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A map of the World: Cognitive injustice and the Other

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This paper employs critical geography to advance a fresh philosophical orientation of cognitive injustice and Otherness. Operating under the assumption that modern cartography is entangled with power, knowledge and politics, this study examines how maps construct and sustain the identity of the social, cultural and political Other. Synthesizing Boaventura de Sousa Santos' work on abyssal thinking and ideologies of the Other, a conceptual framework for demonstrating how maps are inscribed with power was presented, theorizing the racialization and naturalization of geographies and identities. The result, inevitably, is a world separated by abyssal lines that threaten global human connectivity.

Key words: Otherness, Abyssal Othering, ideology, mercator projection, identity, critical geography.

INTRODUCTION

The relationship between cartography and critical geography should be brought to the forefront of discussions about global power relations and the philosophical orientation of Otherness. Otherness is achieved through carefully orchestrated processes of social, cultural and political Othering – many of which are responsible for today's protracted disputes between nations, sectarian violence, and even ethic and racial discrimination during pandemics such as the COVID-19 outbreak. Against this backdrop, critical geography is committed to emancipatory politics, progressive social change and, of course, systematic map critique. Its theoretical links to anticolonialism, critical race theory, feminism, Marxism, postcolonialism and poststructuralism offer insight into the relations of power and knowledge, drawing upon decades of scholarly theorization, empirical work, and activism.

This article demonstrates that critical praxis is possible in education, especially through the application of what Santos (2006, 2008, 2018) refers to as abyssal thinking. Abyssal ideologies of the Other pervade contemporary and enduring cartographic productions in neogeography, the geoweb, and web-based mapping. To justify this position, this research is grounded in a constructivist, poststructural paradigm and after the background of critical geography is presented, the scholarship on Otherness is reviewed and a framework for synthesizing abyssal thinking with the Other is presented. This framework is referred to as *abyssal Othering* and is applied to one case study of how maps produce space, geography, territory and identities. Finally, a coda is provided to this theoretical discussion for various stakeholders, reflecting on the broader beneficial impacts of deconstructing and decolonizing maps.

MATERIALS AND METHODS

A critical geography

O'Sullivan et al. (2018) comment on the troubled relationship

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between quantitative and cartographic methods on the one hand and critical approaches to human geography on the other in a recent publication. Indeed, there have been theoretically groundbreaking developments in the field of geography which no longer view quantitative, mathematical, and cartographic approaches as the shining examples of positivist epistemologies, but as opportunities for a broader inquiry into cartography (Sheppard, 2014; Wyly, 2011; Barnes, 2009; Barnes and Sheppard, 2009; Kwan and Schwanen, 2009; Leszczynski, 2009; Schwanen and Kwan, 2009; Wyly, 2009; Elden, 2008; Poon, 2005; Schuurman and Pratt, 2002). For the sake of brevity, then, this section of the study does not attempt to present a complete overview of the evolution of critical geography. To quote Peake and Sheppard, this retelling of the origins of the discipline is not "the definitive story, but a provocation: one particular account that can only be enriched as others react to, correct, and differently narrate these events" (Peake and Sheppard, 2014: 306).

Before sketching the tenets of critical geography and its theoretical promise in offering a new theorization of Otherness, an overview of the map communication model (hereafter MCM) in cartography is in order. Cartographic methodology, research and map design have undergone noteworthy shifts during the twentieth century as a direct result of MCM (Andrews, 1988). Crampton (2001) summarizes MCM's guiding principles: to separate the cartographer from the user; establish maps as an intermediary between the cartographer and the user; communicate spatial information effectively to the user from the cartographer; and understand the cognitive and psychophysical abilities of the user in comprehending information communicated by the map.

Of course, MCM has been challenged by poststructuralist thinkers – notably, Wood and Fels (1986), Harley (1988, 1989, 1990, 1992b), Gregory (1994), and Wood (1992). Eloquently articulating their critiques of MCM in Foucauldian fashion, these authors identify maps as sites of power-knowledge, subjugating alternative, marginalized, Indigenous, non-scientific, populist and local cartographic knowledge. Peake and Sheppard (2014) suggest that the philosophical and methodological antecedents of critical geography can be found in early writers like Pyotr Kropotkin, French anarchist Élysée Reclus, the German and American Sinologists Karl Wittfogel and Owen Lattimore and Mary Arizona (Zonia) Baber, to name a few.

In the late 1960s, radical geography emerged as a collection of thinkers and activists dedicated to addressing pressing social issues. The Detroit Geographic Expedition was one such example: after the devastating 1967 riots in Detroit, Michigan, the expedition encouraged collaboration between academic geographers and "folk geographers", employing geography to address racial injustice in Detroit's inner core. The expedition was accompanied by the publication of Clark University's *Antipode: A Journal of Radical Geography.* The journal served as an outlet for outspoken students and scholars who were disillusioned with the Vietnam War, rampant racism and the increasingly harmful effects of pollution in certain cities (Mathewson and Stea, 2003). With a specific focus on understanding social and spatial problems, radical geography attempts to capture the lived experiences of vulnerable members of society by analyzing and theorizing access to safe and affordable food and housing; fair pay; educational opportunities; and basic health care (Pickerill, 2017).

In the 1970s, radical geography adopted a Marxist tone, advancing tenable critiques of geography's quantitative revolution, which began in the 1950s as a result of perceived needs for more rigorous and systematic methodologies to communicate general spatial dynamics. By the mid-1980s, radical geography was reframed as 'critical' and merged with what is now referred to as critical geography. While compatibilities exist between radical geography and critical geography, there are notable nuances such as the latter's emphasis on postmodern thought and a renewed interest in culture and representation. Blomley (2006) argues that a critical geography framework is comprised of commitments to postmodern and poststructural theory; explorations of the driving forces that produce inequality; spatial representation as a critical tool and a form of resistance against oppression; and progressive social movements.

Critical geography disrupts academic cartography by linking epistemologies of geography with power. Such intellectual fervor has led to searing claims that maps communicate what Harley affectionately refers to as the "second text within the map" (Harley, 1989: 9). But Harley, surely, wasn't the first to convey such skepticism over the putative technical authority and objectivity of maps. Crampton (2001) traces this critical strand of thought as far back as the 1940s with J. K. Wright's work *Map Makers are Human: Comments on the Subjective in Maps* (Wright, 1942). The stage had been set by the latter half of the twentieth century for theoretically rich methodologies and frameworks dedicated to challenging taken-for-granted assumptions about maps. Harley's decorated career as a historical cartographer allowed him to fill a lacuna in radical geography and critical geography, interpreting maps as agents for the normalization of power relations (Edney, 2005). Deconstructing the representational aspects and cultural assumptions underlying maps, Harley advances the practice of critical geography by encouraging cartographers to shift their attention from attempting to increase the precision of maps to a more interpretive analysis of the cultural meaning of mapping. Most importantly, Harley views maps as Foucauldian discourse, challenging the communication-oriented theoretical assumptions of cartography, exploring how this discipline is more likely to produce rhetorical propaganda, imbued not by objective science but by cultural and social values. Maps, simply put, inscribe power and support the dominant political structures (Harley, 1992a). Consider, for example, Harley's comments in a paper entitled *Deconstructing the Map:* "Cartography has never been an autonomous and hermetic mode of knowledge, nor is it ever above the politics of knowledge. My key metaphor is that we should begin to deconstruct the map by challenging its assumed autonomy as a mode of representation" (1992a: 232).

Such a quote questions the very ontology of cartography and maps. What, then, do maps represent? More importantly, Harley's corpus shapes the contours of what many critical human geographers refer to as the "crisis of representation" and the exercise of institutional power through the subjugation of alternative knowledge. While Harley laid the groundwork for a scintillating research agenda, there were fundamental limitations to the application of his work – namely, misunderstandings of both Foucault and Derrida's theoretical frameworks (Crampton, 2001). At any rate, Harley's work serves as an impetus for engaging research agendas and rich discussions in critical geography. Let us now consider some examples of how critical geography has been applied in various research projects. Note, the following examples are by no means exhaustive, but serve as a glimpse into the theory-enriched work being done by select scholars.

Crampton (2001) attempts to work beyond Harley's prolific career, formulating a working research agenda that is both theoretically informed and empirically grounded. Exploring the social history or anthropology of mapping as human practice, and documenting the power of maps through a genealogy of power discourses, the author aims to "de-naturalize" the map and displace cartography's claims of objectivity with intersubjectivity instead. The aim is to lay bare how cartographers and geographers infuse their respective worldviews into maps and how this human practice affects global social consciousness. Such an approach, Crampton maintains, enables a wider appreciation of the diversity of cartographic forms and knowledge. This is most evident through critiques of geographic information systems (GIS), geographic visualization and the innovative capabilities of interactive mapping software (Schuurman, 2000). This new modality of mapping raises important issues such as: the convergence of spatial technologies; hypermedia formats and distributed mapping; geographies of virtuality; and ethics (Crampton, 2009).

Pickles (2003) offers a critical analysis of historical cartographic practices, echoing Harley's contention that maps should be interpreted as ideologically informed discourses. Drawing upon myriad examples from the sixteenth century to the twenty-first century, the author extends Harley's social critique of cartography by revealing how the world has been coded and represented in national and colonial states, military projects and capitalist countries. Reimagining mapping as the ideological construction of space, geography and political identities, maps exercise power but can also serve as a means of enacting social change. In a somewhat related vein, Perkins (2004) highlights the diverse approaches to mapmaking, commenting on links between culture and cartography. Specifically, the author explores the merit of non-representational theory (Thrift, 1996, 2007; Dewsbury, 2003) in human geography and the practice of going beyond the representation of maps to understand how knowledge is produced. This, according to Perkins, allows critical geographers to explore how the power of mapping is practiced, but also contested and subverted.

Crampton and Krygier (2006), applying a more subversive application of critical geography, document how cartography has been "undisciplined" and wrested from the control of powerful elites – specifically, the great map houses of the west, the state and, of course, academics. The authors suggest that paradigmatic shifts in mapmaking and the collection of spatial data have occurred, especially through the introduction of interactive 3D maps, "open source" collaborative tools, mobile mapping applications, and geotagging. Such developments, undoubtedly, place the very practice of mapping within a matrix of power-knowledge relations. Crampton and Krygier's exploration of the "insurrection of knowledges" (Foucault, 2003: 9) is both timely and befitting for critical geography's commitments to the use of spatial representation as a form of resistance against oppression. One need only think of the resurgence of alternative cartographic knowledge as a means of challenging the centralizing, normalizing and hierarchizing features of mapping. Such an approach allows critical geographers to unpack the historical conditions of cartography and its entanglement with coloniality and relations of power and exclusion.

Contributing a more nuanced approach to Harleyian cartography, Fotiadis (2009) draws on empirical cartographic sources such as NATO, the European Union and The Economist in order to demonstrate that maps and cartographic images are powerful objects viewed through the interaction of various mapping practices and the intersubjective understanding of map users. In other words, the power of maps is revealed through their application and widespread use by the media. It is Fotiadis' emphasis on maps in educational settings which is of particular importance for the purposes of this paper. If, as the author maintains, cartographic images contribute to collective conceptions of national and supranational identity, might they also contribute to conceptions of Otherness?

On the other hand, Peake and Sheppard (2014) hurl race, class and gender into their analysis of the geography of knowledge production and the evolution of critical geography. The authors demand an interrogation of whiteness, which seems to establish an Anglo-American hegemony in the discipline. Arguing that the history of critical geography overwhelmingly favors white, middle-class men, the authors highlight the exclusion of non-normative narratives and a dire need to engage with alternative historical geographies. Finally, the authors propose broader questions on whether or not the discipline has reached its aim of increasing access to the methods and tools of knowledge production and transformative change via pedagogy and research.

Prince (2016) takes up questions of identity and mapping by invoking a constructivist and poststructural lens, along with theories of representation, discourse, gaze, performance, and the social construction of space and place. The author investigates how social geographies are created as a result of multiple interactions between material localities, the lived experiences of people, and media representations. In classic Harleyian fashion, Prince uses Halfacree's (2006) 'rural space' model (comprised of both Lefebvrian and Foucauldian thought) to explore how the historical use and evolution of visual representations used to promote the Appalachian Trail mediates peoples' perceptions, casting cultural assumptions about certain landscapes. Specifically, the author's emphasis on Foucauldian discourse adds a critical angle to his research agenda, aligning with critical geography's commitments. If discourse establishes a connection between representation and landscape formation, what are the dimensions of power-knowledge undergirding social relations, and how do the discourses of maps and visual representations of the Appalachian Trail show people who they are in relation to each other and the world? Prince masterfully addresses such thought-provoking questions by demonstrating that maps of this iconic trail provide the spatial orientation that facilitates the exploitation of both the environment and people, creating a particular view of the world while erasing *other* worlds.

Finally, Akerman (2017) identifies the ideology of Otherness in elements of mapping, suggesting that the historical use of cartography has resulted in certain nations viewing themselves as the center of the world, and superior to others. The practice of mapping has long been a tool used by the ruling powers to declare dominion over lands and peoples from the late seventeenth century to the early twentieth century and Akerman's work expounds the relationship between mapping and imperialist campaigns – in particular, political and economic hegemony.

Mapping the Other

In this section, a fresh philosophical orientation of Otherness is offered through the use of critical geography and notions of justice – specifically, cognitive injustice. Defined as the de-legitimization of the epistemologies of the South, cognitive injustice is also manifested through epistemicide – that is, unequal exchanges among cultures and the subordination of peoples (Santos, 2018). This is precisely why Santos argues that global social injustice is linked to global cognitive injustice: both refer to processes of subjugation and repression by cultural hegemonic forces. I contend that it is cognitive injustice, facilitated through the power of maps, which heightens contempt for the Other. What role, however, is critical geography poised to play in advancing our understanding of Otherness? While radical and feminist geographies of the 1960s demonstrated interest in minority groups who distinguished themselves from the 'mythical norm' (Lorde, 1984), it was not until geography adopted postmodern, postcolonial and queer perspectives that the socio-discursive construction of minority groups garnered the attention of critical geographers (Sibley, 1995).

Identifying the origins of the Other is no easy feat, given its varied manifestations through different cultures. The burning question among scholars and students of Otherness is why do human societies organize and collectively define themselves along dimensions of difference and sameness? Human beings' cognitive systems of classification and our construction of categorical distinctions are clearly necessary for our survival and intelligence, but the content, definition, and meaning of these categories is rather contrived (Massey, 2007). The Haas Institute for a Fair and Inclusive Society reveals that neuroscience holds the key to advancing our understanding of how the human brain defines group boundaries which, in turn, internalizes meanings and assumptions about the Other into mental shortcuts (Powell and Menendian, 2016). These shortcuts evaluate groups and are responsible for the judgments we form about people that are members of out-groups.

Foucault's (1967) early work alludes to the social construction of group boundaries and the fluidity of such boundaries when he

speaks of creating and maintaining knowledge of the Other and the foundational issues of our culture – specifically, the basic dichotomies and categories which influence social belief and action. These categories of the Other, according to Jackson and Hogg (2010), emerged through a sequence of interconnected intellectual moments in the west, especially in philosophy, social studies, literature, feminism, gender and sexuality studies, race and ethnicity studies, aesthetics, architecture, and the visual arts. The notion of the Other has been invoked to highlight and exaggerate *difference* along many dimensions of human identity. This phenomenon has been documented by scholars such as Irigaray (1977), Said (1994), Spivak (1994), Hall (1997) and Bhabha (1994, 1996), to name only a few. The central theme of Otherness in these disciplines is an investigation of identity and the interminable search for selfhood, which is defined *against* another. This search for selfhood and the identification of the Other is fundamental to human thought, perhaps even our existence as a civilization. In other words, the consolidated identity of one group is entirely contingent upon the disavowal of another group's identity.

Okolie (2003) maintains that dominant groups define themselves in relation to the Other and that the in-group's collective understanding of who they are is rooted in material and symbolic power. Elaborating on the power of discourse, Staszak (2009) defines Otherness as a discursive process through which a dominant in-group (Us/the Self) creates a dominated out-group (Them/the Other) through the exaggeration of real or imagined *difference*. This state of *difference*, moreover, is often stigmatized and leads to myriad forms of discrimination through hierarchal classifications. Such elaborate systems of classification are possible only through the negation of the out-group's identity and the concomitant consolidation of the in-group's identity. This is precisely why Otherness and identity are inseparable: the Other exists relative to the Self, and vice versa.

Sanderson (2004) argues that Otherness is a process of alienation which entails the subjugation of out-groups, while Powell (2017) links the process of Othering to the presence of ethno-nationalism among human civilizations and the rapid changes societies undergo. Almost every dominant in-group throughout history, Powell suggests, has narrowly defined who qualifies as a full, participating member of that society. Othering is predicated upon conscious or unconscious assumptions and fears that a particular group will pose a threat to the dominant in-group. Powell and Menendian (2016) propose that Othering is best understood as a conceptual framework which elucidates prejudice as a "set of dynamics, processes, and structures that engender marginality and persistent inequality across any of the full range of human differences based on group identities" (Powell and Menendian, 2016: 17). These dynamics and processes appear to be a staple of modern society's power structures, perpetuating the division and dehumanization of out-groups. Consider, for example, how the process of Othering leads to the construction of ethnic and national identities, political identities, religious identities, class identities, and so on. Bauman (1991: 8) writes:

"Woman is the other of man, animal is the other of human, stranger is the other of native, abnormality the other of norm, deviation the other of law-abiding, illness the other of health, insanity the other of reason, lay public the other of the expert, foreigner the other of state subject, enemy the other of friend".

What is of most importance through the creation of such identities is the role social institutions play in reinforcing Otherness. The law, media, education and religion, for example, exercise tremendous power through cultural representations of what is considered "normal" and, naturally, Otherness. Echoing Foucault's claims that knowledge of the Other buttresses power relations and the establishment of hierarchies within society, Hall (1997) unpacks the Other through visual representations that produce a special cultural authority. Messages about race, class and gender inequalities are transmitted through the media and Otherness is linked to legacies of colonialism because perceived *difference* is judged against the dominant in-group: White, middle-to-upper class, heterosexual, Christian, etc.

What, precisely, is the response to the Other? The Haas Institute for a Fair and Inclusive Society summarizes some of the most pernicious effects of Othering: segregation, secessionism, assimilation, discrimination and violence, to name just a few (Powell and Menendian, 2016). The only viable solution to the perils of Othering, the institute recommends, is the cultivation of inclusion and belongingness. Powell (2017) asserts that the creation of "circles of human concern" can only be achieved through a collective commitment to dismantling system-level structures of power that aim to exclude the Other. This commitment stems from cognitive, social and cultural efforts to humanize the Other through challenging negative representations and stereotypes of society's out-groups. Powell and Menendian (2014: 33) elaborate:

"We need a vision of society that is inclusive with new identities and narratives that inoculate societies from demagoguery and demonization of the "other" while improving the well-being of everyone. One possible alternative to the "acculturative" strategies of assimilation, integration, separation, or marginalization is "voice" and "dialogue."

While the groundwork of inclusion and belongingness lay in cognitive, social and cultural processes, belongingness must, perforce, be more than expressive. It requires the institutionalization of structural safeguards through the provision of resources, special accommodations and critical institutions to those who have been stigmatized and consigned to the margins of our society. The embrace of pluralism and multiculturalism, for instance, offers solutions to the trenchant problem of Othering, encouraging diversity through the creation of new identities. Huntington (2004) suggests that the creation of inclusive structures will replace the system-level structures of power responsible for perpetuating Otherness. Inclusive narratives, the author argues, will reframe group identities and reject certain narratives that exaggerate perceived *differences* between in- groups and out-groups.

A proposed framework for mapping the Other

The aforementioned sojourn through the varied modern literature on Otherness highlights notable compatibilities between Otherness and Santos' contention that modern western thinking is based on abyssal thinking – an elaborate system of visible and invisible distinctions (2006, 2008, 2018). While the latter serves as a foundation for the former, Santos (2006) argues that the invisible distinctions are constructed through a violent division of social reality into two realms: the realm of "this side of the line" and the realm of "the other side of the line". Most importantly, it is the "the other side of the line" that vanishes as reality, rendered nonexistent. Santos (2007: 2) explains: "whatever is produced as nonexistent is radically excluded because it lies beyond the realm of what the accepted conception of inclusion considers to be it's other." Abyssal thinking, then, is defined as the impossibility of the co-presence of the two sides of the line.

Given the strong links between Santosian abyssal thinking and ideological notions of the Other, might Otherness be integrated into the matrix of abyssal thinking? Both systems of classification place tremendous emphasis upon constructed dichotomies: Otherness is predicated upon the in-group/out-group dichotomy and abyssal thinking the realms of "this side of the line"/"the other side of the line". In both examples, it is the exclusion and nonexistence of the Other and "the other side of the line", respectively, which is of interest to me. I refer to this phenomenon as *abyssal Othering* –

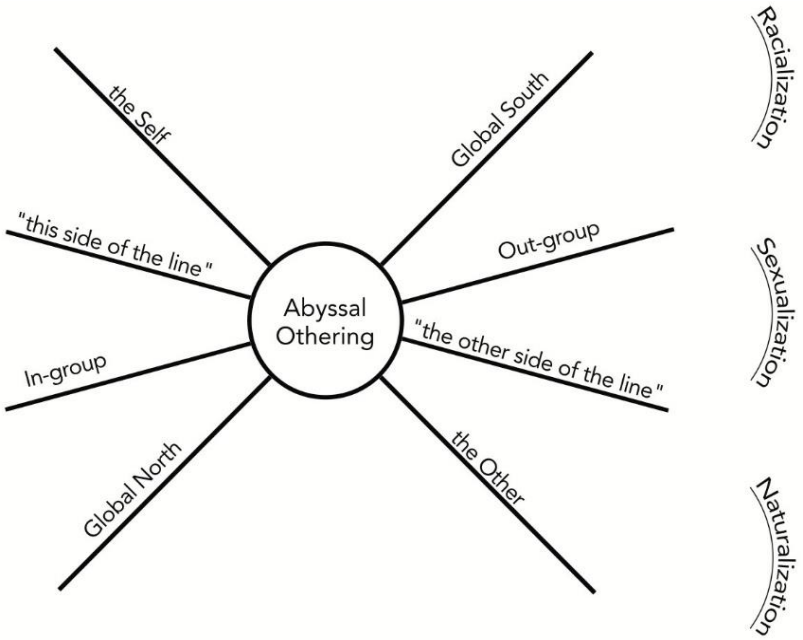

Figure 1. A conceptual synthesis of Santosian abyssal lines and Otherness.

conceptual interchangeability between Us/the Self and "this side of the line", and Them/the Other and "the other side of the line". Processes of racialization, sexualization and naturalization occur as a result of *abyssal Othering.* This is precisely why the fight for both global social justice and global cognitive justice demands post-abyssal thinking, which challenges the economic, social, political and cultural exclusion of members of the out-group. The crux of post-abyssal thinking is the recognition of the splendor of the diversity of the world. For Santos (2006, 2007), the monoculture of the west can be confronted and challenged through the ecology of knowledges and an identification of the plurality of heterogeneous knowledges and sustained interconnections between these disparate epistemologies without one compromising their autonomy. Santos' heterogeneous knowledges can be leveraged by the Other to challenge the in-group's socially constructed systems of classification through radical co-presence and the creation of a positive, autonomous identity.

Radical co-presence, Santos (2006) explains, is a commitment to ensuring that both the practices and agents of both sides of the line are contemporary in equal terms. This is somewhat reminiscent of the inclusive narratives (Huntington, 2004) and conceptual model of inclusion and belongingness (Powell and Menendian, 2014) mentioned in the previous section. Santos' post-abyssal thinking is very much concerned with achieving radical co-presence between out-groups and in-groups and those on both sides of the line. The following shows how *abyssal Othering* creates a constellation of visible and invisible distinctions between in-groups and out-groups through cartographic expressions (Figure 1).

RESULTS AND DISCUSSION

Abyssal Othering is applied by extending Santos' argument that metaphorical cartographies have outlived literal cartographies. Consider, for example, the case study of the Mercator projection in North American schools. In the spirit of anti-racism and cultural diversity, the Mercator map should be abandoned to support efforts that put the principles of racial equity, diversity and inclusion on the agenda. In this case study, we get a clearer picture of how critical geography can advance our understanding of the institutionalization and structural features of *abyssal Othering.* In earlier works, Santos (2007) alludes to the abyssal and amity lines which emerged in cartographic work during the sixteenth century. In particular, an abyssal duality was sketched between territories on "this side of the line" and the territories on "the other side of the line" during the colonial period. "The other side of the line" harbored the strange beliefs and behaviors of the peoples of the New World which, inevitably, led to the denial of their humanity through invisible distinctions between "savage" and "civilized" zones. The author argues, furthermore, that metaphorical cartography has outlived the literal cartography of the abyssal lines that separated the Old from the New World. Today, western thinking continues to engender hegemonic principles and practices through the invisible distinctions between the human from the sub-human (Santos, 2007).

The maps aren't alright

As a professor and former member of The Centre for Global Citizenship, Education and Inclusion (GCEI) at Centennial College, I am in a unique position to comment on what I believe to be a pedagogical mental narrowness and sense of complacency over the use of the Mercator

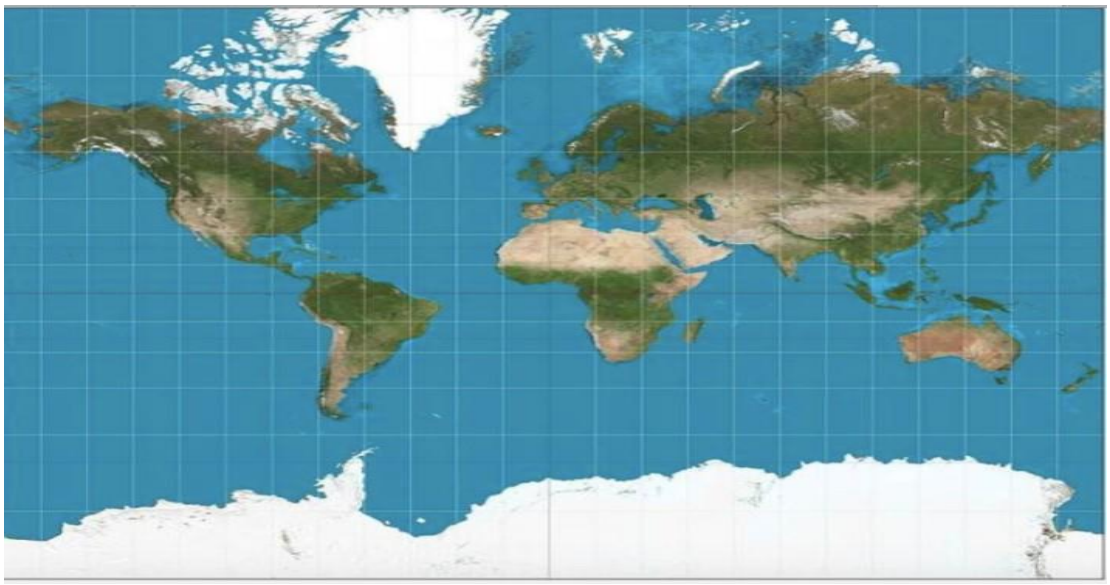

Figure 2. Mercator projection.
Source: Wikipedia (2020).

projection within classrooms across the Greater Toronto Area. In my own work and research, I have explored how cartographic productions affect students' understanding of global citizenship and identity. My work with GCEI sought to engage the wider community in transformative learning through a social justice lens, developing inclusive working and learning environments.

Named after Flemish cartographer Geradus Mercator, the projection is a cylindrical map that dates as far back as 1569, and has been the global standard in schools and atlases for the last four hundred years. In 2017, Parthi Kandavel, a trustee representing Ward 18, Scarborough Southwest, raised concerns with the Toronto District School Board (hereafter TDSB) about the implications of using this cultural relic (Smee, 2017). Kanavel tabled a motion to the board's program and school services committee, asking members to consider updating school maps. Across the Canada–United States border, public schools in Boston, Massachusetts, have also opted for swapping the Mercator projection with the Gall-Peters projection. The Mercator projection has been criticized for imposing Eurocentric views of the world by unfairly distorting the size of both Africa and South America to reflect the ambitious trade routes of European colonial navigation during the sixteenth century. Such distortions include Greenland appearing to be the same size as Africa, and Alaska boasting a larger landmass than Mexico. In actual fact, Africa is approximately fourteen times larger than Greenland and three times as big as Europe, while the whole of Alaska could easily fit inside the United Mexican States (Figure 2).

If maps inscribe power and reinforce dominant power structures, the burning question is quite simple: is the Mercator projection truly representative of the students who use this map? Like members of the Boston School Committee, Kandavel believes that such maps skew students' worldviews, cultivating certain biases and prejudices about people and places. Smee (2017), for instance, argues that the Mercator projection associates power with Europe, Russia and North America due to the sheer size of these territories and this, concomitantly, associates powerlessness with territories whose landmasses have been distorted through Mercator cartography. What is needed is a decolonization of the curriculum so that educators and students can resist the Eurocentrism of western constructs such as the Mercator projection, challenging the subjugation and exploitation of peoples disempowered by colonialism (Mbembe, 2016; Smith, 1999). The current maps used by the TDSB perpetuate cognitive injustice through the exclusion of other forms of knowledge – namely, Indigenous, local, community and Third World knowledge (Al-Daraweesh and Snauwaert, 2013; Zembylas, 2016; Coysh, 2014; Keet, 2015). This knowledge pertains not only to one's place of birth, but also knowledge of oneself – the very core of one's identity. The entanglement of coloniality and the politics of the Mercator projection, therefore, engender Eurocentric assumptions about the Other and cognitive injustice through the unequal exchanges among cultures and the subordination of certain social out-groups.

Applying a critical geography lens to the Mercator projection, we begin to see how such a map perpetuates institutional power, driving forces that produce inequality. There is, also, an opportunity to apply the proposed *abyssal Othering* framework. The distortion of the Global South through the Mercator projection disempowers

certain nations, engendering visible distinctions between power/powerlessness which, according to Santosian abyssal lines, are buttressed by invisible distinctions: developed/developing, civilized/uncivilized and in-group/out-group – to recite just a few. Might the elaborate constellation of visible and invisible distinctions produced by the map help us theorize the link between global social injustice and global cognitive injustice? This oft-cited aphorism by Santos forces us to reflect on the origin of both types of injustice. This study asserts that instruments such as the Mercator projection can further our understanding of how maps create, and sustain, the identities of the Other, illuminating the abyssal lines that harbor tribalistic prejudices which cognitively sequester humanity.

The demonization and vilification of the Global South are the result of cognitive injustices that permeate myriad social institutions. How else might we explain the unconscionable remarks by former President Donald Trump when he referred to Haiti, El Salvador, and other African nations as "shithole countries?" During a closed-door meeting with congressional leaders and Cabinet members in January 2018, Trump reviewed the terms of a deal to resolve the status of 800,000 young immigrants protected from deportation by the Obama administration's Deferred Action for Childhood Arrivals program. Former United States Secretary of Homeland Security Kirstjen Nielsen was reportedly in the room when Trump asked "Why are we having all these people from shithole countries come here?" (Kendi, 2019). Undoubtedly, Trump's vile rhetoric was used to draw visible distinctions between Americans ("Us") and foreigners ("Them"), justifying his decision to revoke Temporary Protected Status for over 200,000 foreign nationals who lived in the United States. We see examples of *abyssal Othering* in Trump's discourse, as it was motivated by racism against non-white, non-European immigrants. Trump's divisive language was a mainstay of his immigration policy; whether he is complaining about Nigerian immigrants who will never "go back to their huts", or Haitians who "all have AIDS", Trump saw the browning of America as the "shitholing" of America, evoking anti-immigrant sentiments among his supporters (Woodhouse, 2018). Slogans such as "Make America Great Again" were predicated upon the violent division between in-groups and out-groups.

The Return of the 'Yellow Peril' and COVID-19

I would be remiss if the politics of the COVID-19 pandemic were not theorized through the lens of *abyssal Othering.* In pursuing an examination of cognitive injustice and the waves of anti-Asian racism in Canada and the United States of America, one cannot help but reflect on the role *abyssal Othering* plays in spreading xenophobia. Some limiting parameters of this examination must be set by stating that COVID-19 visualizations are part and parcel of an entirely new digital and visual environment in which map projections are delivered with algorithmic, contextual decisions. While the Mercator projection is not solely responsible for the social ills of the world, might the racist discourse surrounding COVID-19, and the attempt to frame the virus as a political threat, be traced to the ideology of Otherness that the Mercator projection sought to capture so long ago?

While the following deals only tangentially with *abyssal Othering* as it relates to the politics of COVID-19, it does open vistas of critical geographical inquiry into more empirical work on the Mercator projection in the future. This study is particularly interested in how the pandemic has stoked the hot embers of racism and xenophobia. It began with a case of pneumonia of unknown cause detected in Wuhan, China in December 2019. The virus spread rapidly and was declared a Public Health Emergency of International Concern on 30 January 2020. On 11 February 2020, The World Health Organization (WHO) named the new coronavirus disease COVID-19. Not long thereafter, on 11 March 2020, The World Health Organization declared that the COVID-19 outbreak can be characterized as a pandemic – in other words, a worldwide spread of a new disease for which people do not have immunity (Muccari et al., 2020). In the span of only a few months, the virus spread to more than two hundred countries and territories, prompting governments to impose travel restrictions, national lockdowns, citywide quarantines and austere social distancing measures. Theories have circulated that one of Wuhan's "wet markets" is responsible for the human-to-human transmission of the virus, but what is more important is the city's railway network dynamics and its role as a commercial hub in the spread of COVID-19 (Webel, 2020). At any rate, it is the former theory that has garnered the attention of the public.

Geospatial information of select countries has been used by various news organizations to measure both the concentration and the accelerated spread of the virus. There is, then, a "second text" to be read through the mapping of COVID-19, invoking what Sachs (2020) refers to as the "yellow peril" in the age of COVID-19. The author argues that the pandemic has perpetuated racist ideologies of Chinese invading and overtaking the western world, a modern reiteration of the "yellow peril" of the 1800s and the growing fear among white Americans that Chinese culture is equated with savagery and barbarism (Tchen and Yeats, 2014). While some U.S. jurisdictions have allowed the use of interactive maps and zip code searches among citizens to determine how many COVID-19 cases are located in particular areas, other cities – notably, Toronto – have raised concerns over the demoralizing and stigmatizing effect such maps may have on particular communities and areas in question (Artuso, 2020).

Figure 3. Microsoft's Coronavirus Map.
Source: Microsoft (2020).

Consider, for a moment, Microsoft's coronavirus map (Figure 3). Despite the World Health Organization's 2015 guidelines prohibiting infectious diseases from being labeled based on geographic locations, individuals, cultures, or ethnic populations, a "second text" is presented in the politics of the COVID-19 pandemic. This is most evident when American officials referred to the virus as the "Wuhan virus" or the "Chinese virus" (Webel, 2020). The emphasis on the foreign or external origins of the virus erects *abyssal Othering* through visible distinctions such as Us/Them, but also invisible distinctions, which speak to the purported disease-ridden Chinese who have been blamed for the global economic fallout. Diabolical hashtags such as #Kungflu and memes have gone viral on social media, spreading across platforms such as Twitter, Facebook and Instagram, inflaming contempt for members of the Asian community. Overnight, it would appear, stereotypes of the Chinese model minority have been replaced with more vulgar stereotypes of Chinese people as the quintessential Other – unhygienic, uncivilized and unclean.

Chinese nationals and individuals of Asian descent have been the target of the most heinous of acts – everything from physical assault, vandalism and the denial of services, to name only a few examples (Sachs, 2020). The oft-cited phrase "go back to where you came from" sums up the cognitive and psychophysical parameters of injustice and the process of *abyssal Othering.* In the United States, the abyssal lines have become so visible that the Asian Pacific Policy and Planning Council has partnered with Chinese for Affirmative Action, an advocacy organization, to launch an online reporting center for victims of discrimination. The joint venture has led to a platform that logs approximately 100 hate crimes per day (Sachs, 2020). As of May 2020, there have been more than 1,700 reports of physical and verbal attacks against Asian Americans during the pandemic. In Canada, a surge of anti-Asian hate crime has also swept through cities like Vancouver by way of vandalism and physical and verbal assaults in Chinatown. In fact, since the inception of the national lockdown, police in the province of British Columbia have investigated close to eight times the number of hate crimes against Chinese Canadian communities compared to 2019 (Beattie, 2020). Such violence is fuelled by the abyssal lines constructed by influential members of the public – government officials, social media influencers and, perhaps, even celebrities.

A recent tweet by Canadian rock icon Bryan Adams exemplifies highly skewed worldviews as a result of *abyssal Othering.* On 11 May 2020, the singer and songwriter used Twitter and Instagram to lament the inconveniences the pandemic imposes upon his career (Figure 4). Adams' tweet draws upon Santosian visible and invisible lines, as he blames COVID-19 on "bat eating, wet market animal selling, virus making greedy bastards". *Abyssal Othering* is clearly captured in the use of Adams' attempt to draw visible distinctions between "Us" and "Them", but also the invisible distinctions through his emphasis on "the other side of the line" – that socially constructed realm where racist ideologies of the "yellow peril" have re-emerged in the form of the Other. Adams' "dog-whistle politics" (Lopez, 2014) racialize and

Figure 4. Bryan Adams' post on social media.
Source: Instagram and Twitter (2020).

naturalize members of the Asian community, recreating the geography of China as a bastion of uncivilized traditions, motivated by unethical practices and avarice. What is more alarming is the support Adams has received among fans, some applauding his "honesty" for speaking out. The troubling question is: honesty about whom and what?

Conclusion

This article argues that maps work dialectically within social and cultural contexts to reinforce ideologies of the Other. The presented case study adds flesh to the theoretical bones of my proposed framework of *abyssal Othering,* revealing how maps are imbued with institutional power, producing highly skewed worldviews of certain geographies, territories and identities. Where do we go from here? The suite of arguments in favor of decolonizing maps, and curricula, may contain the seeds for cultivating belongingness and inclusion – the only viable solution to the intractable problem of Otherness. In Santosian thought, post-abyssal thinking is promoted to bridge the radical, and often violent, lines that divide society into disparate realms. The goal is to achieve co-presence between both sides of the abyssal lines, recognizing the diversity of knowledge, people and places.

Following the lead of schools in Toronto and Boston, perhaps other school districts can make concerted attempts to replace the Mercator projection with more accurate maps. Members of the Boston School Committee have already allowed the use of the Gall-Peters projection and the Winkel tripel projection, the former being the preferred map of the United Nations Educational, Scientific and Cultural Organization because of its geospatial accuracy. Much more work is required in order to decolonize and problematize the Eurocentric structures embedded in myriad social institutions, however. What is needed at this juncture is a collective focus on global citizenship education to confront the Otherness of modernity. What this looks like in practice depends heavily upon those advocating global citizenship but the end result, inevitably, is achieving human connectivity through global social justice and global cognitive justice.

CONFLICT OF INTERESTS

The author has not declared any conflict of interests.

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REFERENCES

Akerman JR (Ed.) (2017). Decolonizing the map: Cartography from colony to nation. University of Chicago Press.
Al-Daraweesh F, Snauwaert DT (2013). Toward a Hermeneutical Theory of International Human Rights Education. Educational Theory 63(4):389-412.
Andrews SK (1988). Applications of a cartographic communication model to a tactual map design. The American Cartographer 15(2):183-195.
Artuso A (2020). Revealing COVID-19 hotspots to the public 'stigmatizing', Ford says. Toronto Sun. Available at https://torontosun.com/news/provincial/revealing-covid-19-hotspots-to-the-public-stigmatizing-ford-says

Barnes TJ (2009). Not only…But also: Quantitative and critical geography. The Professional Geographer 61(3):292-300.
Barnes TJ, Sheppard E (2009). Nothing includes everything: Towards engaged pluralism in Anglophone economic geography. Progress in Human Geography 34(2):193-214.
Bauman Z (1991). A Sociological Theory of Postmodernity. Thesis Eleven 29(1):33-46.
Beattie S (2020). Trudeau Condemns Surge of Anti-Asian Hate Crimes in Canada. HuffPost. Available at https://www.huffingtonpost.ca/entry/trudeau-vancouver-anti-asian-hate-crimes_ca.
Bhabha H (1994). The Location of Culture. Routledge.
Bhabha H (1996). Culture's in-between. In S. Hall and P. du Gay (Eds.), Questions of Cultural Identity. Sage Publications, pp. 53-61.
Blomley N (2006). Uncritical Critical Geography. Progress in Human Geography 30(1):87-94.
Coysh J (2014). The Dominant Discourse of Human Rights Education: A Critique. Journal of Human Rights Practice 6(1):89-114.
Crampton JW (2001). Maps as Social Constructions: Power, Communication and Visualization. Progress in Human Geography 25(1):235-252.
Crampton JW (2009). Cartography: Maps 2.0. Progress in Human Geography 33(1):91-100.
Crampton JW, Krygier J (2006). An Introduction to Critical Cartography. ACME: An International Journal for Critical Geographies 4(1):11-33.
Dewsbury JD (2003). Witnessing space: knowledge without contemplation. Environment and Planning 35(1):1907-1932.
Edney M (2005). The Origins and Development of J.B. Harley's Cartographic Theories. Cartographica 40(1):1-2.
Elden S (2008). Dialectics and the measure of the world. Environment and Planning 40(1):2641-2651.
Fotiadis P (2009) The Strange Power of Maps: How maps work politically and influence our understanding of the world [Conference session]. School of Sociology, Politics, and International Studies Conference. Bristol, UK.
Foucault M (1967). Madness and Civilization. Random House.
Foucault M (2003). Society Must Be Defended: Lectures at the Collége De France 1:1975-1976. Picador.
Gregory D (1994). Geographical Imaginations. Blackwell.
Halfacree K (2006). Rural Space: Constructing a Three-Fold Architecture. In P. Coke, T. Marsden and P. Mooney (Eds.), Handbook of Rural Studies. Sage Publications. pp. 135-157.
Hall S (1997). Representation: Cultural Representations and Signifying Practices. Sage Publications.
Harley JB (1988). Maps, knowledge and power. In D. Cosgrove and S. Daniels (Eds.), The Iconography of Landscape. University of Cambridge Press. pp. 277-312.
Harley JB (1989). Deconstructing the map. Cartographica 26(1):1-20.
Harley JB (1990). Cartography, ethics and social theory. Cartographica 27(2):1-23.
Harley JB (1992a). Deconstructing the map. In T.J. Barnes and J.S.Duncan (Eds.), Writing Worlds, Discourse, Text and Metaphor in the Representation of Landscape. Routledge. pp. 231-247.
Harley JB (1992b). Rereading the maps of the Columbian encounter. Annals of the Association of American Geographers 82(3):522-542.
Huntington S (2004). Who Are We? The Challenges to America's National Identity. Simon and Schuster.
Irigaray L (1977). Ce Sexe qui n'en est pas un. Editions de Minuit.
Jackson RL, Hogg M (2010). Encyclopedia of Identity. Sage Publications.
Keet A (2015). It's Time: Critical Human Rights Education in an age of Counter-hegemonic Distrust. Education as Change 19(3):46-64.
Kendi I (2019). The Day Shithole Entered the Presidential Lexicon: In insulting certain countries, Trump revealed the hierarchy he imposes on the world. The Atlantic. Available at https://www.theatlantic.com/politics/archive/2019/01/shithole-countries/580054/.
Kwan MP, Schwanen T (2009). Quantitative revolution 2: The critical (re)turn. The Professional Geographer 61(3):283-291.
Leszczynski A (2009). Quantitative limits to qualitative engagements: GIS, its critics and the philosophical divide. The Professional Geographer 61(3):350-365.
Lopez IH (2014). Dog Whistle Politics: how coded racial appeal have reinvented racism and wreaked the middle class. Oxford University Press.
Lorde A (1984). Sister Outsider. Ten Speed Press.
Massey D (2007). Categorically Unequal: The American Stratification System. Russell Sage Foundation.
Mathewson K, Stea D (2003). In memorium: James M. Blaut (1927-2000). Annals of the Association of American Geographers 93(1):214-222.
Mbembe A (2016). Decolonising the University: New Directions. Arts & Humanities in Higher Education 15(1):29-45.
Muccari R, Chow D, Murphy J (2020). Coronavirus timeline: Tracking the critical moments of COVID-19. NBC News. Available at https://www.nbcnews.com/health/health-news/coronavirus-timeline-tracking-critical-moments-covid-19.
Okolie A (2003). Identity: now you don't see it; now you do. An International Journal of Theory and Research 3(1):1-7.
O'Sullivan D, Bergmann L, Thatcher J (2018). Spatiality, Maps, and Mathematics in Critical Human Geography: Toward a Repetition with Difference. The Professional Geographer 70(1):129-139.
Peake L, Sheppard E (2014). The Emergence of Radical/Critical Geography within North America. ACME: An International E-Journal for Critical Geographies 13(2):305-327.
Perkins C (2004). Cartography – cultures of mapping: power in practice. Progress in Human Geography 28(3):381-391.
Pickerill J (2017). What are we fighting for? Ideological posturing and anarchist geographies. Dialogues in Human Geography 7(3):251-256.
Pickles J (2003). A History of Spaces: Cartographic Reason, Mapping and the Geo- coded World. Psychology Press.
Poon JPH (2005). Quantitative methods: Not positively positivist. Progress in Human Geography 29(6):766-772.
Powell J (2017). Us vs them: the sinister techniques of 'Othering' – and how to avoid them. The Guardian. https://www.theguardian.com/inequality/2017/nov/08/us-vs-them-the-sinister-techniques-of-othering-and-how-to-avoid-them.
Powell JA, Menendian S (2016). The Problem of Othering. In R. Galloway-Popotas, S. Menendian and M. Omi (Eds.), Othering and Belonging: Expanding the Circle of Human Concern. Berkeley. The Haas Institute for a Fair and Inclusive Society 1:14-39.
Prince BJ (2016). An Appalachian trail: A Critical Geographic Study in Visual Representation and Landscape Production. PhD Thesis, Texas State University, United States of America.
Sachs HJ (2020). "Yellow Peril" in the Age of COVID-19. Humanity in Action. Available at https://detail/article-usa-hannah-sachs-yellow-peril-in-the-age-of-covid-19.
Said E (1994). Culture and Imperialism. Vintage Books.
Sanderson G (2004). Existentialism, globalization and the cultural other. International Education Journal 4(4):1-20.
Santos B (2006). The Rising of the Global Left: The World Social Forum and Beyond. Zed Books.
Santos B (2007). Beyond Abyssal thinking: From Global Lines to Ecologies of Knowledges. Review 30(1):1-66.
Santos B (2008). The World Social Forum and the Global Left. Politics and Society 36(2):247-270.
Santos B (2014). Epistemologies of the South: Justice Against Epistemicide. Paradigm.
Santos B (2018). The End of the Cognitive Empire: the coming of age of epistemologies of the South. Duke University Press.
Schuurman N (2000). Trouble in the Heartland: GIS and Its Critics in the 1990s. Progress in Human Geography 24(4):569-590.
Schuurman N, Pratt G (2002). Care of the subject: Feminism and critiques of GIS. Gender, Place and Culture 9(3):291-299.
Schwanen T, Kwan MP (2009). Doing critical geographies with numbers. The Professional Geographer 61(4):459-464.
Sheppard E (2014). We have never been positivist. Urban Geography 35(5):636-644.
Sibley D (1995). Geographies of Exclusion: Society and Difference in the West. Routledge.
Smee M (2017). Trustee wants board to tackle potential bias in TDSB's map collection. CBC News. Available at https://www.cbc.ca/news/canada/toronto/trustee-wants-board-to-tackle-potential-bias-in-tdsb-s-map-collection-1.4061873.

Smith LT (1999). Decolonising Methodologies: Research and Indigenous Peoples. Zed Books.
Spivak GC (1994). Can the Subaltern Speak? In: P. William and L. Chrisman L (Eds.), Colonial Discourse and Postcolonial Theory: A Reader. Columbia UP. pp. 66-112.
Staszak JF (2009). Other/Otherness. In R. Kitchin and N. Thrift (Eds.), International Encyclopedia of Human Geography: A 12-Volume Set (pp.1-7). Elsevier Science.
Tchen JKW, Yeats D (2014). Yellow Peril: An Archive of Anti-Asian Fear. Verso.
Thrift N (1996). Spatial Formations. Sage.
Thrift N (2007). Non-representational theory: Space, Politics, Affect. Routledge. Waldenfels, B. (2007). The Question of the Other. SUNY Press.
Webel M (2020). Calling COVID-19 a 'Chinese virus' is wrong and dangerous – the pandemic is global. The Conversation. Available at https://theconversation.com/calling-covid-19-a-chinese-virus-is-wrong-and-dangerous-the-pandemic-is-global-134307.
Wood D (1992). The Power of Maps. Guilford.
Wood D, Fels J (1986). Designs on signs/myth and meaning in maps. Cartographica 23(3):54-103.
Woodhouse LA (2018). Trump's "shithole countries" remark is at the center of a lawsuit to reinstate protections for immigrants. The Intercept. Available at https://theintercept.com/2018/06/28/trump-tps-shithole-countries-lawsuit/.
Wright JK (1942). Map makers are human: Comments on the subjective in maps. The Geographical Review 32(4):527-544.
Wyly E (2009). Strategic Positivism. The Professional Geographer 61(3):310-322.
Wyly E (2011). Positively Radical. International Journal of Urban and Regional Research 35(5):889-912.
Zembylas M (2016). Toward a Critical-sentimental Orientation in Human Rights Education. Educational Philosophy and Theory 48(11):1151-1167.