included on the doula registry (Nguyen 2021). These fees may discourage new doulas from undertaking the steps necessary to register as a Medicaid provider–especially if they have already undergone training with a community-based organization. In essence, new licensure and training requirements deny insurance reimbursement to experienced doulas who lack formal certification while raising the entry barriers to new doulas.

Unsurprisingly, most of the barriers to insurance coverage outlined above affect doulas of color more acutely than white doulas, particularly in light of the increased demand for doula care in communities of color. Given that costs associated with meeting certification requirements can be prohibitively expensive for marginalized doulas, communities of color suffer more from the stringent requirements that insurance coverage enforces upon doula care (Lange 2021). Low reimbursement rates and strict certification requirements decrease the number of doulas of color (Chen et al. 2021). In addition, limits on doula autonomy may potentially prevent doulas of color from speaking up against medical racism (Davis 2021). Moreover, the toll that doula care insurance coverage takes on communities of color prevents doulas from meeting the increased demand for Black doulas and birth workers. At every step of the way, insurance coverage should work to improve access to doulas, but the current systems accomplish the opposite. Even so, experts and advocates alike claim that Medicaid coverage for doula care could help alleviate the maternal mortality crisis. If this is true, shouldn't Medicaid coverage make doula care more accessible to communities of color?

THE CHANGING FACE OF DOULA CARE

Beyond the ways that the privatized system for doula care pushes out birth workers of color and systematically strips away the ability of doulas to personalize care, insurance-supported doula care has also become detached from the community in a way that subtly undermines the historical and modern purposes of the doula profession. By moving the work of birth workers closer to our privatized health care system in function and location, our current system has detached doula care from community, and thus from birthing people.

Modern-day concepts of institutionalized birthing have completely transformed the way that individuals give birth in the United States. Before the 1930s, birthing people typically gave birth at home surrounded by family, friends, and midwives (Hunter 2022). Midwifery in the United States began in large part with enslaved individuals that survived the middle passage and continued to practice midwifery throughout the country (Hunter 2022). Particularly talented enslaved midwives received pay for their labor and were allowed to journey long distances to attend births (Hunter 2022). Due to the mobility their trade granted them, enslaved medical practitioners could maintain ancestry records and community connections even when families and community members were broken apart or sold off (Hunter 2022). After Emancipation, Black midwives became known as "granny midwives." Midwifery, and "Granny Midwifery" in particular, operated as a female-dominated family apprenticeship as community knowledge passed from generation to generation.

Ever since physicians usurped midwives in the 1920s, giving birth in America has become increasingly institutionalized and less centered on the empowerment and needs of birthing people (Panazzolo and Mohammed 2011). The long-standing tradition of village birthing has ceded to widespread preventative medical interventions (Panazzolo and Mohammed 2011). Today, the most popular birthing practices in the United States seem to reflect our capitalistic society with the main focus, not on the health and empowerment of birthing people, but instead on monetary profits and efficiency (Panazzolo and Mohammed 2011). Practicing midwife Lisa Davis believes modern birthing to be in direct opposition to natural birthing, "In our American culture we like to control everything. We have these limited timetables about when you dilate, when you're supposed to give birth. And if you don't, you're supposed to cut her. To give her a c-section." Midwives like Lisa argue that modern birthing rushes nature in a way that disempowers and harms birthing people, especially in the case of low-risk pregnancies of healthy birthing people.

The desire to rebel against the conventional biomedical birthing model in the United States during the 1970s led to the home birth movement and the popularization of doula care (Hunter 2022). Yet, the midwives and doulas that serve communities of color and other marginalized communities often face financial trouble as they choose between their own financial well-being and supporting those who need their services the most.

Some birth workers have chosen to work with care teams in hospitals. However, this model may unintentionally strip the birth workers of their autonomy and, ultimately, their power to prioritize the interests of the birthing person. In the words of practicing midwife Lisa Davis,

> You become a midwife because you honor birth, you honor natural birth. Then you work for a hospital organization that makes all the rules and regulations for you to follow. And all types of unnatural things happen in a hospital. A lot of midwives feel stuck…What I see for midwives in the hospital setting is that they just don't have a lot of power.

Furthermore, many of the proposed laws to fund doula care with insurance coverage stipulate physician supervision. This is particularly distressing as it is likely that physician supervision will serve as another barrier that limits the autonomy of doulas. Minnesota requires doulas to practice under the supervision of clinicians (Chen et al. 2021). However, a focus group by the National Health Law Program found that doulas believed their role was to serve as independent, third-party providers, outside the medical institution (Chen et al. 2021). Requiring physician supervision creates a conflict of interest for doulas that could prove detrimental for birthing people. When doulas must bill under and be supervised by licensed providers, there is a risk that doulas will be unable to fully represent the interests of birthing people due to fear of coming into conflict with their supervisor.

BUILDING A BETTER SYSTEM

Current models for insurance coverage of doula care should serve as a warning for advocates and legislators alike. A doula provides more than a presence of continuous support during a trying time; a doula provides a voice of advocacy to ensure that the birthing person's needs are met. A doula is an extension of and support for the birthing person. The current models for integrating doulas into the medical system diminish doulas' abilities to impact the health of their communities. Undoubtedly, doulas cannot address the public health crisis of racism if they are regulated by the very systems they are working to circumvent. Moreover, the current models of doula insurance coverage fail to expand access to doulas in a meaningful way by raising barriers to entry (and to remaining in the field) for doulas and by setting reimbursement rates so low that doulas may simply choose not to accept new Medicaid clients.

As I came to this conclusion, I could not help but wonder: how do we ensure that those who need access to doula care most can access it in light of countless barriers? How do we ensure that the support of a doula or other community-based birth worker is not just a luxury reserved for wealthier white women–as birthing people and non-birthing people alike may currently see it? The solution may have always been there. A potential model for filling gaps could be found in community-based doulas and birth workers. These organizations, including doula collectives and the growing number of home birth and practicing midwives across the country, are already embedded in their communities (Davis 2019). They exemplify the burgeoning grassroots movement of people of color building relationships and trust within their own communities to transform birthing. With the support of grant funding, many of these organizations offer a sliding scale payment system so that they may serve those with the greatest need (Davis 2019). Funding existing community organizations could go a long way to assist in the delivery of culturally competent birthing care and support that meets the needs of each community. As Casey–a long-time doula–informed me, the catchphrase is, "every birthing person deserves a doula" (Bastiaans 2021). Communities, not underfunded Medicaid systems, will get us there.

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Towards a Precision Medicine for All of Us:

Analyzing Global Assemblages

Richard Coca

Abstract: *President Barack Obama launched the Precision Medicine Initiative (PMI) in 2015 "to enable a new era of medicine through research, technology, and policies that empower patients, researchers, and providers to work together toward development of individualized care" (NIH 2021). The focus of this paper is neither to define this new era of medicine nor to argue against its normalization, but rather to analyze this movement towards precision medicine as assemblages of people, institutions, and types of knowledge. By evaluating who and what is included and excluded from these assemblages, this paper aims to measure the extent to which precision medicine has fulfilled its underlying promise: to serve All of Us. Building on discussions of cure as an ideology (one that can at times seem to be at odds with care), I argue that current assemblages have created a hegemonic form of precision medicine that complicates the goal of the initiative.*

Introduction

When the Human Genome Project launched, scientists argued that clinical applications would easily follow suit. The hype around the project continued beyond its early milestones. After the completion of this $2.7 billion investment, Russ Altman, the former chair of the Stanford Bioengineering Department, captured the post-hype sentiment: "the genome sequencing projects were neither unmitigated successes nor failures, but rather the start of a newly enabled era in which determining the sequence of four DNA bases is easy, but understanding its role in biological systems in incredibly challenging" (Richardson and Steven 2015, 9). Altman's warning to "resist the temptation to merely declare the obvious next steps" has gone unheeded at times. While there is no shortage of literature on the societal and scientific implications of the eighteen intervening years, the question remains whether these discussions have reached their appropriate audience or substantially informed the developments of the past two decades in this realm. Many actors intend to build on the promises of the Human Genome Project and accelerate the adoption of precision medicine across healthcare. To these actors—which include but are not limited to physician-scientists, R&DE teams, research universities, and national scientific funding agencies—the logical next step of the Human Genome Project took shape as launched in 2015 with the President's announcement of the Precision Medicine Initiative (PMI).

This hundred-million dollars initiative proposes a new model of health care that seeks to increasingly account for individual differences in people's genes, environments, and lifestyles. The All of Us Research Program composes the flagship of this initiative, aiming to recruit one million volunteers who will contribute their health data and biospecimens to a centralized national database to support precision medicine research. Analyzing the assemblages of stakeholders around the initiative will likely reveal the gaps between how care is being defined and delivered in the new era of medicine under the PMI.

This paper will proceed to examine this configuration under the framework for defining "assemblages" offered by Deleuze and Parnet (1987):

> "[An assemblage] is a multiplicity which is made up of many heterogeneous terms and which establishes liaisons, relations between them, across ages, sexes, and reigns – different natures. Thus, the assemblage's only unity is that of a co-functioning: it is a symbiosis, a 'sympathy.' It is never

(Screenshot from the Precision Medicine World Conference website)

filiations which are important, but alliances, alloys; these are not successions, lines of descent, but contagions, epidemics, the wind." (69) Using assemblages here reveals the precarities of scientific innovation under capitalism. For the purposes of this paper, I will focus on the time after the completion of the Human Genome Project in 2003, highlighting, in particular, the assemblages that have come to dominate following the 2015 launch of the PMI.

Nothing new: medical neoliberalism

The idea behind the PMI— that an individual's data will empower them to make better decisions about their health— is not novel. It follows a trend noted by Fisher (2007) towards medical neoliberalism, the key characteristic of which lies in the transformation of the individual from a patient to a consumer. Fisher first explored this concept in the context of recruitment for clinical trials. Private providers would market pharmaceutical clinical trials as a service for their patients who had health problems but no other means of getting treatment. However, these pharmaceutical clinical trials were likely exacerbating and profiting from existing social and economic inequalities.

Fisher draws parallels between neoliberal policies that oversee the withdrawal of social goods/deregulation of the private sector and medical neoliberal policies where providers must compete with the influence of insurance providers and pharmaceutical companies when deciding care. As the country's health care policy and culture shifts towards medical neoliberalism, Fisher argues that state transfers more responsibility to its citizens to provide for themselves while simultaneously needing to increase the amount of monitoring of citizens' actions. Medical neoliberalism exacerbates the commodification of health by framing consumption of health care as not only a right but also an obligation if one wants health care at all, while ignoring any structural inequalities built into the healthcare system such as access to insurance or disparities in medical treatment.

The natural next step of this trajectory is that anything as unique as an individual's microbiome should become a new product to be consumed. Amid the financialization of life, Widmer (2021) offers us direct-to-consumer microbiome tests as a case study in this phenomenon. Widmer argues that direct consumer health consumption has long acted as a main financial driver for a push towards individual health. To biotech investors, shareholders, and company executives, such tests generate capital by transforming the patient into a consumer. These investors, shareholders, and companies form an assemblage that encourages the consumption of this narrative towards individual responsibility for one's health.

This narrative can at times come in conflict with a push by community health and public health leaders who may prefer to look at the bigger picture and address how structural inequities lead to health inequities. (This is not to frame the two as inherently opposed. In fact, there are already papers and talks on combining the two.) The question then arises: how has this push been normalized and so quickly?

Normalization: from a new era of medicine to the status quo

Tackling the question of how precision medicine has been normalized rather quickly can also be answered by examining ethnographic work outside the United States and its healthcare system. Experimental stem cell treatment composes one of the bigger, loftier goals within precision medicine. Kandhari's (2021) ethnography in India, for instance, argues that the normalization of experimental stem cell treatments relied on several dynamics which included bioconsumption, consumer

choice, stem cell brokers, individual accountability, social class, and consumer burden. Although the experimental stem cell treatments were clinically unproven, Kandhari's framework argues that they became normalized as regular health care due to an already existing assemblage of institutions and providers; the addition of brokers only accelerated the normalization of these treatments. Kandhari offers us the story of Vivek as an example:

> "For example, Vivek, on his return from China, helped his agent 'publicize' stem cell treatments in the Delhi region. The agent had arranged meetings for Vivek with various medical establishments such as Hospital AA where Vivek had his second round of treatment." (355)

It is likely that medical establishments like Hospital AA would not be able to deliver this experimental stem cell treatment without the assemblage of medical establishments, stem cell brokers, regulatory bodies (including those in other countries that do not allow this), and other businesses invested in normalizing this medical technology. Patients and providers are connected by these brokers and there is not only a direct fiscal cost (the brokers charge for their service) but the loss of resources that might have been better directed elsewhere. Such an analysis can offer insights or parallels with the normalization of clinically proven but novel treatments being promoted by a movement

(The cartoon above plays on classic cartoons about Ockham's razor but with a twist—a critique of our ability to generate a lot of new data with the challenge of curating it for the benefit of the patient.) Illustration: Richard Coca

towards precision medicine. Even when such treatments work, costs remain high and accessibility hinges on the costs of the technology decreasing. But who holds whom accountable? As is the question for the stem cell brokers who promote a non-clinically significant treatment. It seems to be non-existent as the patient is assumed to accept the consumer's burden. Increasing government support should also come with increased scrutiny to protect the patient population, especially as that population grows increasingly larger and global.

Precision medicine: an increasingly global agenda

While genetics and genomic research continues to gain financial support domestically, its international influence has grown and spilled over into fields such as global health. Using the Precision Medicine World Conference 2022 as a case study, we can observe here that the complex formation of actors here reflects the body politic. With over 30 percent of the conference attendees composed of pharma and biotech representatives, patients—who only make up two percent of the conference—have much less leverage to shape the global agenda that medical centers, physician-scientists, and healthcare providers will ultimately embrace. With registration to such a conference costing $1,423, concerns of equity arise. How is it that an initiative that seeks to serve *All of Us* is mainly guided by the same collection of people, companies, and universities? When a conference on precision medicine is mainly composed of pharma executives, what does it mean for the science that is being produced and is being encouraged to be produced? While its consumers are individuals, precision medicine's main drivers are companies like Novartis, Merck, and Genentech. These companies are not static nor free of ideology. They are driven by goals, profits, and stakeholders who have a financial incentive to accelerate the push towards medical neoliberalism.

On a global stage, precision medicine actors do not only exist on the West Coast of the United States. The role of national science agencies shines prominently when looking at a globalized precision medicine approach to epidemiology. Gibbon,

Kilshaw, and Sleebom-Faulkner (2018) note that genomic research's recent expansion to tackle global health is particularly striking by its growing mandate to not only examine rare diseases but also infectious disease as well as non-communicable chronic diseases. In fact, even before the COVID-19 pandemic, journals like *Nature Medicine* opened discussions on the possibility of using precision medicine for infectious disease control (Ladner et al. 2019, 206).

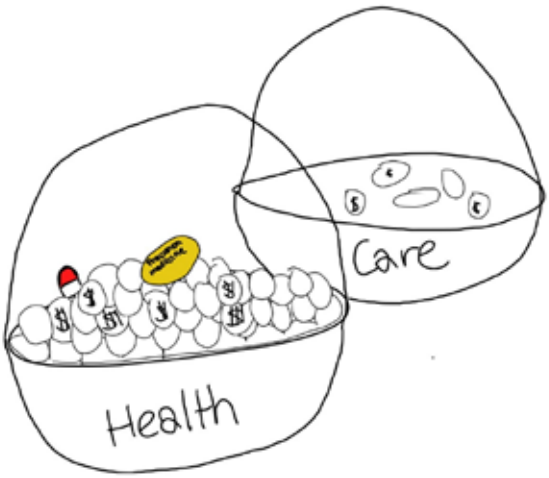
Gardy and Loman (2018) were some of the first to discuss how collaboration between the fields of precision medicine and public health might improve surveillance systems to the point where emerging infectious threats could be better anticipated. While that promise has not fully materialized yet, it has improved public health surveillance systems to the point of being able to respond more effectively to localized outbreaks. Ebola and Zika outbreaks were two case studies of this. The Ebola and Zika epidemics, however, also showed that pathogens could go undetected for some time before being diagnosed in a population. It also raised questions about ethics and collaboration. With whom data is shared and not shared reflects international relations.

We have even seen this play out with recent news of the Omicron variant of COVID-19. Precision medicine sequencing technology did indeed identify a new variant of concern and once South Africa decided to announce it to the international community, the nation was met with travel bans. These same travel bans may hinder global collaboration as South African scientists will have to find creative ways to share samples. The asymmetrical travel bans are further called into question with the recent news that the variants were already in Europe yet travel bans to the most-affected European countries were not enacted. It is clear from this example that global assemblages around the policy implications of precision medicine exclude those from the Global South. Although South African scientists successfully utilized precision medicine techniques for global benefit, the U.S. and other European nations reaffirmed myths of primitiveness and danger by announcing their travel bans.

In clinical epidemiology, precision medicine allows scientists to generate all these data, but the question of whose responsibility it is to translate data to policy and to answer other societal questions suffers from a rather hegemonic definition of what precision medicine should be. Precision medicine, particularly studies looking to use genetics to track epidemiology, presents epistemological limitations. Sargent and Larchanché (2011) highlight the restrictions of using genetics in epidemiological studies by drawing attention to how the distribution of diseases among migrant and ethnic minority populations often correlates with economic development. To many in migrant communities or ethnic minority groups, this seems self-evident. However, the exclusion of such groups from global agendas, whether at a conference or the national policy level or any other assemblage of institutions, risks failing to deliver on the promises of precision medicine for all of us. Focusing too much on individualized medicine can make us forget that population health is more than the sum of every individual in a population. Care cannot simply be replaced by individualizing health and ignoring structural contributions to people's health. In some cases, addressing these structural barriers may even be more cost-effective in addressing health disparities.

Patient perspectives

The most important individual element of the different assemblages within precision medicine are the patients themselves. They are the very individuals that are being acted on as they transform into consumers, but these individuals retain autonomy and can practice refusal of care. Such autonomy complicates the portrait painted by precision medicine as not all patients may either desire a cure or have the background to be sufficiently educated to consent to the experimental treatment. This runs counterintuitive to the neoliberal framework that the consumption of health care is not only a right but also an obligation if one wants health care at all. Through the discussion of illness narratives of patients



(The cartoon raises the question of whether we are putting too many of our eggs in one basket and raising the rather controversial distinguishment between health and care from the perspective of medicine and sometimes a distinguishment felt by patients.) Illustration: Richard Coca

with Duchenne muscular dystrophy (DMD), Kato (2018) argues that the perception of genomic research and the possibility of a cure is shaped by the conditions in which patients live. In the case of DMD, Japan's history of eugenics and discrimination against people with genetic disorders makes patients feel like precision therapeutics is giving in to that dark history. DMD patients are also dependent on care from their parents so clinical trial registration is usually at the parent's discretion and will. Centering patients when shaping the agenda for precision medicine may further reveal that similar or different sociocultural conditions should be addressed when introducing either new treatments or when beginning the quest for one.

Precision medicine does, however, allow the formation of community and support groups especially for patients of rare diseases who may be the only one in their state or country with that disease. These support networks are a form of care where patients can share their experiences and share information about what works for them. Online communities for rare diseases are one way that either patients or parents of patients can keep up to date on the scientific literature (as well as become susceptible to misinformation). These groups can also occasionally be a feeder source to different clinical trials. Precision medicine thus has a social utility that should not be underestimated.

Research surrounding breast cancer diagnosis done by Mrig (2020) centers on patient perspectives to evaluate the utility of genetic medicine. By examining access to genetic testing among American women with a breast cancer diagnosis, Mrig finds that those who undergo testing often translate genetic knowledge into "salient change in their lives" (Mrig 2020, 109). This type of knowledge about their genes also carries implications beyond the immediate individual as siblings and other family members may also benefit from this genetic knowledge. It is because of this that many seek out genetic counseling services. This transformative power should be recognized by genetic medicine and precision medicine as one that comes with a weighty responsibility to educate and inform the patient.

How the idea of cures may limit precision medicine

The previously referenced composition of the PMWC should be perceived as problematic. The incentive structures under which pharmaceutical company executives operate make cure and profit intractable concepts with respect to their interests. For many pharmaceutical company executives, the idea of a cure as a concept cannot be separated from the concept of a cure for profit. Such an idea may be limiting precision medicine and our conception of what is possible. Could precision medicine also be focusing on more personalized corticosteroid doses for DMD patients to help with muscle weakness? (The answer is: Probably!) Surely, there are more possibilities for precision medicine to be intertwined with, and even imbued with, care. Warren and Addison's (2020) research on deep brain stimulation analyzes the idea of "cures" as a promise that may be drawing resources away from care that may very well be needed by the very patients. They ask what our healthcare system might look like if the idea of the cure did not crowd out possibilities of care even when the cure does not exist. The piece also raises the question of how resources should be allocated towards precision therapeutics and novel treatment when existing cures remain inaccessible for much of the population. Warren and Addison, like Mrig, recognize how the promises of genetic medicine drive the funding and direction of precision medicine as well as how the individual's relationship to biomedicine can change post-cure.

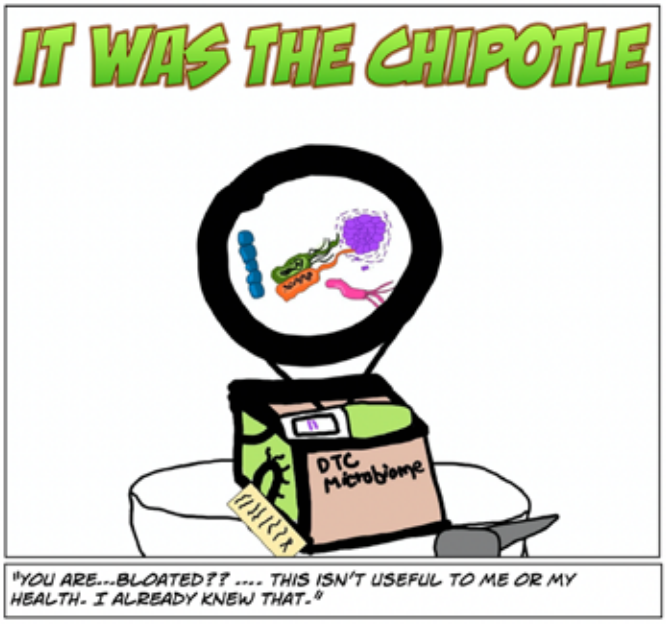
Where do we go from here?

There are many actors involved in the movement towards the adoption of precision medicine within the healthcare industry. Within research institutions like Stanford, principal investigators and physician-scientists plan and run experiments that reflect research interests that increasingly fall under precision medicine by nature. Funding agencies like the National Institute of Health and other grant bodies also hold power over the increasing normalization of precision medicine, as they provide funding that shapes the landscape of medical and research developments. Under Francis Collins, the NIH saw many of its policies oriented towards big institutions and translation research, away from high-risk research that drives a large part of the nation's scientific innovation (Faherty 2022). Thinking about assemblages, the NIH gives about 50% of all extramural grant money to 2% of applying organizations, most of which are universities or research facilities attached to universities (Wahls

2018). Among grant applicants, it is informally yet widely recognized that precision therapeutics is a buzzword and that using related terminology signals to the grant reviewer that they should value the application at hand more highly, all else equal. How might having patient-advocates on grant review panels change the type of research that is produced and prioritized? How might grant cycles be organized to ensure a more thorough review of clinically significant treatment? How might grant applications incorporate questions of social utility when examining projects focusing on precision medicine?

How might regulations around clinical trials and the FDA's new drug approval process be giving precision therapeutics a competitive advantage against non-precision therapeutics (and thus contribute to precision medicine's normalization)? Overall, regulation is a promising tool for ensuring the PMI lives up to its promises of equity. Regulation around direct-to-consumer tests offers another avenue to change the dynamic of turning a patient into a consumer that is found within the assemblages of precision medicine. Global cooperation and international regulation of experimental stem cell treatments like those Kandhari studied may also change the current trajectory of precision medicine and increase patient protection against potentially harmful interventions. With respect to global cooperation and globalized precision medicine, national government across the world should empower local agencies and caution towards normative claims of precision medicine being able to solve every medical subdiscipline's problems.

In the US, the PMI's promise to work for all of us is significantly hindered by the nation's healthcare landscape. Health insurance companies have a patchwork framework for evaluating genetic testing. Not all genetic tests are covered as they usually must be seen as clinically necessary and show significant promise in either improvement of diagnosis, treatment, or prevention. The discrepancy between rural and urban healthcare systems must also be addressed for the PMI to succeed. Sequencing technology, while much cheaper than when first introduced, remains costly and is not necessarily found within every hospital in America. Research institutions, which remain concentrated either in urban or suburban areas, recruit heavily from their local communities. Recruitment strategies should always be kept in mind when designing a clinical trial or conducting research to improve precision medicine.



(This cartoon highlights the current limitations of DTC microbiome testing.)
Illustration: Richard Coca

Precision medicine remains an assemblage of people, institutions, and types of knowledge. Given its continuing—perhaps even accelerating—adoption trajectory it becomes imperative to introduce new types of knowledge from the social sciences as well as from non-traditional medicine to ensure that cure and care are both given proper attention to. The PMI, which promises to deliver on individualized health, should invite individuals to shape its agenda, although such mechanisms remain speculatory as of now.

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From Paving Over to Paving Under:

Dharavi's Resistance to Top-Down Redevelopment in Mumbai

Arusha Patil

Abstract: *This paper studies the tensions generated by the clash between gentrifying redevelopment in Dharavi, one of Asia's largest slums, situated in the heart of Mumbai's financial district. The inhabitants of Dharavi, 'Dharavikars,' lack access to basic infrastructure, including waste disposal systems, equitable water distribution, and communications facilities. Prior to the 1990s, these needs were largely overlooked by the government, and a local form of capitalist-neoliberal networks arose to fulfill the slum's needs. In the 1990s, however, the ideology of neoliberalism that advocates for free trade and competition incentivized a set of policies promoting state sponsored private international investment. The neoliberalization of India sought to catalyze modernization, transforming benign, self-functioning settlements such as Dharavi into malicious deformities in the government's vision for the future. As outlined by urban plans of the early 2000s, this future depended upon the displacement of slum-residents by higher-income, middle-class communities. Instead of providing the paving under these settlements, Mumbai's urban plans sought to pave over them. While other slums across Mumbai vanished and shifted to the fringes of the city, Dharavi mobilized to defend its existence. As a result of its unique cultural and economic diversity, the slum nurtures extensive social networks that configure its informal businesses and industries, which have enabled a trade and caste-based mobilization against gentrifying redevelopment. This paper will highlight Dharavi's unique socioeconomic networks and configurations, and their role in resisting the Dharavi Redevelopment Project, a massive urban re-design scheme undertaken in Mumbai in 2004. Dharavi is grounded in India's past of incremental grassroots development, while Mumbai symbolizes India's potential future. The conflict between the two represents a crossroads for how India will modernize, illustrating the importance of culturally sensitive redevelopment and encouraging planners to ask, "who do we design for?"*

Figure 1. Aerial Perspective of Dharavi (Johnny Miller, Slums by BKC, photograph, Unequal Scenes, September 19, 2018. Scroll.in Magazine.)

Appearing like an ocean within a city, blue tarps, metal sheets, and plastic walls sprawl until the horizon, juxtaposed against towering steel skyscrapers in Mumbai. The steel skyscrapers belong to the Bandra-Kurla Complex, a national and global financial center, while the recycled low-rise homes constitute Dharavi, one of the world's largest slums. Together, they form a strikingly powerful image that exposes urban inequality in Mumbai, where 40 to 60% of the population lives in slums despite the city housing the most billionaires and millionaires in India.[1] As Mumbai urbanized in the twenty-first century, the city government has increasingly advocated for the promise of a "slum-free city." Local politicians envisioned an urban landscape of middle-class high rises, golf courses, and theme parks to complement Mumbai's wealthy financial district.[2] However, this elitist vision for a modern, homogenous Mumbai would destroy the complex and diverse patterns of urban life that coexist in the city, eradicating vibrant and historical slums like Dharavi. Although the context of Neoliberal redevelopment lends itself to the David-and-Goliath narrative of "the innocent grassroots struggling against malevolent globality," the reality of Dharavi's persistence in Mumbai is considerably more complex.[3] As microcosms of India's rural and elite populations, Dharavi and Mumbai share an intertwined history and future: their symbiotic relationship illuminates a path of modernization that respects the rights of India's urban poor instead of undermining them.[4]

Mumbai's modernization has largely excluded Dharavi and its residents. Spanning 0.84 square miles with a population of over 600,000, Dharavi's population density is 869,565 people per square mile, which is approximately ten times that of Manhattan.[5] This density is incredibly high even for Mumbai, which is the fourth most populous city in the world with an average population density of 77, 000 people per square mile.[6] Due to neglect, infrastructure privatization, and dweller-resistance, the government has failed to provide permanent waste disposal facilities (beyond unhygienic portable toilets) nor clean water distribution systems to slum residents. Slum-dwellers often struggle with basic amenities: one Dharavi resident, Fatima, accounts how she averages two hours per morning waiting to collect water, since the supply may evaporate or be closed by Dharavi's water mafia if she arrives later in the day.[7] Working long hours, at low wages in factory environments, Dharavi's residents often face health challenges due to the pollution in the region: breathing Dharavi's air is equivalent to smoking two and a half packs of cigarettes a day.[8]

It would be inaccurate, however, to depict Dharavi solely through its infrastructural challenges: the settlement is defined by a diverse, interconnected community that depends on mixed land-use for living, praying, manufacturing goods, and selling products. Dharavi is considered a 'slum' by the UN definition, which defines slums as "low-income settlements that suffer from a deprivation of housing, living space, water, sanitation, or tenure."[9] However, the UN definition exclusively addresses residential features of slums, ignoring other facets, such as economic vitality, which form a large part of the settlement identity. Thus, this paper employs the term 'homegrown settlement' over 'slum' for two primary reasons: first, 'slum' is a reductive term laden with negative connotations. The word reinforces narratives favoring gentrification and distorts views of low-income, urban neighborhoods that each have a unique, non-homogenous character.[10] Second, the official designation of 'slum' often enables and foreshadows the settlement's elimination.[11] In India, political slogans like 'slum-free cities' aim to mobilize public support for

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[10] Jake Blumgart, "Should We Retire the Word 'Slum'?," Bloomberg, October 10, 2017.

[11] Jan Nijman, "A Study of Space in Mumbai's Slums," Journal of Economic and Social Geography 100, no. 1 (February 24, 2010): 11, accessed February 2, 2021, Wiley Online Library.

removal and cleansing programs.[12] Although Dharavi's residents often use the word 'slum' to gain access to government welfare programs, they rarely choose to describe themselves as 'slum-dwellers' in common conversation.[13, 14] Considering the complexity of Dharavi and its resistance toward redevelopment, 'homegrown settlement' characterizes the constantly changing space more precisely than the negative and potentially destructive terminology of 'slum.'[15]

As the settlement confronts top-down planning focused on its elimination, the perseverance of Dharavi is a remarkable phenomena: urban poverty is rarely so explicit and audacious that it persists at the heart of a country's financial capital. Dharavi has successfully resisted gentrification via a diverse, yet politically united local culture that engages in informal industries that provide trade and caste-based mobilization against redevelopment. In order to examine and understand this phenomenon, this paper will provide an overview of Dharavi's cultural and economic soft-power, examine its resistance to the Dharavi Redevelopment Plan (DRP), and discuss development approaches that can be extended to India's modernization. The intent is not to romanticize Dharavi but advocate for the preservation of settlement economies, cultures, and complexities in development endeavors across India. In India's path to modernization, will we pave the roads under these settlements? Or will we pave over them?

The Origins of Dharavi and the Neoliberalization of India

Dharavi's diverse character took shape against the backdrop of India's industrialization in the 19th century and Neoliberalization in the late 20th century. As Mumbai transitioned to large-scale production in the late 1800s, planners actively sought to isolate "dangerous and polluting" trades such as leather processing (tanning) to protect the public health of the growing city.[16] Such industries were relocated on the fringe of Mumbai, in the marshy regions of Koliwada, a fishing village to the northwest. While urbanization spurred migration to city centers, inadequate worker housing in Mumbai led to the development of informal neighborhoods around the city. Residents lived "not in chawls [single house tenaments], but in huts put together with dry coconut or date palm leaves . . . or corrugated iron, empty kerosene tins, wood."[17] In Koliwada, the existing Koli community absorbed the overflow of migrants, many of whom were also fleeing caste and religious discrimination.[18] For instance, in 1890, dalits ('untouchables') from Uttar Pradesh and Tamil Nadu embraced the 'dirty' work of tanning leather in northern Dharavi.[19] Then, in 1895, the Kumbars, a Gujarati community of potters, migrated to the southwest corner of Dharavi, increasing the concentration of polluting industries in the region.[20] As migrants found work in tanning, recycling, and pottery industries, the Koli Village transformed into Dharavi, distinguished by a unique spatial segregation based on trade and region of origin.

The diversity of occupations and ethnicities in Dharavi contributed to a fragile tolerance and interchange, as residents jointly strived to obtain socioeconomic mobility. Until the 1930s, Mumbai's local government disregarded the overcrowding in Dharavi, embracing a policy of supportive neglect. Homegrown settlements formed inexpensive, self-functioning units on the outskirts of the city. As a result, the government avoided confrontation with informal spaces like Dharavi, seeking to preserve them as sources of cheap migrant labor.[21] Housing workers in the city was expensive, so Mumbai warehoused them in settlements. As conditions exacerbated and demands for infrastructural support intensified across settlements, the government undertook projects that constructed homes and roads, but they had minimal impact on steadily growing Dharavi.[22]

[12] Andavarapu, "Victims or Survivors,"

[13] Andavarapu, 13.

[14] Matias Echanove, Rahul Srivastava, and URBZ, The Slum Outside: Elusive Dharavi (Moscow, RS: Strelka Press, 2014), 15, digital file.

[15] I derived the adjective 'homegrown' from the book The Slum Outside: Elusive Dharavi, which employs the term "homegrown neighborhood" to describe Dharavi. 'Homegrown' characterizes the natural development of Dharavi and reflects its historical significance as a home and destination for numerous migrants. However, I opted to use the term 'settlement' over 'neighborhood' because of the unique spatial patterns that arose because of settlement in Dharavi.

[16] Weinstein, The Durable, 26.

[17] Weinstein, 33.

[18] "The Missing Tanneries of Dharavi," Shoes & Accessories, May 31, 2013, Gale General OneFile.

[19] Kalpana Sharma, "Dharavi: An Uncertain Future," in Reclaiming (the Urbanism Of) Mumbai, by Kelly Shannon and Janina Gosseye (Amsterdam: SUN, 2009), 88.

[20] Nijman, "A Study," 8.

[21] Weinstein, The Durable, 27.

[22] Weinstein, 37.

The expansion of Mumbai northwards in the 1980s led to the encircling of Dharavi: the settlement now lies at the center of Mumbai's financial district and railroad lines.[23] Coinciding with Mumbai's expansion in the 1980s, India embarked upon a process of Neoliberalization that sought to remove state intervention and stimulate foreign investment in large-scale development and infrastructure projects.[24]

Neoliberalism refers to a set of actions and ideas meant to achieve a global dispersion of capitalism and generate competition among private actors to prevent worker exploitation.[25] The ideology predicts the "second coming" of capitalism, in which the market bears responsibility for nearly all aspects of life: mobility, security, heritage, water, fair trade, etc.[26] In Dharavi, an unregulated local form of neoliberal capitalism arose to meet the inhabitants' needs, generating socioeconomic networks that drew migrants to the settlement. However, India's globalization in the early twenty-first century marked the introduction of big "N" Neoliberalism, a policy model born from the perversion of little "n" neoliberalism. In this paper, I employ the little "n" and big "N" to distinguish between 1) the philosophy of market exchange and 2) the political, state-driven program that reduces citizens to consumers. As Marxist economist and geographer David Harvey argues, there exists a striking disparity between ideology (neoliberalism) and implementation (Neoliberalism): despite the ideology's intent to protect citizens through free market competition, the practice of Neoliberalization ultimately exacerbates wealth inequality.[27] Little "n" neoliberalism enables people who have differing beliefs or values–which is especially characteristic of the diverse milieu of Dharavi–to mutually benefit from an economic trade.[28] Under big "N" Neoliberalism, however, the state that was meant to police the system and protect workers allied with private actors to maximize profit. In the 1990s, big "N" Neoliberal policies established a framework for India's elite to prosper and accumulate wealth at the expense of both the rural and urban poor. Specifically, in real estate, Mumbai's developers transformed old textile buildings into profitable multiplexes, temples, and malls, profoundly changing the city's urban landscape. Informal settlements like Dharavi were stripped of their historical and spatial significance, instead viewed as real estate for the burgeoning upper-middle-class.[29] Moreover, the shift from local public to international private development contributed to exponential economic growth, leading to higher land values in central regions of Mumbai. Located on marketable government-owned land, the centrality of Dharavi made it a target for development.[30]

As the land on which homegrown settlements existed became increasingly valuable and coveted, elite attitudes toward settlement-dwellers transformed from acceptance to disdain. Prior to the Neoliberal era of the 1990s, India's courts repudiated government evictions and slum-demolition schemes, protecting the inhabitants' rights to live on government-owned land if denied sufficient rehabilitation. The judiciary system ruled in Olga Tellis v. Municipal Corporation in 1985 that the "eviction of pavement dwellers would lead to the deprivation of their livelihood and ultimately their life."[31] This victory established an essential precedent for housing: under Article 21 in the Indian Constitution, inhabitants of homegrown settlements could only be re-settled if their rights to life and liberty, and by extension food, water, shelter, education, and health access were protected.[32] However, Neoliberal attitudes soon shifted to criminalize the urban poor as squatters on prime public real estate, and court language adjusted to reflect the illegality of homegrown settlements.[33] In Patel versus Union of India in 2000, court rhetoric equated inhabitants to thieves and "encroachers," defining informal settlements as "large areas of public land . . . usurped for private use free of

[23] Vandana Baweja, "Dharavi Redevelopment Plan: Contested Architecture and Urbanism," in The Expanding Periphery and the Migrating Center: Papers from the 2015 Association of Collegiate Schools of Architecture Annual Meeting, ed. Lola Sheppard and David Ruy (Washington, DC: ACSA Press, 2015), 382.

[24] Mahmud, "Slums, Slumdogs," 696.

[25] Daniel Münster and Christian Strümpell, "The Anthropology of Neoliberal India," Contributions to Indian Sociology 48, no. 1 (December 4, 2013): 5, SAGE Journals.

[26] Münster, 5.

[27] Münster, 9.

[28] Kevin Vallier, "Neoliberalism," The Stanford Encyclopedia of Philosophy, (Stanford, CA: Metaphysics Research Lab, Stanford University, 2021).

[29] Mahmud, 696.

[30] Mahmud, 696-97.

[31] Weinstein, The Durable, 72.

[32] Shirish B. Patel, "Dharavi: Makeover or Takeover?," Economic and Political Weekly 45, no. 24 (June 12, 2010): 48, http://www.jstor.org/stable/40738495.

[33] Mahmud, "Slums, Slumdogs," 697.

cost."[34] They claimed that residents "have no legal right, what to talk of fundamental right, to stay there a minute longer."[35] Although the statute established by Olga Tellis protected the inhabitants' livelihoods, it failed to prevent their displacement to the edges of Mumbai. Ultimately, the accusation of criminality justified violent evictions as well as the government's inaction. Mumbai's local politicians eschewed responsibility for creating running water supplies or organized garbage collection systems, propagating narratives of "unsanitary slums" without providing the necessary infrastructure to develop them.[36] In slum clearance programs from 1994 to 1998 and 2004 to 2005, the Maharashtra government and the Brihanmumbai Municipal Corporation (BMC) eradicated approximately 360,326 housing units in settlements outside of Dharavi.[37]

The Dharavi Redevelopment Project

Although there have been multiple projects aiming to redevelop Dharavi, the failure of the most ambitious and lengthy Dharavi Redevelopment Project (DRP) reveals the flaws in top-down planning and the strength of the Dharavikar identity. The DRP was proposed in 2004 as a public-private partnership that would attract international developers to the land in Dharavi as part of the pattern of Neoliberal globalization in India. Based on a 2003 report by the NGO Bombay First and the global consulting firm McKinsey, the DRP was part of a broader vision to transform Mumbai into a "world-class city" like that of Shanghai and Singapore.[38] The DRP's top-down planning defined lofty objectives for the settlement's re-design and used profit as the primary incentive for international developers, whose motives are especially visible due to Dharavi's prime location.

Dharavi is straddled between the central business district (Nariman Point) in southern Mumbai, the emerging financial center (Bandra-Kurla Complex) in midtown Mumbai, and the city's international airport. Three suburban train stations dot the corners of the settlement, forming a "golden triangle" of real estate due to the region's accessibility and surrounding business centers.[39] Appearing as a dilapidated urban blight in a highly-valued location, Dharavi offered developers a unique opportunity to pave over the 'slum' and turn 'lead' into gold. This notion of incongruency with the city heightened the ambitions of the DRP, which discounted Dharavi's thriving neoliberal market and bottom-up grassroots development and instead embraced grandiose top-down planning. In its declaration of intentions, the DRP re-imagined Dharavi as a "glittering township of parks, skyscrapers, shopping arcades and good life."[40]

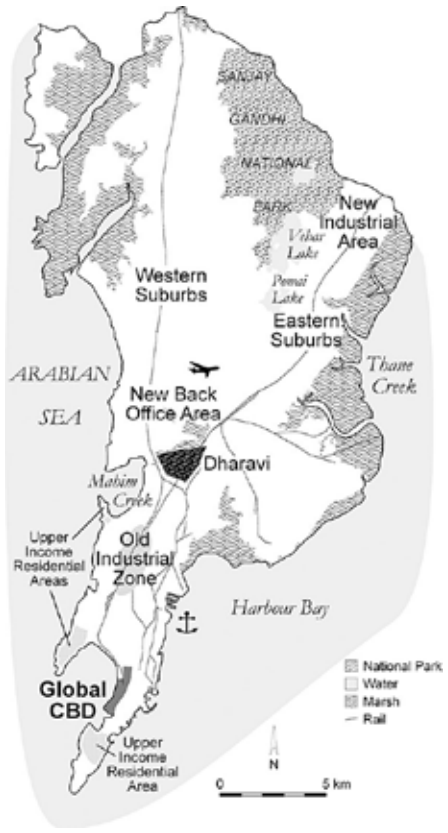

Figure 2. Shaded Triangle of Dharavi and Greater Mumbai (Map by Jan Nijman in "A Study of Space in Mumbai's Slums," © Royal Dutch Geographical Society KNAG, 8).

To maximize Dharavi's appeal as a developmental opportunity, the McKinsey report called for a substantial increase in the projected floor surface index (FSI) of Mumbai's slums from 1.0-2.5 to 3.0-4.0. FSI can be understood in the context of building and selling land. With an approved FSI of 3, the developer can build three times the lot size through the construction of vertical high-rises. The potential for greater construction enables the developer to sell 2.0 times the built area, while a living unit of 1.0 of the FSI would be allocated to inhabitants that had settled in Dharavi before 2000. McKinsey theorized that slum-clearance with higher FSIs would incentivize foreign developers to invest in Dharavi, disregarding the challenges of executing such an ambitious plan.[41] In the DRP, the lead architect Mukesh Mehta envisioned a suburb with schools and malls, promising settlement inhabitants 225 sq. ft. of living space with electricity and running water for 300 rupees ($7) per month.[42] On average,

[34] Mahmud, 698.

[35] Mahmud, 698.

[36] Patel, "Dharavi: Makeover," 48.

[37] Baweja, "Dharavi Redevelopment," 385.

[38] Baweja, 384

[39] Rani Day, Kamla Raheja Vidynidhi Institute for Architecture and Environmental Studies, and Society for the Promotion of Area Resource Centres, R[e] Interpreting, 6.

[40] Chalana, "Slumdogs Vs. Millionaires," 31.

[41] Chalana, 31.

[42] Leo Hollis, Cities Are Good for You: The Genius of the Metropolis (London: Bloomsbury, 2014), 217.

Dharavikars earn 20 rupees per day, and 600 rupees ($14) per month.[43] A rent of 300 rupees, which appears cheap by Mumbai's standards, would absorb half of the current residents' income. The DRP shifted the onus of development from the government to private companies. Private developers were expected to pay a premium to the government, re-house settlement inhabitants, and provide schools and infrastructure in exchange for the higher FSIs.[44] The main clients of the developers, however, would be the incoming upper-middle class, displacing the current residents of Dharavi.

In 2007, the DRP, valued at five billion euros, entered the global stage, dividing Dharavi into five sectors for competitive international bidders to redevelop. In all other rehabilitation schemes in Mumbai, developers granted FSIs of 2.5 or more needed to garner approval from at least 70% of the affected community. However, not only did the local government increase the FSI maximum to 4, they also eliminated the developer requirement for 70% approval, in an effort to stifle dissent and keep the DRP socially and economically viable.[45] This profoundly undemocratic decision eliminated the need for resident approval and prevented the participation of Dharavikars in the planning process. Projected to drastically reduce slum population from 60% to 20%, the DRP was lambasted for its failure to consider the infrastructure realities of Mumbai and more importantly, the spatial and social networks that define Dharavi.[46]

The Dharavikar Socioeconomic Identity

While the socioeconomic networks of Dharavi have provided creative opportunities for caste-based alliances, it is imperative to address the exclusion of women across these networks. The settlement is notorious for street harassment, sexual violence, and gender discrimination. As rural attitudes restrict womens' work and education opportunities, many suffer from exploitative high-interest loans and wage discrimination.[47] To even secure a license to sell products, a woman in Dharavi is expected to pay a bribe.[48] Straddled between earning money and managing the home, Dharavi's women often experience health complications as a result of repeated pregnancies, heavy manual labor, and negligible healthcare.[49] Any modernization in Dharavi must include a reshaping of such cultural attitudes, empowering women as a vital half of the settlement population. In stark contrast with the oppression toward women, caste in Dharavi has transformed into a source of alliance and unity, albeit with occasional tension. The Mahars illustrate this point: historically, the Mahars lived as traditional village servants and belonged to the lowest group in the Hindu caste system. However, divorced from the village structure after settling in Dharavi, many Mahars found work in textile factories and in the military that provided socioeconomic mobility.[50] Some discovered religious freedom, converting to Buddhism and rejecting the Hindu caste system that confined them to the bottom of the social hierarchy.[51] In contrast, the Cambhars, Dhors, and Holars–ethnic groups esteemed as village artisans in the Hindu caste system–embraced Hindu orthodoxy.[52] Rural caste-based differences thus converted into socioeconomic inequalities among ethnic groups in Dharavi. Caste rivalry further resulted in religious and political divergence, leading to novel caste-based associations and ethnic pockets across Dharavi with informal Cambhar spaces in the north, Muslim districts, and Dhor-dominated streets.[53] A source of social and political power, caste remains an integral aspect of settlement life, despite India having banned the system in 1950. The legacy of caste tension manifests in inequalities for individuals working outside of their traditional ethnic industries and in limitations on socially-appropriate marriages. However, the settlement's unique caste-ethnic guilds simultaneously create a deep sense of belonging for new migrants. Take, for instance, the Khumbars, potters who migrated from Gujarat. The Khumbars form a 'caste,' a clearly defined cultural group, and an industry all at once."[54]

[43] Hollis, Cities Are Good, 219.

[44] Baweja, "Dharavi Redevelopment," 381.

[45] Sharma, "Dharavi: An Uncertain," 91.

[46] Baweja, "Dharavi Redevelopment," 383.

[47] Smita R. Chodankar, "The Situation of Women in Dharavi, Asia's Largest Slum," Social Change 34, no. 1 (March 2004): 136, SAGE Journals.

[48] Chodankar, 135.

[49] Chodankar, 134.

[50] Marie-Caroline Saglio-Yatzimirsky, "Caste as a Political Tool," in From Stigma to Assertion: Untouchability, Identity and Politics in Early and Modern India, by Mikael Aktor and Robert Deliège (Copenhagen: Museum Tusculanum Press, University of Copenhagen, 2010), 207, digital file.

[51] Saglio-Yatzimirsky, 206. One of the greatest legacies of Hinduism in India is the caste system originating from a Hindu myth on the social hierarchy of society. As a result, Hinduism and caste have proven inseperable, motivating the shift of many persecuted, lower-caste groups to other religions.

[52] Saglio-Yatzimirsky, 204.

[53] Saglio-Yatzimirsky, 210.

[54] Saglio-Yatzimirsky, 210, Nijman, "A Study," 13.

As new migrants integrate themselves into their sub-cultural industry, the economic interdependence between ethnic groups facilitates their assimilation into the larger Dharavikar identity.

Dharavi consists of eighty nagars or districts, divided by natural boundaries which developed based on religion, trade, and region of origin.[55] As Neoliberal policies catalyzed the gentrification and displacement of the urban poor in India, spatial and social networks based on class, caste, and gender became increasingly essential for survival within settlements.[56] These community networks fall under the term 'social capital,' which as defined by the OECD, refer to "networks together with shared norms and understandings that facilitate co-operation within or among groups" ie. former colleagues, family friends.[57] Dharavi may be the image of poverty in Mumbai, but it is the beacon of social capital across India, largely because of the coexistence of diverse groups in the region. In fact, Dharavi's social fabric is a gendered and cultural mosaic of Muslim tanners, Uttar Pradeshi embroiderers, Bihari and Tamilian textile industrialists, female small-scale food manufacturers etc. – all of whom have interweaving subcontracted businesses.[58] Jewelers depend on local smelters, statuary-makers rely on local plastic recyclers, andgarment-manufacturers supply local embroidery shops.[59] Despite the caste-tensions, overcrowding, and flooding in Dharavi, the homegrown settlement continues to sustain generations of migrants: for numerous persecuted, low-income communities, Dharavi remains "India's premier fast track to upliftment."[60]

The story of Waqar Khan, a Dharavi tailor and social worker who received the Gandhi Peace Prize, illuminates the economic mobility complexity of Dharavi's networks. Born in Bareli, Uttar Pradesh in a Muslim family, Khan left school to work at the age of seven to provide for his family. When his family moved to Mumbai seeking opportunity, he found work selling bananas as a teenager. After years of saving, Khan decided to invest in a sewing machine, which he then used to finance a tailoring business in Dharavi, recycling clothing from the local flea market.[61] His gradual garnering of economic power allowed him to send his daughters to school and educate his son on managing his business. His story serves as a paragon of informal neoliberal entrepreneurship in Dharavi. As such, Khan valued the region's economic and resulting religious diversity, living peacefully beside a Hindu family for a decade.[62] However, despite the proximity and financial interdependence of diverse communities, Dharavi is vulnerable to the larger communal forces of India. Khan describes how the vitriol of riots between Hindus and Muslims across India diffused into the neighborhoods of Dharavi from 1992 to 1993. Over two hundred were killed in the cross-fire, leaving Khan aghast at the shattering of Dharavi's fragile peace.[63] After the riots, Khan joined the Dharavi Mohalla (Neighborhood) Committee Movement Trust, an activist organization that sought to re-build the trust and understanding between Hindu and Muslim communities.[64] Working with fellow Hindu resident Ramachandra Korde, Khan established a cross-religious alliance, encouraging Muslims to attend Hindu events such as Ganesh Chaturthi while inviting Hindus to Muslim festivals such as Iftar.[65]

Figure 3. Children of Different Religions Stand United Above Text "We Are All One." Teesta Setalvad, "A Community Poster that Speaks for Peace: Bombay 1992-1993, Sabrang, September 2001.

Perhaps one of the enduring legacies of Khan and Korde's alliance is the poster above, where four children of Christian, Sikh, Muslim, and Hindu faiths stand symbolically against the backdrop of the Indian flag.[66] They circulated the poster with the intent of inspiring harmony and unity among the various faiths, re-weaving stronger and more tolerant social webs through the shared suffering after the riots.[67] Dynamic and extensive, Dharavi's neoliberal socioeconomic networks further root the settlement in Mumbai's landscape.

[55] Chalana, "Slumdogs Vs. Millionaires," 29.

[56] Mahmud, "Slums, Slumdogs," 690.

[57] Brian Keeley, Human Capital, OECD Insights (Paris, FR: OECD, 2007), accessed March 3, 2021, OECD Insights.

[58] Nijman, "A Study," 13.

[59] Campana, Dharavi: The City, 47.

[60] Campana, 47.

[61] Campana, 27-28.

[62] Campana, 32.

[63] Campana, 28.

[64] Campana, 31.

[65] Campana, 32.

[66] Campana, Dharavi: The City, 33.

[67] Campana, 33.

Additionally, as chain migrations led to the development of over eighty distinct ethnic and caste-based neighborhoods (nagars), residential-industrial areas naturally segregated based on occupation.[68] The spatial segregation of Dharavi lends itself to an interconnected settlement culture, as individuals share public spaces like roads and walk-ways outside of organic low-rise huts for communal living.

Figure 4. Dharavi, Mumbai, India 2011. Public and communal spaces as a source for domestic and economic life. (In Kim Dovey, "Incremental Urbanism: The Emergence of Informal Settlements," in Emergent Urbanism: Urban Planning and Design in Times of Structural and Systemic Change, by Tigran Haas, ed. Krister Olsonn (London, UK: Taylor & Francis Group, 2014), 48, ProQuest Ebook Central)

One building type, the 'chawl' characterizes many inner-neighborhoods in Dharavi, originally constructed by the government in the 1900s to superficially redress the lack of worker housing.[69] A chawl consists of two to six stories with ten to twelve tenements on each floor that measure 8 by 8 feet, along with a shared toilet and washing area.[70] As a result of the little living room for residents, the streets outside of chawls and huts emerged as collectively-owned spaces for festivals and marriages.[71] Fig. 2 captures the vibrancy of the shared street, where children embrace the road as basic playgrounds and families organize their shop. Thus, the informality of these communal spaces enables the exchange of ethnic customs and traditions, goods and products, and resources and materials that serve as the basis of Dharavi's unique culture and economy.[72] On a single street, one can see a Buddhist shrine, decorated with images of Babasaheb Ambedkar–an Indian economist, activist, and politician who fought for the Dalit community–next to a Hindu Tamil temple.[73] In a community where NGO-led schools teach in Kannada, Tamil, Hindi, English, Marathi, [and] Urdu . . . usually with more than 50 pupils per class, "diversity is the only norm."[74] Beyond exemplifying the cultural milieu of Dharavi, the myriad of schools, places of worship, and community centers evidence the permanent nature of the homegrown settlement. The highly condensed form of living in Dharavi has produced a culture of exchange, predicated on relationships between diverse identities. Studies of neighborhoods in the U.K. reveal a similar relationship between density and socialization. While inhabitants of low-density areas report having "widely spread social networks" with "few strong relationships," higher-density neighborhoods tend to be characterized by "smaller networks but stronger ties."[75] Additional research on the spatial foundation of social networks reveal a rather intuitive correlation: smaller geographical areas–like the shared spaces in the case of Dharavi–provide more opportunities and contexts for contact and connection.[76]

In addition, Dharavikar homes have evolved to become incredibly productive and efficient. A housing unit or 'tool-house' in Dharavi averages around 250 square feet, sheltering ten to twelve people and constructed with recycled objects like plastic and metal sheets.[77]

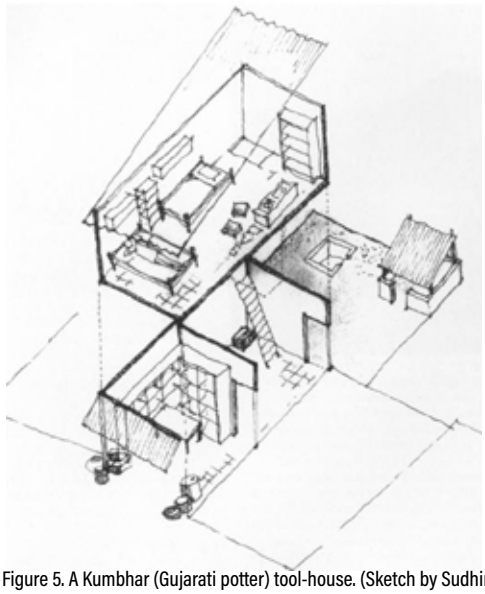

Figure 5. A Kumbhar (Gujarati potter) tool-house. (Sketch by Sudhir Prakash in Chalana, Manish. "Slumdogs Vs. Millionaires: Balancing Urban Informality and Global Modernity in Mumbai, India." Journal of Architectural Education 63, no. 2 (March 2010): 25-37.

[68] Campana, 43.

[69] Weinstein, The Durable, 80.

[70] Tithi Sanyal, "The Chawls and Slums of Mumbai: Story of Urban Sprawl," Agora Journal of Urban Planning and Design, April 14, 2018, 24.

[71] Chalana, "Slumdogs Vs. Millionaires," 27.

[72] Dovey, "Incremental Urbanism," 47.

[73] Echanove, Srivastava, and URBZ, The Slum, 27.

[74] Echanove, Srivastava, and URBZ, 5.

[75] Raman Shibu, " Designing a Liveable Compact City: Physical Forms of City and Social Life in Urban Neighbourhoods." Built Environment (1978-) 36, no. 1 (2010): 63–80.

[76] Amati V, Meggiolaro S, Rivellini G, Zaccarin S. "Social relations and life satisfaction: the role of friends." Genus. 2018. 74, no. 1, 14, (May 2018). https://doi: 10.1186/s41118-018-0032-z

[77] Rupsa Chakraborty, "Door-to-door Survey at Heart of Government's Dharavi Strategy to Tackle Covid-19," Hindustan Times (Mumbai, India), April 5, 2020.

In Western cities, residence and work life are separated by land-use and zoning laws; however, due to the high population density and limited space, a single housing unit in Dharavi often serves as a restaurant, office, religious center, and manufacturing space, such that inhabitants can "satisfy most of their everyday needs . . . within a five-minute walking radius."[78] With next to no cost for transportation, Dharavi's labor force works minimize commute time and maximize hours of work, lowering costs of production for businesses and employers.[79] Furthermore, the organic low-rise home creates adaptable multi-use spaces that suffice the individual's familial needs and profession.[80] Fig. 5 exemplifies this phenomenon: the vernacular architecture of the Kumbhar home supports ethno-occupational ties, as families share kilns in the yard, sleeping areas on the upper floor, and store space on the street.[81] Family units combine to create extra-familial workshops, maximizing employment within an ethnic network: in fact, despite many workers being underpaid, there is less chronic unemployment in Dharavi than in the rest of Mumbai.[82] Considering how Dharavi houses 90,000+ families and how a majority of homes serve as industrial units, it then follows that the settlement forms a manufacturing superpower, producing belts, jeans, buckles, papad, farsan, pottery, jewellry etc.[83] With an annual turnover of US $650 million, Dharavi's home-based entrepreneurship has created a model for accumulating economic power in Mumbai with caste and ethnic networks extending across India.[84]

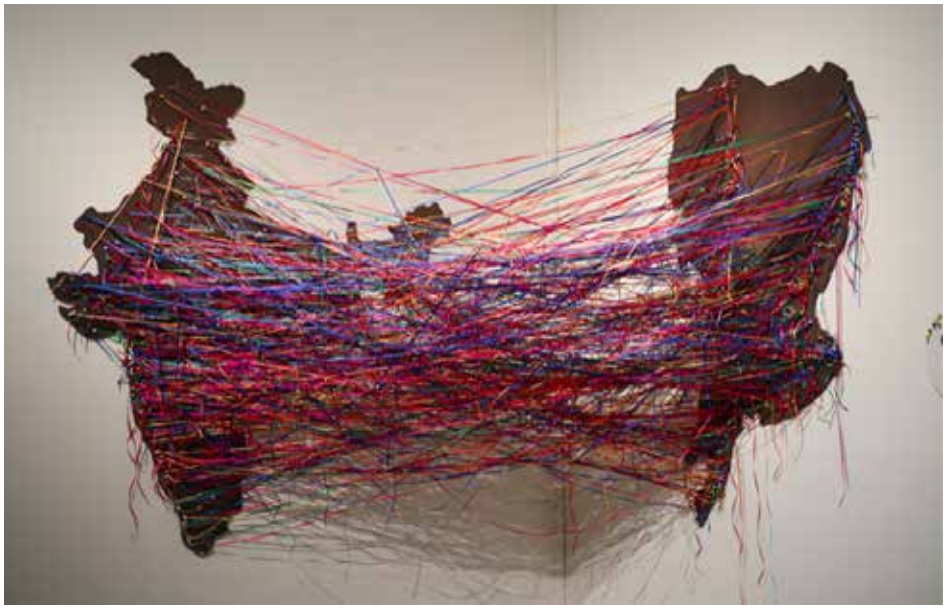

Figure 6. Interactive Map between India (left) and Mumbai (Photographed by urbz in Bloomberg City Lab) Feargus O' Sullivan, "In Mumbai, a Push to Recognize the Successes of 'Informal' Development," Bloomberg City Lab (Manhattan, USA), June 21, 2018.

Due to the interchange between Mumbai and Dharavi, the networks connecting Mumbai to India extend to Dharavi, making the settlement a microcosm of India as a whole. In a project led by the URBZ research collective, participants attached a string between their hometown in India (left) and their current home in Mumbai (right).[85] Residing at the heart of Mumbai, many Dharavikars utilize the resources they find in the city to send money back home and develop their village.[86] Resident Assadula Rubena, who migrated to Dharavi in 1991, founded a business that produces and delivers kitchenware and appliances. His family lives in the rural regions of Tamil Nadu, and he mails half of his income to them monthly.[87] The disparity in economic opportunity is clear: to earn the same amount, a brickmaker from Madurai–a major city in Tamil Nadu–must sell 60,000 bricks per month.[88] Rubena's story is one of many, as the flow of migration to Dharavi contributes to interchange across India, birthing a complex web of trade, consumption, and connection. A study conducted by Anamika Singh, lecturer at Bharati

Vidyapeeth's Institute of Management Studies and Research, demonstrated how shutting down Dharavi's tanneries could disrupt the entire supply chain of India's leather industry.[89] Many of Dharavi's tanneries have been relocated to suburbs in Mumbai to minimize toxicity in the city; however, the remaining factories are essential in leather production, as they semi-process raw hides and ship them to Chennai or Deonar for additional processing. The hides then return to Dharavi's workshops to be crafted into bags, wallets, and shoes from where they are sold to countries like Japan and Australia.[90]

[78] Echanove, Srivastava, and URBZ, The Slum, 21-23.

[79] Campana, Dharavi: The City, 42.

[80] Chalana, "Slumdogs Vs. Millionaires," 31.

[81] Baweja, "Dharavi Redevelopment," 385.

[82] Govinda, "Marie-Caroline Saglio-Yatzimirsky," review, 4.

[83] Weinstein, The Durable, 159, "The Missing."

[84] "The Missing."

[85] O'Sullivan, "In Mumbai."

[86] O'Sullivan.

[87] Campana, Dharavi: The City, 39.

[88] Campana, 39.

[89] "The Missing."

[90] Sourav Dey, "The Circular Economy of Dharavi: Making Building Materials from Waste" (master's thesis, The Pennsylvania State University, 2018), 39.

The destruction of Dharavi would shatter the underlying neoliberal system of trade that India depends on, as the settlement enables national interconnection. Further, Dharavi's recycling industry absorbs approximately 80 percent of Mumbai's plastic waste: without the settlement, Mumbai would rapidly feel the weight of its own consumption.[91] Dharavi is invaluable to Mumbai and India; it is the neoliberal seed of informal trade, economic opportunity, and resistance in Mumbai that has grown roots across the country over the course of generations.

In the words of French anthropologist Saglio-Yatzimirsky, who studied leatherworkers in her novel Dharavi, from Mega-Slum to Urban Paradigm, "Dharavi is not an offshoot of villages nor is it a rejection of the city; it is a society in its own right."[92] Armed with the economic soft-power of its diverse ethnic industries and its wide-ranging roots in India, Dharavi confronted the DRP for its reductive and destructive simplification of the settlement.

Grassroots Resistance and Development

In the 1990s, the threat of demolition in Dharavi triggered the birth of grassroots resistance guided by NGOs and community-based organizations that "strengthened the residents' collective efficacy to resist."[93] Under pressure from the DRP in 2007, two Indian organizations, the Society for Promotion of Area Resource Centers (SPARC) and the Concerned Citizens for Dharavi (CCD) arose as NGO-leaders in the settlement community. In an open letter to India's prime minister, endorsed by renowned academics, researchers, and NGOs, advocates delineated three primary failures of the plan: the disregard for existing nagars, the absence of census data on Dharavi residents, and the stifling of Dharavikar voices in the redevelopment effort.[94]

First, the re-design would destroy the unique spatial patterns of the region, and thereby, deracinate the social networks that define the settlement community. Tanners would be stripped of their efficient transportation, and production systems and recycling industries would be pushed to the outskirts of Mumbai. Equally problematic, the entirety of the tool-house, representing the livelihood of most inhabitants, would be replaced with high-rises dedicated only to residence. Second, the DRP allocated 57% (70 out of 240 hectares) of the land to development, asserting that the displaced 67,000 families would be rehoused in the remaining 144 hectares–making an already unsustainable population density denser.[95] Additionally, the estimate of 67,000 families was likely conservative: many residents avoid being counted in government censuses because of the requirement for housing stamps and rent payments, further undermining the estimates and projected developments of the DRP.[96] Third and finally, the envisaged destruction of tool-houses and construction of high-rises failed to consider the effect of higher operational costs on inhabitants. In a joint publication, SPARC and the National Slum Dweller Federation of India describe how rehabilitated settlement dwellers often struggle with basic bills, let alone additional costs for high-rise utilities such as elevator operation.[97] While spatially undermining the livelihoods of the Dharavikars, the subtext of the DRP was a Neoliberal expectation for inhabitant displacement and replacement.

In June 2007, the looming threat of the DRP produced grassroots opposition within Dharavi: 15,000 people marched peacefully to the office of the Maharashtra Housing and Development Authority, while inhabitants hoisted black flags on electricity poles as a symbol of their solidarity.[98] The march was a microcosm of the shared Dharavikar identity, as politicians, shopkeepers, potters, and tanners united beyond their caste strata and religious differences to resist redevelopment. Dharavi is homegrown: a space creatively built, used, and shared by the million plus people that live there. They rally to protect the spatially embedded economic networks and trust developed through years of trade, as well

[91] Matthew Niederhauser, "A Mumbai Slum's Cultural Moment," Bloomberg City Lab, February 27, 2015.

[92] Govinda, "Marie-Caroline Saglio-Yatzimirsky," review, 3.

[93] Weinstein, The Durable, 78.

[94] Sheela Patel, P and Jockin Arputham, "An Offer of Partnership or a Promise of Conflict in Dharavi, Mumbai?," Environment and Urbanization 19, no. 2 (October 2007): 501-08, SAGE Journals.

[95] Patel, "Dharavi: Makeover," 43.

[96] Nijman, "A Study," 9-10.

[97] Sheela Patel and Jockin Arputham, "Recent Developments in Plans for Dharavi and for the Airport Slums in Mumbai," Environment and Urbanization 22, no. 2 (2010): 501-04, SAGE Journals.

[98] Sheela Patel and Jockin Arputham, "Plans for Dharavi: Negotiating a Reconciliation between a State-Driven Market Redevelopment and Residents' Aspirations," Environment and Urbanization 20, no. 1 (April 1, 2008): 249, SAGE Journals.

as the homes constructed across generations. Their mobilization against such forces of gentrification reinforces their common identity–an identity which roots itself in the history of the land, its usage, and the diverse cultures of its inhabitants. As urbanist Benita Fernando articulates, walking through Dharavi is like an orchestra: phrases of Hindi are intermixed with Marathi, Telegu, and Tamil, street-food crackles as plastic is shredded for recycling, and sewing machines hum with the clanking of metal pots.[99] The grassroots mobilization of Dharavi's inhabitants simply brought their synchronized orchestra to the front-stage in Mumbai.

Resistance emerged also in voter turnout: while wealthy neighborhoods in Mumbai reported a turnout rate of thirty percent in 2012, homegrown settlements across the city averaged around sixty percent.[100] Dharavikars seek to be heard and to bring development in a sustainable and people-centered manner that elevates the community, instead of splintering and displacing it. The communal response of the settlement reflects the difference between little "n" neoliberalism and big "N" Neoliberalism: while the latter sees value in property and capital, neoliberalism depends on networks of people and communities. In fact, groups of women in Dharavi have mobilized to draw planning maps, lead interviews, and count houses to gather information about the legitimate needs and conditions of the settlement.[101] As a result of inhabitant resistance and the burdens on private corporations, the DRP was unable to attract developers and was discarded in 2016: the imposition of big "N" Neoliberal policies thus failed in the little "n" neoliberal context of Dharavi.

However, the expectation for private international capital had an adverse effect on Dharavi's residents, not only with the uncertainty of displacement but also with the inconsistency of the development efforts. Sitamani, an immigrant to Dharavi from Tamil Nadu, explains how homes were cleared for a new apartment that developers later halted mid-way in construction, leaving an uninhabitable space.

> The chawl was better than this building. There we had a proper water supply and current. The chawl was our own place. Some people in the chawl had big rooms, and many people were getting rent from first-floor apartments. If this building had been good, we would prefer living here. But look at this![102]

Under fragmented governance and authority, settlement inhabitants found themselves in limbo: the Neoliberal romanticism of the DRP had overshadowed the neoliberal need for incremental infrastructure growth in water, electricity, and waste disposal systems. Furthermore, the inefficiencies and failures of private investment were left unaddressed. Mumbai's local government had purposefully weakened itself to eliminate regulatory friction with developers, resulting in largely unsupervised and substandard implementation of the government plan.

Ultimately, despite the unity and vibrancy that defines the region, Dharavi, by the UN definition, remains a 'slum' in terms of deprivation. In the context of Dharavi, 'slum' denotes failures in elite leadership to engage with grassroots efforts and sacrifice the incentive of profit.

Neglected by both the government and the private sector, Dharavikars have mobilized to improve their home both through illegal and legal means. Marginalized and targeted for grand redevelopment schemes, their survival serves as a form of resistance, as residents embrace illegality to live and work.[103] Seediya, a plumber in Dharavi, balances professional work with the BMC with the chori (stolen) water business, setting new pipes into city pipelines. The challenge of engineering informal water systems requires precision and expertise, as Seediya asks, "If there are twenty members [in a Compound], how do we distribute the water equally?"[104] Whether through resourceful drainage solutions or special extensions to connect pipes to homes below them, Seediya exemplifies the jugaad of Dharavi–the frugal, improvised innovation that defines their mechanisms of survival. When asked if he fears being arrested, Seediya

[99] Benita Fernando. "An Urbanist's Guide to the Mumbai Slum of Dharavi," The Guardian, Guardian News and Media (Apr. 2014), https://www.theguardian.com/cities/2014/apr/01/urbanist-guide-to-dharavi-mumbai.

[100] A. A. K., "Local Elections in Mumbai Gluttons for Punishment," The Economist (London, UK), February 20, 2012.

[101] A. A. K.

[102] Weinstein, The Durable, 173.

[103] Mahmud, "Slums, Slumdogs," 703.

[104] Campana, Dharavi: The City, 155.

answers, "No. I know some BMC officials . . . all I have to do is make one phone call. I continue doing jobs for them as well, so they know me."[105] As the BMC overlooks the creative illegalities of the settlement in exchange for labor and profit, it entrenches the homegrown settlement further in Mumbai and contributes to its resilience against efforts such as the DRP. NGO-led projects, on the other hand, employ legal channels to guide public workshops, grant applications, and infrastructure proposals to develop Dharavi through grassroots involvement. At a 2007 Urban Age competition that evaluated proposals seeking to improve living conditions in Mumbai, a handwritten entry in Marathi devised by Dharavi's residents won the first prize over professional entrants like the World Bank.[106] Referred to as the Triratna Prerana Mandal Initiative, the NGO-led project advocated for the development of a community center around a public toilet to cultivate a shared sense of responsibility for the hygiene of public bathrooms. As a result of inadequate sanitation systems, Dharavi faces a shortage of toilets–as many as eighty people share a single toilet. The few toilets that exist are often in repulsive conditions due to the lack of a cleaning system. Awarded $50,000 the residents immediately began the construction of their project, inverting top-down planning to bottom-up with their initiative to erect clean public toilet blocks.[107]

Figure 7. Triratna Prerana Mandal toilet facility. Triratna Prerana Mandal, "Project Gallery: Environment," Triratna India, last modified 2011.

By creating communal rooms above the toilet facility, planting flowers around the toilet, and offering English and computer lessons at the community center, the project successfully transformed the residents' treatment of the bathrooms.[108] Beyond empowering Dharavi's community to make developmental decisions, NGOs like Triratna Prerana Mandal and SPARC have also set the precedent for community-based implementation. In a 2018 presentation at MIT, SPARC director Sheela Patel described how they teach women in Dharavi to construct roofs: "Women make these roofing tiles and have trained each other to make them and demonstrate that even if 10 men stand on the roof it can bear the load... Both the government and communities need this reassurance!"[109]

By pre-fabricating cement slabs, the cost-efficient design saves money on roofing for Dharavi's families.[110] More importantly, however, the experience equips the women with skills in manual labor and cultivates their ability to negotiate with authorities and oversee construction.[111] Through projects and initiatives that emphasize community over monetary gain, Dharavi embodies the concept of incrementality, forgoing the grandeur of redevelopment schemes for incremental urbanization – that respects and utilizes the region's distinctive spatial and social networks. With the failure of both government-led and private housing, self-building has become the only viable alternative in Dharavi. Brick by brick and slab by slab, NGO-led infrastructure work has sought to pave under the settlement. Through little "n" neoliberal practices that elevate the Dharavikar community and catalyze community-based development endeavors, Dharavi can modernize in the twenty-first century while maintaining its fundamental character.

After the failure of the DRP, the government opted to alter the sub-cluster division of Dharavi but maintain the Neoliberal top-down leadership approach.[112] The new plan asserts the same objective as the

[105] Campana, 155.

[106] Hollis, Cities Are Good, 223.

[107] Triratna Prerana Mandal, "Project Gallery: Environment," Triratna India, last modified 2011.

[108] Hollis, Cities Are Good, 223.

[109] Sheela Patel, "Exploring Possible Solutions That Emerge from below," lecture presented at MIT, Boston, USA, May 3, 2018, Leventhal Center for Advanced Urbanism.

[110] Sheela Patel and Sheridan Bartlett, "'We Beat the Path by Walking' Part II: Three Construction Projects That Advanced the Learning and Credibility of the Indian Alliance," *Environment and Urbanization* 28, no. 2 (July 8, 2016): 500, SAGE Journals.

[111] Patel and Bartlett, 500.

[112] Sandeep A. Ashar, "Simply Put: The New Plan for Dharavi," *The Indian Express (Mumbai), 1/24/19. 113 Ashar.*

DRP and seeks to transform Dharavi into a residential space but uses one large cluster for redevelopment instead of five sectors. The onus for development remains on a private, profit-driven entity, which will assume responsibility for re-settling inhabitants and constructing transportation and utility systems.[113]

One potential solution to the dilemma of profit over people was proposed in 2015 by Mumbai's Urban Design Research Institute (UDRI). The UDRI organized a competition called Reinventing Dharavi, which sought to stimulate conversation on creative alternatives to modernizing Dharavi. The winning entry was built on Mahatma Gandhi's rejection of land-ownership by individuals and the state, recommending instead a trusteeship involving the residents as a community.[114] Essentially, all landowners, including the government, would transfer ownership rights to a trust owned by community members and neighborhood associations.[115] The trusteeship would resolve conflicting land ownership claims that plagued the DRP, while also ensuring the involvement of Dharavi's residents in the development of their settlement. Amidst the ongoing struggle between Neoliberalization and grassroots neoliberalism, the UDRI effectively creates a space within the top-down modernizing plans of Mumbai to develop Dharavi. Their method emphasizes the settlement's character and history, providing an alternative path for building not only Dharavi but also Mumbai, and by extension, India incrementally.

Despite the economic vibrancy and community of Dharavi, the settlement remains an "anachronistic collection of shacks inhabited by migrants" in popular imagination.[116] Yet, its very existence in the face of gentrification serves as a direct contradiction of this myth. As anthropologist Liza Weinstein writes in her novel, The Durable Slum: Dharavi and the Right to Stay Put in Globalizing Mumbai, Dharavi is integral to Mumbai.

Figure 8. Women Standing in Front of Successful Roofing. (Photographed by SPARC) Sheela Patel, "Exploring Possible Solutions that Emerge from below," lecture presented at MIT, Boston, USA, May 3, 2018, Leventhal Center for Advanced Urbanism.

If the megaslum was to disappear, then Mumbai would lose so many of its drivers, domestic workers, garment manufacturers, garbage collectors, and office workers that India's commercial trade would simply cease to function. . . [residents, who] make up the links in the chain of migration that settled in Dharavi from places like Tirunelveli, helped make the settlement, transforming it from a marshy garbage heap into a densely populated, economically productive, politically powerful city within a city.[117]

The aesthetic of the modern metropolis dismisses essential communities like Dharavi on a global-scale; thus, the story of Dharavi urges us to re-define our understanding of urban growth. Large-scale top-down plans undermine the spatial patterns that govern life in homegrown settlements, and the destruction of 'slums' eliminate the diversity of changing urban landscapes.[118] When the focus of development shifts from people to profit as in the case of Dharavi, both the larger city around the settlement and the community itself suffer. As evidenced by the efforts of NGOs such as SPARC, transitioning from top-down to bottom-up planning can empower residents to modernize at a pace that protects their homes and livelihoods. Grounded in migration and historical tradition, Dharavi has modeled an alternative form of modernization and mobilization for India, one driven by incremental development that prioritizes people over profit.

[113] Ashar.

[114] Carlin Carr, "The Best Idea to Redevelop Dharavi Slum? Scrap the Plans and Start Again," The Guardian (London, UK), February 18, 2015.

[115] Carr.

[116] Echanove, Srivastava, and URBZ, The Slum, 6.

[117] Weinstein, The Durable, 174-75.

[118] Chalana, "Slumdogs Vs. Millionaires," 25.

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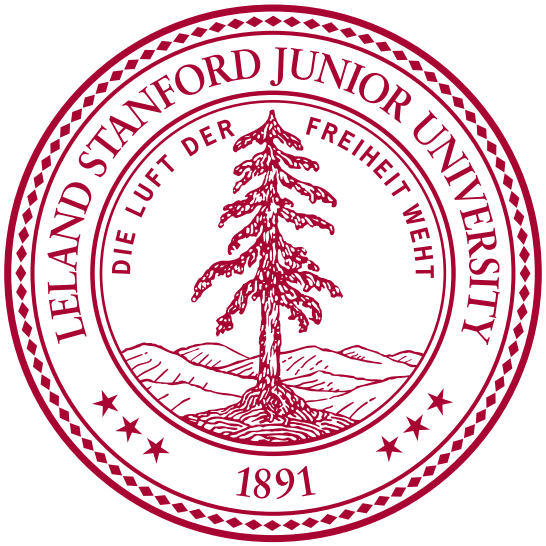
Caroline Skwara ('24) is an anthropology major and history minor from Cincinnati, Ohio who is really excited to be on the Editorial Team for CONTEXTS this year! Within anthropology, she is interested in studying violence, memory and pasts, and music subcultures. In her free time, she is passionate about music, crosswords, and The Bachelor.

Aaron Adriano ('25) is a first year undergraduate student from South San Francisco, California, majoring in Urban Studies and minoring in Civil Engineering. His academic interests include the study of public transportation systems, affordable housing, the built environment, and community organizing against gentrification, particularly in the context of the Bay Area where he was born and raised. Outside of academics, you can find him sewing his own clothes, dyeing his hair extravagant colors, or riding the Marguerite Shuttle because he does not own a bike.

MEET THE ARTIST

Gregory Medina-Kenyon is a student at Stanford University studying biology and art practice.



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