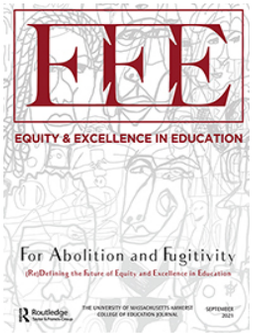

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Rightful Presence in Times of Crisis and Uprisings: A Call for Disobedience

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ABSTRACT

Borders—territorial, economic, political, and ideological—are processes of social division. They monitor and exclude and are regulated, patrolled, and maintained by an array of power regimes, but borderlands are also sites of movement, agency, and resistance. Likewise, mathematics is used as a border that divides and politicizes. In this article, we seek to explore how the field can disrupt and transform borders in mathematics education. We draw on border and third space theories to challenge the ontological and epistemological borders in mathematics education that are taken as normative yet reify exclusion through the following questions: (1) What is mathematics? (2) Who can do mathematics? (3) Where is mathematics done? We situate these questions within the COVID-19 pandemic as context of continued injustice. We call for the field to be disobedient and ready itself for the changes that must come so the field can create a humanizing and just alternative.

Race, racism, and White supremacy are now on full display. Political parties and groups latch onto the COVID-19 crisis and the current fight for Black and Asian lives to advance anti-racism, ultra-nationalism, and xenophobia. Within the education community, how often does one speak boldly for justice but continue to inflict racial violence on lives and minds? In this article, we speak to the insidious role that education and, specifically, mathematics education play in perpetuating racial scripts that not only hide the competence, brilliance, and agency of youths of color but also perpetuate suffering (Gholson & Wilkes, 2017; Howard et al., 2019; Martin et al., 2017). We witness explicit acts of violence, criminalization, and silencing of youths of color in mathematics classrooms. For example, Niya Kenny was arrested with criminal charges of "disturbing a school" for calling for help and asking other students to record the events as a female peer was thrown across the classroom by a police officer (Sorkin, 2015). Ahmed Mohamed, a Muslim ninth-grade student, was arrested for bringing a homemade clock mistaken as a hoax bomb to his mathematics classroom (Chappell, 2015). Ahmed Mohamed, Niya Kenny, and so many unnamed youths are examples of students who suffer not only from carceral implications, which are direct and highly visible, but also from the symbolic violence—the racial scripts—perpetuated in mathematics education (Gholson & Wilkes, 2017). In the United States, racial scripts divide, sort, and stratify along a caste hierarchy placing Whites at the top and Blacks at the bottom (Wilkerson, 2020). Through racial listing and ordering, hierarchies are formed and maintained, and groups are divided and positioned against one another. Molina (2014) highlighted the ways in which the lives of racialized groups are linked across time and space and thereby affect one another.

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Decades of equity-based reforms have focused on access and inclusion to the discipline with minimal attention to the sociopolitical situatedness of mathematics education; thus, these initiatives have only perpetuated existing racial, gendered, linguistic, and ableist hierarchies (Martin et al., 2017; Tan et al., 2019). As Gloria Ladson-Billings reminded us, "school is often a place of trauma" (Alim et al., 2017, p. 13) for many students impacted by these hierarchies. Thus, access and inclusion are in reference to spaces designed for, and success is measured in relation to, White norms, perspectives, and values in which students of color will always be positioned as less than.

(Re)humanizing mathematics education requires the field to address students whom the system has most failed. The political struggle of (re)humanization has become even more evident considering the global COVID-19 pandemic. The virus itself does not discriminate based on race, class, or country; yet, in the real world, COVID-19 has targeted the most vulnerable—those in poverty, immigrants, the undocumented, people of color, Indigenous peoples, and the disabled[1] (Maxwell & Solomon, 2020). This happens not because of preference but because the most vulnerable are the most exposed. Amid the pandemic, we see the ravages of White capitalist supremacy and patriarchy and how they have divided communities—Black communities, communities across the diaspora, and communities of color with the growth of anti-Asian and anti-Black sentiments and violence in terms of health access. Mathematics education mirrors this same disproportionality and inequity affected by systemic injustices and the pandemic.

As mathematics education scholars, whose work centers on equity and social justice, we acknowledge the many privileges that we have and our roles as both the oppressor and the oppressed (Freire, 1970). We offer our analysis, prioritizing attention to social locations, the unfixed yet durable histories and trajectories that structure what we know and how we know. As the pandemic continues to spread, two of us—Chinese American scholars, educators, and community organizers—have felt the rise of Asian hate crimes, prejudice, xenophobia, and discrimination living in a country in which the 45th president dubbed COVID-19 the "Chinese virus" and continued to regularly spew anti-Chinese rhetoric and racist misinformation. The 2021 Atlanta, Georgia, spa shootings are only a recent example in a legacy of anti-Asian violence in the Americas. Orientalist stereotypes of submissiveness and passiveness, the exoticization of Asian women, and the emasculation of Asian men (Museus & Iftikar, 2013) have not only led to the long-standing history of hypersexualization and violence but also have forced false obedience and compliance within the Asian American community. We call on both our Asian American siblings and the mathematics education community—educators, researchers, students, and leaders—to disrupt the silence, as complacency to injustice only fuels White supremacy.

Education and our survival as Asian American scholars within an educational industrial complex that oppresses folks of color are political acts. We build on shared histories, contributions, and solidarity of our elders and their interracial alliance and collective fight for racial justice (Museus & Iftikar, 2013). We recognize that oppression does not play out uniformly, but rather across the multitude of intersections of social identities, and it is often disguised through division and intentional pitting of one group against an other (e.g., using Asian Americans as a wedge against our siblings of color; Museus & Iftikar, 2013). We do not and cannot speak for marginalized communities, including our own; rather, our hope here is to spark conversations centering *rightful presence* (Calabrese Barton & Tan, 2020).

Disobedience toward rightful presence

As COVID-19 puts a spotlight on systemic injustices exacerbated by the pandemic, we move toward (re)humanizing education by drawing attention in this article to such injustices made *invisible* as they are perceived to be normative and standard practices in mathematics education—for example, Eurocentric curriculum and values (what is mathematics?) and high-stakes testing and ability grouping (who can do mathematics?), which are contained to school settings (where is mathematics done?). We argue to shift away from providing youth historically marginalized the "right" of inclusion to a discipline that is exclusive by design. We must radically transform mathematics education itself.

Every system is perfectly designed to get the results it does. Under the guise of equity, standard rights of inclusion only perpetuate deficiency models and the reproduction of mathematics education as a tool of cultural violence (Gholson & Robinson, 2019; Yeh & Rubel, 2020). We ask for the mathematics education community to disobey a system that continues to inflict harm on communities of color. To be clear, disobedience requires us to reject false dichotomies that pit racially minoritized populations against one another (e.g., model minorities vs. not model minorities), and argue for the necessity of cross-racial solidarity and collective liberation (e.g., Sins Invalid, 2019). We call for disobedience via a process of reauthoring, closely aligned with Calabrese Barton and Tan's (2020) three tenets of rightful presence:

> Political struggle is integral to disciplinary learning: the right to reauthor rights (Tenet 1)
>
> Rightfulness established through presence: making visible the intersections and justice/injustice in the present while orienting towards new social futures (Tenet 2)
>
> Shared burden/cost between currently powered and the othered.... Culture of disruption towards justice, where modes of power/authority are collectively called in question (Tenet 3) (p. 436)

The goal of having students access mathematics grounded in White supremacy will only (re)produce systemic inequities. Disobedience via rightful presence requires the mathematics education community to collectively identify mechanisms of exclusion and actively work to dismantle such mechanisms that perpetuate racial hierarchies.

The disturbing and pervasive human rights violations during the pandemic necessitate the blurring of spatial and ideological boundaries. The manifestations of systemic oppression in society writ large cannot be ignored within the classroom. In mathematics education, artificial boundaries have now been brought into question. Practices previously taken for granted (e.g., normative centering of Whiteness in schooling, standardized testing, mathematics curriculum as only textbooks and within the confines of classrooms) are now on the table for change via reauthoring rights. Thus, boundaries can become borderlands and hybrid spaces of movement, agency, and resistance (Anzaldúa, 1987; Giroux, 2005; Nail, 2016).

Reauthoring borders toward justice-oriented third spaces

The pandemic leads us to think of boundaries and borders differently—boundaries that once seemed determined and unchangeable: territorial, political, social, economic, and ideological. In *Theory of the Border*, for example, Nail (2016) defined borders as spatial divides that separate countries, states, or classrooms, but also are located inside individual minds, expressed through values, beliefs, and ways of knowing that people develop through daily interactions. Borders are sites of psychic, emotional, social, and cultural marginalization that we all inhabit and that inhabit us. Although enmeshed with power and hierarchy, borders are in a "constant place of transition" (Anzaldúa, 1987, p. 3). Importantly, mathematics education's borders were historically enacted as tools of exclusion and social stratification (e.g., in the eugenics movement; Stoskopf, 2002) to benefit some while marginalizing others (Stinson, 2004). Thus, rightful presence provides us a guide to (re)humanize mathematics education by disobeying and reauthoring such problematic borders.

We draw on Giroux's (2005) concept of *border crossing* as a theoretical framework to suggest ways of challenging, and subsequently reauthoring, traditional border constructs. Giroux posited that the idea "of borders allows one to critically engage the struggle over those territories, spaces, and contact zones where power operates to either expand or to shrink the distance and connectedness among individuals, groups, and places" (p. 2). This includes political struggles for justice in and out of schools, as borderlands function as spaces of movement, agency, and resistance (Anzaldúa, 1987; Nail, 2016). We assert that educational stakeholders are well positioned to work with and for marginalized communities to reauthor inequitable distributions of access and power by blurring traditional mathematics education borders. While the broader society establishes and negotiates borders around

norms, values, and perspectives, what the mathematics education community acts on, and what we view as mathematics, its curriculum, and mathematical brilliance, can reproduce, interrogate, and challenge these borders as third spaces.

The creation of third spaces occurs when "people in any given community draw on multiple resources or funds to make sense of the world" (Moje et al., 2004, p. 42) to connect to privileged knowledge and discourses. Grounded in hybridity theory (Bhabha, 1994), third spaces are taken as physical, social, and/or digital sites where new knowledge, learning, and discourses emerge (Gutiérrez, 2008; Moje et al., 2004). In particular, Gutiérrez (2008) conceptualized these various forms of learning as vertical and horizontal. Vertical forms are traditionally privileged and closely associated with formal schooling practice (e.g., mastering of certain skills and then progressing to more advanced skills), whereas horizontal considers learning across multiple dimensions of students' lifeworlds (Gutiérrez & Larson, 2007), centering, for example, how students move "through and around and across these boundaries that people and schools have set up" (Gutiérrez & Larson, 2007, p. 71). This includes their political struggles for justice in and out of schools. In turn, horizontal forms of learning align to the notion of borderlands as spaces of movement, agency, and resistance (Anzaldúa, 1987; Nail, 2016). Third spaces offer opportunities to honor both vertical and horizontal forms of engagement as multiple cultural practices come together in a newly created space (Gee, 1996). More importantly, third spaces become sites for solidarity in political struggles, disobedience, and reauthoring for a more just future.

Through borders and third space theoretical frameworks, we ask readers to consider how approaches to educational research and practices might be disobeyed and reauthored toward justice-orientated transformation in response to the global COVID-19 pandemic and racial reckonings. In what follows, we share some *rightful presence* insights around three specific borders as sites of third spaces in mathematics education. The purpose of this article is to explore how the field can disrupt and transform traumatic boundaries such as structures, constructs, and practices that are taken as normative yet reify exclusion. In particular, we focus on three fundamental questions that draw attention to the ontological and epistemological borders in mathematics education: (1) What is mathematics? (2) Who can do mathematics? (3) Where is mathematics done?

Borders in mathematics education

What is mathematics?

A century ago, Wells (1920) commented that "human history becomes more and more a race between education and catastrophe" (p. 594). The global COVID-19 crisis brings to light this dance among scientific discovery, worldwide suffering, and race relations. The field needs to ask what responsibility we all bear as a mathematics education community for bringing this situation about and for trying to change it. D'Ambrosio (2010) noted,

> It is clear that mathematics provides the foundation of the technological, industrial, military, economic, and political systems and that in turn mathematics relies on these systems for the material bases of its continuing progress. It is important to question the role of mathematics and mathematics education in arriving at the present global predicaments of humankind. (p. 51)

Testing and vaccinations have become a matter of life and death. Mathematics modeling is central in discussions of mass production, distribution, and vaccinating billions of people across the world. At this moment in time, perhaps more than any other, the importance of data, statistical literacy, mathematical modeling, and ethics is in the public spotlight. It is clear that mathematics education has not done enough to prepare people to be aware of the application of mathematics for society's well-being and for justice-oriented work, forcing the field to reexamine the arbitrary borders on what constitutes mathematics and for what purposes.

Even with current reform efforts centered on problem solving and reasoning, school mathematics is still typically defined as a discrete set of topics taught in a linear progression that ultimately leads to calculus. This is the only version of mathematics that most people know, and thus, calculus is seen as the pinnacle of mathematical understanding. However, a wealth of research has shown that calculus in particular (J. Ellis et al., 2016), and its precursor algebra (Moses & Cobb, 2001), are major barriers that deny access to higher education, particularly in the areas of STEM. Despite decades of reform efforts, the "calculus problem" has been intractably hard to solve. It is time for mathematics educators to disrupt this limited understanding of mathematics and open new pathways to mathematical success.

Rather than working to *fix* calculus, we ask, Why put so much emphasis on calculus at all? If mathematics educators were no longer forced to guide students along a narrow path to calculus, what else could it mean? Let us honor the historical, social, cultural, and political situatedness of mathematics (e.g., McGee & Hostetler, 2014) and the diversity that characterizes mathematical practices. Mathematics has been dubbed a "science of patterns" (Steen, 1988). Cultures around the world have been engaging in this science for millennia, using tools, practices, and cultural ways of knowing and being (Lakoff & Núñez, 2000; Moje et al., 2004; Saiber & Turner, 2009). The development of new mathematics is a largely social endeavor (e.g., proofs are validated by peers in the field), and what exactly constitutes mathematics continues to evolve (e.g., does a proof by a computer count as a valid proof?). Mathematics is in fact a living, ever-changing body of knowledge and set of cultural practices (Lakoff & Núñez, 2000; Razfar, 2012; Saiber & Turner, 2009) involving human activities of "counting, locating, measuring, drawing, representing, playing, understanding, comprehending, and explaining" (Rosa, 2020, p. 20). (Re)humanizing mathematics requires rightful presence to connect to and with students' immediate and lived experiences, their political struggles for justice, their bodies, and their emotions, needs, and desires. This implies that mathematics learning and research activities should also connect with bodies and senses, interacting directly with our physical and social worlds, not just through symbolic mediations on pages and screens. This contrasts to commonsense, enduring notions that mathematics is objective, timeless, and perfect, separating it from other human endeavors, which limits our ideas of what counts as mathematics.

Let's envision a future in which calculus is no longer seen as a pinnacle of a "complete" body of knowledge known as mathematics: "If mathematics educators take seriously the goal of equity, they must question not just the common view of school mathematics but also their own taken-for-granted assumptions about its nature and worth" (Stanic, 1989, p. 58). The field needs to shift from measuring students' accuracy and precision of discrete concepts and skills to attending to students' awareness and engagement with the messiness that is modern mathematics and its applications to recognizing and addressing societal injustices. When such messiness is ignored, one sees mathematics as a tool to reify inequity, such as in the development of racist and racially biased computer algorithms. Rather than holding on so dearly to closed-form solutions and analytic methods that are rarely used today and can be trivially solved by computers (e.g., Wolfram Alpha), the field could move toward the use of numerical/computational methods that focus on approximation and better represent solving *real* modern and immediate problems in science, while simultaneously recognizing the culturally and historically situatedness of such methods. Mathematics education would affirm "that all cultures and all people develop unique methods and explanations that allow them to understand, act, and transform their own reality" (Rosa, 2020, p. 18).

As one reenvisions what it means to do mathematics and for what purposes, one sees not only an increased role for technology, data, computing, and modern methods that were not available decades ago but also an ability to draw on multiple knowledge systems, including cultural and ancestral wisdom (e.g., in addressing environmental sustainability and climate change; Watson, 2020). This envisioning opens up bold new justice-oriented possibilities, as educators and students engage with data relevant to and that can improve their lives, communities, and the world around them. As students develop deeper mathematical literacy, we imagine that they can become increasingly more aware of the connectedness of mathematics and their world, rather than more

disconnected and isolated, as often is the case in the current iteration of *school* mathematics (e.g., through the rote memorization of a narrow set of facts and procedures disconnected from reality). Disobeying such iteration would create opportunities for students to create and be immersed in *rightful presence* spaces, in which they develop critical literacies to support them throughout the rest of their lives.

Who can do mathematics?

At this time of such pain and uncertainty, our hearts are heavy and our souls stirred. The world is grieving and angry. The economy is shattered for too many while greatly benefiting a few. Unemployment continues to climb, steeply. Worldwide, over 4.6 million people have died from COVID-19, with over 665,000 deaths in the United States alone (Johns Hopkins University, 2021). The only solution to the current crisis is offered as binary oppositions between public health and economic prosperity. Should we all allow the economy to crumble or a few already vulnerable to be sacrificed? Citizens are committed to individual survival based on false narratives of scarcity, loss of freedom, and competition over collective well-being. Inequity exacerbated through the crisis is perpetuated through mathematics education. The field needs to look at the history of education to understand the legacy of violence.

As Freire and Macedo (1987) reminded us, "the intellectual activity of those without power is always characterized as nonintellectual" (p. 122). What we argue here is that mathematical knowledge perpetuates not only power and privilege but also capital and individualism. Mathematics ability is commodified and seen as property; success is measured in terms of achievement of a numerical target, and such data are used to construct and constitute some students as "mathematically smart" while simultaneously constructing and constituting other students as "not-so-smart," deficient, or learning disabled (Leonardo & Broderick, 2011; Yeh et al., 2020). By objectifying knowledge, students are reduced to objects in need of repair and sorted, stratified, labeled, and pathologized, and teaching and research are viewed as mechanical processes, to the end of production of knowledge as human capital.

Considered objective, depersonalized, value-neutral, and unproblematically transferable and quantifiable, the field must disrupt current ideologies or borders of mathematics ability, competence, or smartness which are often not questioned (Borgioli, 2008; Leonardo & Broderick, 2011; Yeh et al., 2021; Yeh & Rubel, 2020). The field must stop treating mathematics ability as objective within research and teaching and recognize its historical and political origins, roots in the eugenics movement and complicity in the forced sterilization of poor Black and disabled communities (Farber, 2008), and how eugenics inform present-day incarceration policies (Appleman, 2018). Notions of *intelligence*, *ability,* and *normal* came to be conceptualized, quantified, and stratified at the turn of the 20th century (Borgioli, 2008; M. W. Ellis, 2005; Yeh et al., 2020, 2021), when terms such as *gifted* and *special* came to be applied to justify segregation within and between schools by markers of race, class, and ethnicity. At the same time, the idea of what was to be considered "mathematics" became narrowly defined as a vehicle for efficient measurement and sorting.

In a historical examination of shifts in school mathematics practices, M. W. Ellis (2005) uncovered how the assessments that emerged at the start of the 20th century shifted the perception of mathematics, from being something students would *do* and intricately tied with human knowing to hard measurable outputs atomized in discrete ways. The intent of practices of measurement, labeling, and stratification has always been to preserve privilege and mask racial and class-based bias. It is not coincidental but *intentional* that the instantiation of special education was intimately connected with the processes of measurement and objectification of students by invented, biased definitions of normal achievement. Special education research has been notorious for constructing disabled students as incapable of reasoning mathematically (e.g., Lambert & Tan, 2020). How often is the history of mathematics education taught in mathematics courses, teacher education courses, or research methods courses?

With its historical origins denied to most educators and researchers, standardized tests still carry on the racist, ableist, and eugenic legacies of competence (Au, 2014; Stoskopf, 2002), and tracking is a self-fulfilling prophecy to further marginalize already marginalized students (Oakes, 2005). Through its seemingly objective capacity to quantify (Garcia et al., 2018), mathematics becomes one of the most powerful tools to perpetuate and justify otherization and conditional participation in society, particularly our Black and Brown youths who are objectified by a ranking or trend line that measures their progress relative to that of White peers (Annamma & Morrison, 2018; Leonardo & Broderick, 2011). At this moment, our current federal administration demands state administration of federally required standardized tests this year, using equity as a justification.

The hyperfocus on "the achievement gap" and "learning loss" should not distract from their historical frames that maintain racialized, gendered, and classed hierarchies. Ultimately, these narratives perpetuate racial hierarchy in mathematics, mirroring White supremacist hierarchies in society more broadly. As such, "ability is distributed and withheld based on race through policies and practices" (Annamma & Morrison, 2018, p. 72). For example, disabled Black students are significantly more likely than their White counterparts to be placed into segregated and restrictive educational settings (Fierros & Conroy, 2002). In terms of mathematics education, this means lowered academic exceptions and a narrow curricular focus on rote procedures and memorization for Black students (Stanard, 2016). Such outcomes reflect what Annamma and Morrison (2018) called *dysfunctional education ecologies*, "where Students of Color are not positioned as valuable resources and are instead being lost as outflows" (p. 70). Marshallese students in today's U.S. classrooms, for example, are often positioned as deficient, and their ancestors' contribution to innovations in mathematical measurement practices have been largely ignored (de Freitas & Sinclair, 2020).

Beyond ability testing, racial narratives play out at the level of classroom interactions, as they perpetuate implicit biases about who can and cannot do mathematics (Reinholz & Shah, 2018). These narratives cause material harm to students on a daily basis, for instance, as they dictate who does and does not get opportunities to participate in mathematics classrooms (Reinholz, 2021). In this way, the function of mathematics in the curriculum is to sift and sort through students, determining who to exclude rather than engaging and empowering students as a mechanism for inclusion. Kincheloe (1999) reminded mathematics educators to challenge borders:

> One of the ways to rethink intelligence is to expand the boundaries of what can be called sophisticated thinking. When such boundaries are expanded, those who had been excluded from the community of the intelligent seem to cluster around categories based on race (the nonwhite), class (the poor), and gender (the feminine). (p. 7)

Kincheloe problematized the central role that knowledge serves in controlling and dividing society and the population. There is a hierarchy of forms of knowledge. Eurocentric epistemologies, methodologies, and standards take on gatekeeper roles, leading to the ideological effects whereby students and teachers are subject to and internalize the ideological and epistemological presuppositions and values of the dominant culture. Recognition becomes central in rightful presence work with and for those who are oppressed by them. Third spaces (Gutiérrez, 2008; Moje et al., 2004) challenge entrenched borders of mathematics competence. The community must disobey education and research priorities that focus on hard, measurable outputs instead of softer processes and human dimensions of knowing, knowledge products over knowing processes, the cognitive domain over the affective domain, independence over interdependence, and valued knowledge and intellect over feeling and being. The pandemic and the relevancy of mathematics as a tool of manipulation, violence, or solidarity highlights how *knowing* cannot be separate from *life* as a whole. All forms of mathematical activity are human activities, involving the whole person as a system that integrates all of these aspects of personhood and more (as mathematics is part of cooking, carpentry, data mining, policing, engineering, and organizing). Thus, mathematics educators cannot educate, research, or assess mathematics brilliance without considering whole persons in context, who are anxious, fearful, excited, yearnful, eating, drinking,

hungry, satiated beings in flesh and blood (Sins Invalid, 2019). What individuals know or can do in relation to mathematics is independent and interdependent to all the other goals/motives that they pursue during their daily lives.

Fostering diversity in mathematical education is not only about access for the marginalized but also about the betterment of our society as a whole; it draws on generative resources of the varied human experience (Garland-Thomson, 2012; Ladson-Billings, 2021) while supporting pathways to human capital and access to positions of power. For example, as part of a special education course led by the second author, secondary mathematics teacher candidates in an urban teacher education program designed Individualized Education Programs (IEP) grounded in rightful presence. Candidates designed IEPs that positioned disabled students of color as powerful mathematics doers and thinkers (Tan, 2017) who would meaningfully contribute to a classroom community whose aims include examining and tackling various social justice issues, such as U.S. reparations to the Black community. The IEPs included crucial supports (e.g., access to assistive technology, professional learning for educators) to ensure that educators could honor divergent ways of knowing and doing mathematics. Such justice-oriented innovations emerged in the confines of rigorous, standardized, and institution-approved coursework that provided candidates the required set of knowledge and skills to be recommended for credentials in special and secondary mathematics education. In preparing future leaders, the second author's disobedience meant "play[ing] the game of mathematics that is currently associated with power and intellectual potential and. . .chang[ing] the game of mathematics to serve a better society" (Gutierrez, 2002, pp. 166–167). The world is beautifully diverse, and the survival and development of humankind depends on diversity. The field needs to sustain cultural and cognitive diversity by disrupting and transforming traditional borders of mathematical competence.

Where is mathematics done?

Rightful presence work in mathematics education requires one to disobey the traditional situatedness of school mathematics as separate from students' lives. When mathematics is confined within the classroom walls as a separate entity, there is a false assumption that mathematics classrooms are places of sanctuary—sites of neutrality in which engaging in rigorous, standards-based mathematics alone can ameliorate the structural inequities in society. The field needs to acknowledge not only how racism, anti-Blackness, ableism, and genderism exist in our broader society but also how limiting mathematics to the confines of physical and virtual classrooms has inflicted psychological damage on students (Gholson & Robinson, 2019). Fasheh (1997), a mathematics educator who had lived through four very different political regimes in Palestine, commented on the pervasive and damaging aspect of mathematics education as it is typically practiced in schools:

> What is startling about the math curriculum is—with the exception of some changes at the technical level—how stubborn and unchanging it has remained under the four completely different realities in which I have lived, studied, and taught; how insensitive and unresponsive it has been to the drastic changes that were taking place in the immediate environment! When something like this is noticed, it is only natural to ask whether this is due to the fact that math is neutral or that it is actually dead! (p. 24)

COVID-19 has shifted the locus of schooling to outside its walls (e.g., students' homes, family members' workplaces, local community centers), blurring of physical boundaries that has exacerbated existing inequities, especially those rooted in race, ability, and class-based struggle. To access education, students now need technology, and not all have it. How should students without webcams participate in a synchronous video chat, or how should they access the course platform when a cell phone is their only device? For disabled students, is the least restrictive environment conceived more as exclusion rather than inclusion (Collins et al., 2015)? Which students have access to a safe, distraction-free learning space that is conducive to learning? What about students for whom the home is a place of trauma and abuse? Parental support has always been a key part of learning, now more than ever. What does this mean for students whose parents do not have time to support their

learning, because the parents are working multiple jobs? What about those who have parents who have the luxury of working from home (often White and middle/upper class) as compared with those providing "essential services" who are disproportionately lower-class, Black or Brown and required to risk their lives each day?

The blurring of physical walls also allows the field to attend to the situated nature of mathematics and the creation of third spaces. In examinations of third spaces, we note that features of rightful presence, vertical and horizontal learning elements, are already present in mathematics education scholarship and even more so in organizing spaces past and present (Yeh et al., 2021). Eagle Shield et al. (2021) reminded us that *"education happens inter- and intra-generationally*. . .beyond the confines of schooling spaces that center the lives, challenges, knowledges, stories, and transformative actions for those involved" (p. 40). In these third spaces, traditional mathematics education boundaries become locations of inclusivity of Indigenous knowledges (e.g., Lipka et al., 2007), students' funds of knowledge (Diaz & Bussert-Webb, 2017) such as leveraging the use of non-English language(s) (Razfar, 2012), and family funds of knowledge (Cribbs & Linder, 2013). Razfar's (2012) border-crossing work in informal, after-school mathematics clubs showcased powerful vertical and horizontal learning possibilities. Participants were bilingual fifth-grade students who were positioned "as active learners and agents of knowledge construction" (p. 58) during mathematics game-based activities facilitated by university students:

> Ultimately, in creating an interactive third space, these activities served to socialize the students to new mathematical identities as "doers of mathematics" and foster a positive repositioning of their cultural and linguistic tool kit—developed in other settings and activity systems in their life but applicable to sense making in specific ways. (p. 73)

Thus, these third-space studies disobeyed traditional cultural and linguistic hierarchies and borders in mathematics education. The Algebra Project serves as another example of blurring classroom and community boundaries using students' life experiences and everyday language as the site for which mathematics should take place (Grant et al., 2015). Bob Moses, the Algebra Project founder and organizer of the famous 1964 Mississippi Freedom Summer voting rights campaign, saw mathematics as an organizing tool in which access to mathematics was seen as a civil right (we add as a human rights issue; Tan et al., 2019), one that should be available to all children.

Disobedience requires action

The United States is burning structurally, environmentally, and emotionally. The COVID-19 pandemic has put long-standing inequalities, inequities, and dehumanization of the country's Black and marginalized citizens on the world stage. Across the globe, people are hurt, frustrated, and angry while buildings and police cars go up in flames across most major U.S. cities. As educators, our hearts are also burning with rage and frustration with the knowledge that we have been here before and the realization that a fundamental change must take place, or we will be here again. As frightening as this realization is, it has proven the necessary impetus to act. In the summer of 2020, large, vociferous protests about the treatment of Black people occurred across the United States and around the world, with gatherings in major cities and small towns. Significantly, people have adopted a disobedient stance by taking to the streets, even though doing so increased their exposure to COVID-19. This was a multiracial and working-class uprising, indicating that people are coming together in solidarity with the Black community and also recognizing shared racialized and class oppressions (e.g., Johnson, 2020). It is against this backdrop where "education" is taking place, and in some cases, youth led these uprisings (e.g., Wanshel, 2020). Such disobedient, strategic insurgence and learning against existing structures of individualism and oppression can pave the way for new humanistic and more equitable structures (e.g., Valenzuela, 2019) in which mathematics educators have much to learn from and make meaningful contributions.

Not since the 1960s Civil Rights Movement has the United States seen such a powerful racial justice movement. How can educational researchers and practitioners join and sustain the movement to challenge the dehumanization afflicting communities? Led by the vanguard of Black masses, today's demonstrators are a revolutionary force. They are angrier, more impatient, and also more knowledgeable than before. They have learned from the uprisings that took place in the wake of the 2014 Michael Brown killing in Ferguson, Missouri. Mathematics is used as one powerful lens for drawing attention to murderous treatment of Black communities in the United States as part of a broader history of controlling and confining Black bodies: slavery, rape, lynching, exploitation, mass incarceration, economic precarity, and denied educational opportunities. We see these same treacherous mechanisms used to support Indigenous genocide, to lock up immigrant children in cages, and in assaults on Asian Americans on the streets. To be clear, such carceral violence against all communities of color is vile, and no community will be free until there is collective liberation. With our fists in the air and hope in our hearts, we also call for educators and researchers to disobey, to challenge the borders and boundaries that perpetuate mathematics legacy of exclusion (Louie, 2017), to expand and reconceptualize learning spaces where divergent ways of making sense of and using mathematics (Sinclair & de Freitas, 2019) are centered, thereby dismantling traditionally dysfunctional learning spaces (Annamma & Morrison, 2018) and "changing historically situated authority structures" (Lipka et al., 2007, p. 97). We must all engage in the political struggle for justice-oriented change (Calabrese Barton & Tan, 2020) as we work in solidarity with students and communities.

Conclusion

Guided by the tenets of rightful presence (Calabrese Barton & Tan, 2020), in this article, we explored ways to disrupt and transform borders, both physical and ideological, that reify exclusion, what is taken as normal and normative in mathematics education. Boundaries that promote competitive, individualistic ways of being, doing, and knowing in mathematics have perpetuated hierarchies of power and oppression and continue to do so today. These boundaries also disconnect mathematics from lived realities, deeming the discipline as dead. Yet, borders are in a "constant place of transition" (Anzaldúa, 1987, p. 3), changing and being changed through people, time, and context. This is a time for change. We all feel at risk. The worldwide death toll from COVID-19 has surpassed 4.6 million (Johns Hopkins University, 2021), as tens of thousands of people, masked and unmasked, have thronged the streets, risking exposure to join not only in solidarity with the Black community but also in recognition of shared oppressions. Just as these protests have caused shops to close and folks to pause, to listen, to feel, to learn, and to reflect, this article serves as our call for the education community to consider how the field can be disobedient and to challenge the boundaries for a more just, (re)humanized version of mathematics.

We envision *rightful presence* as the foundation of mathematics learning environments, creating third spaces that leverage historical community resources while harnessing the power of mathematical knowledge situated in history, time, and place made *invisible* through territorial, political, economic, and ideological borders in education and now made *visible* in this moment of chaos, crisis, and possibilities. History is in the making. As an education community, let's check coordinates of social, physical, and ethical locations and join the movement to resist dehumanizing contexts through humanizing collectivity. Let's look to our youth; they bring a wealth of gifts (e.g., Howard et al., 2019) and are currently leading the way.

Note

1. Throughout this article, we intentionally use terms such as *disabled students*, rather than *students with disabilities*, to convey the social construction of disabilities, the ways systems disable individuals, and the ongoing political struggle for disability justice.

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