# Race as Cultural Algorithm, and Racecraft in HCI

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## Abstract

In this position paper, I ask how we in HCI research and practice can account for what scholars Barbara and Karen Fields have dubbed "racecraft", or the "doing" of race: how race is made and re-made in everyday interactions. I argue that the Fields' intercultural and deeply historical perspective challenges those of us in HCI trying to combat racism in all its guises, asking us to be more careful of the language we deploy in papers, conferences and education. I posit points where we can remind everyone that race is a "monstrous fiction" –in Williams' words, "a philosophical and imaginative disaster" [23] –by exploring concepts of race as algorithms during intro CS education (i.e., performing a tree search on ancestry). In the process, I introduce the concept of a "cultural algorithm" and a pedagogy that simultaneously explores bias, discrimination and computer science concepts through such algorithms. Finally, I argue that part of counteracting racism and injustice in HCI should involve looking for ways to destabilize and deconstruct the concept of race altogether.

## Author Keywords

racism; intercultural learning; computational thinking; computing education; prejudice reduction

## CCS Concepts

## Introduction

> "Racism is a qualitative, not a quantitative, evil.
> Its harm does not depend on how many people
> fall under its ban but that any at all do. And the
> first principle of racism is belief in race... [W]hat
> is needed is not a more varied set of words and
> categories to represent racism but a politics to
> uproot it."
> 
> —Barbara and Karen Fields [13, p. 109]

"Algorithmic bias" is an endpoint, not the starting point, of racial injustice. It is also a new name for a centuries-old reality, as non-computing algorithms have so often been created and put towards biased ends. These algorithms become culture, transmitted as if through osmosis to children through generations, encoded into the structure of society. What makes the American concept of race so compelling is its seeming-reality, its hijacking of our cognitive ability to categorize (and cast meaning onto) "human kinds" [16]. Bombarded by American culture, race can seem all-encompassing and, even, not problematic as a concept itself, outside of racism. After all, racial categories have been repurposed by those marginalized by the dominant culture to build solidarity around shared experience [18]. But stepping far outside the United States –or indeed running studies on young children [16] –offers a vantage point on race as a cultural construction, an insidious ontology that upholds racism even under benevolent guises. The concept's seeming mundanity, as a socially and legally accepted understanding of self and other, becomes its most insidious quality [13, p. 101-2].

As the concept of race tracks globally (with the help of global communication infrastructure that we in HCI have helped create), we are at risk to forget the fundamental truth that race is a cultural construct that emerged to justify enslavement and discrimination. Race is not a stationary nor a scientific concept and, no matter how natural it seems, it has no basis in genetics [8, 13]. Recently, a few high-profile individuals have "retired" from the false notion of race: in 2012, the artist Adrian Piper "retired from being black" [21]; in 2019, the author Thomas C. Williams declared himself "ex-black" [23]. Formerly racialized, these Americans now reject to identify with the label they were, and often are, identi*fied* by others as. Such moves raise an important distinction between "identity" and "identification" that reflects Brubaker's unpacking of "identity" in his book *Ethnicity Without Groups* [8], challenging those who mobilize around racial categories.

In their provocative book on race in America, *Racecraft: The Soul of Inequality in American Life* [13], authors Barbara and Karen Fields affirm the importance of the identity vs. identification distinction for the American concept of race. The authors are sisters: Karen Fields is an independent scholar who has published books on colonial Africa and the 20th century American south; Barbara Fields is a Professor of History at Columbia University who has authored several books on slavery in the U.S. In 1992, she appeared in Ken Burn's *Civil War* and argued that the war was about slavery, not "state's rights," which was controversial at the time [1]. The Fields argue that racism created race, not the other way around, and that biological notions of race are reaffirmed in seemingly well-justified concepts like "multiracial" and "whiteness" [13, 12]. Their perspective challenges us to see how concepts founded upon racial categories, in their strides against racism, can reify its fictions. Together, the Fields' have more substantial knowledge of

the history of U.S. slavery and reconstruction than perhaps anyone in HCI; undoubtedly, those of us who deal with the intersection of racism and HCI should engage with their views.

My aim in this position paper is to do just that. I ask whether, how and when such a perspective can be mobilized in HCI. I argue that our educational initiatives in computer science, particularly at the post-primary level, offer a unique chance to disrupt the reproduction of racist ideology. This chance runs much deeper, however, than adding a layer of ethical ramifications of AI. I ask us to consider how, rather than seeing algorithms as byproducts of culture, where might we see culture as byproducts of algorithms? Rather than (only) teaching how computer algorithms may reproduce bias, how, when and where can we teach how prejudice and discrimination often operate along algorithmic lines (i.e., outside computers)? How can we hijack CS and HCI education to destabilize our and students' very understanding of 'us' and 'them' and provide deeper historical perspective and critical consciousness? I begin by defining the Fields' concept of racecraft and lead into a example activity for CS education founded on the one-drop rule.

## Defining Racecraft
I have pulled a quote from the Fields' book, in the margin box to the left, to explain the concept of racecraft. Racecraft is racism masquerading in everyday life as a rationality for action and understanding. When we instinctively parse situations along racial lines, we perform racecraft. Racecraft includes impicit bias, but it also explains how race infiltrates everyday discussion, disappearing the perpetrators of racism by assigning attributes to its objects. Racist ideology does not just operate, therefore, "where it might be said to 'belong'," but also where it operates as a rationality, an explanation for everyday events. To those inside American

culture, the circular causality of racecraft may seem natural, but to those outside –as Adichie emphasized in her book *Americanah* [2] –it appears strange and oftentimes absurd.

The Fields provide the following statement as one example: "black Southerners were segregated because of their skin color" [13, p. 17]. The statement appears normal, but is circular logic: today's rationality is projected back into the past, obscuring the cultural development that produced it. Such subtleties illustrate how racecraft operates in seemingly innocuous ways.

Spurred to write the book by trips to Tanzania [10] and inspired by the racial categorization of immigrants [12], the Fields sisters' critiques may be seen as a call for intercultural competence as described originally by Edward Hall [15]. Yet their intercultural perspective on race is sometimes at odds with other approaches in critical race theory, especially in their deployment in education. For instance, a blog post by the Anti-Defamation League on speaking about race in school classrooms stresses that teachers should *begin* the conversation by "establish[ing] the fact that we all have a race" (ostensibly while hands go up for any of the 'mixed race' people in the room) [3]. This is not some back-water example, but good-natured, well-meaning advice by a prominent institution. Even Kendi, who discusses biological racism, defines antiracism within the confines of racist ideology: he argues that antiracism's goal should be equality between races and the destruction of a racial hierarchy, which still presumes that races exist to begin with [17]. Unlike Kendi, the Fields argue that the ultimate goal of antiracism should include a politics that seeks to destroy the racist ontology altogether. We in HCI should take heed of how, if we are not careful, our own well-meaning moves to correct racial injustice can also end up supporting race as a "fact" that we all "have," rather than a "monstrous fic-

tion" [13] that perpetuates itself, even under benevolent guises.

I am aware the Fields' perspective may be jarring, even upsetting to some people in HCI. Partly this is because of its apparent conflict with group-based activism,[1] but partly too because it challenges deeply-held cultural beliefs, especially for Americans. When cultural beliefs are challenged, cognitive dissonance, defense, and denial will often result [7]. However, intergroup work also suggests that children and adolescents are more malleable and responsive to challenging such beliefs, since they are still being encultured [5]. Thus, it is imperative for us in computing to ask how we might disrupt prejudice early by teaching intergroup and intercultural learning in our educational settings. In the following section, I outline an example activity on race to ask workshop participants what its role should be –if any –in such intercultural CS classrooms for youth.

## The One-Drop Rule: A Cultural Algorithm

> "[B]y converting race into racial identity and thereby managing to attribute one to everybody, [reformers today] evade the key fact about racism in its American form, which is its irreducible asymmetry... the one-drop rule for any known ancestry does not assign each person to a race. Instead, it separates the people who are black or whatever you want to call them, from those who are not."
>
> –Barbara Fields [11]

Those in CS education today are hard at work integrating computational thinking and coding into classrooms at pri-

mary and secondary school levels. Calls for everyone to "learn to code" are also being followed by concerns about *who* gets to code and why it matters [6]. While efforts to integrate ethics into curricula have been lauded, some have also criticized the ethics movement for not going far enough in challenging power structures [20, 22]. But the spread of computational thinking also presents a widely overlooked opportunity, or rather *alignment*, between computing concepts and cultural ones: to reflect on how culture (and bias) has often operated through algorithm.

In the Fields' book and discussions, the terms "programmed" and "classification" come up. In one anecdote, a white boy learns indirectly that a playmate he calls "brown" should instead be called "black" –he learns that "to ask if his playmate is black is not to ask for a description but to ask for a classification" [10]. Classification is not just an issue of algorithmic bias and machine learning: algorithmic bias is just a reflection of the cultural algorithms that have always classified.[2]

The question becomes, how can we teach students to "see" racecraft? Legally and socially, race has often been defined by algorithms of hypodescent, or a binary tree search on ancestry (Algorithm 1). My question for this workshop is whether –and/or how –to run a middle- or high-school classroom activity dealing with such cultural algorithms. In prior work on the Nairobi Play Project, an intro CS course for intercultural learning in Kenya, the teachers, my coauthors and I dealt with a related sensitivity around cultural or tribal backgrounds. We deployed a pedagogy founded on intergroup contact theory and play-based learning which at first distracted from tensions with group and pair activities, and then ramped up to thornier issues. When well-

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[1]It bears mentioning that the Fields are supportive of Black Lives Matter, as they conceive of the "black" in the title as an issue of identification rather than identity [10]. Others such as Williams have disagreed [23].

[2]Others have conceived of race as a technology, but have not spent time on developing a politics to uproot the scheme altogether [9, 6].

facilitated, this method achieved some success in forming cross-cultural and cross-gender relationships [4]. Yet even where such pedagogy is in place, a question remains how we approach discussion of cultural algorithms such as race without seeming to make light of them, but while trying to reveal their fundamental "absurdity" [2].

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**Algorithm 1** The U.S. One-Drop Rule in the parlance of computing: a Binary Tree Search given the biological mother and father of an individual. Changing the 'depth' parameter corresponds to the laws of different states prior to the Civil War (e.g. depth=3 returns *false* if the individual has less than $\frac{1}{8}$ sub-Saharan African ancestry).

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```
1:  procedure ISBLACK(mom, dad, depth)
2:      if mom is sub-Saharan African then return true
3:      else if dad is sub-Saharan African then return true
4:      else
5:          depth ← depth − 1
6:          if depth = 0 then return false
7:          else                        ▷ Recurse into grandparents
8:              b ← IsBlack(mom.mom, mom.dad, depth)
9:              b ← b ∨ IsBlack(dad.mom, dad.dad, depth)
10:             return b
11:         end if
12:     end if
13: end procedure
```

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One possible tactic to discussing the one-drop algorithm is to pick public figures who are well-known to many students. We might ask the algorithm "why is former President Barack Obama black?" Showing pictures of Obama's mother and father, the teacher can trace the algorithm, asking questions about how we hold certain assumptions and why. We might put more examples, such as the actress Fredi Wash-

ington, and ask for guesses of their "race." Tracing the algorithm, we reveal the "answer" given by American society. The teacher then juxtaposes Algorithm 1 with another algorithm construing "race" in South Africa or Brazil. Through contrast, we might show how different cultural algorithms resulted in different concepts of race that nonetheless seem as natural as breathing to those inside the culture (e.g., Machado de Assis in Brazil). For instance, growing up in South Africa, Trevor Noah was considered "white" [19].

This might be followed by asking students: What is South Africa's algorithm (in the Noah example)? What would an IsWhite algorithm in America look like? (Or pick another, depending on the composition of the class.) Other ideas are to ask students how we might extend or change the algorithm to account for "mixed race" individuals, or exploring what happens when we alter the 'depth' parameter in order to lead into a discussion of racial passing. The power of such an activity is that students *simultaneously* explore prejudice and bias, U.S. culture and history, and computing concepts of binary trees, searching a data structure, and recursive functions. None is construed as something additional; rather, computational thinking and learning about racial discrimination are deeply intertwined.

I want to emphasize that encoding race as an algorithm is not to reify race (in the sense of ADL's forcing youth to "learn" the "fact" that "we all have a race" [3]) but to attempt to reveal –even for a moment –the concept's absurdity, for no algorithm will ever be enough. It is my belief that this juxtaposition –*changing* the hypodescent algorithm, and asking what happens –is critical to challenging students' mindsets. However, working with a middle school class, I am still wary of how to approach this activity in a classroom and look forward to learning from the workshop.

## Conclusion

> "Only if we imagined racecraft as a thing in itself worth scrutiny might we imagine ourselves outside or beyond the belief."
>
> –Barbara & Karen Fields [13, p. 20]

According to the Fields' perspective, when we centre "race" or "racial difference" with our framings in HCI –rather than racism –we "transform the act of a subject into an attribute of the object," perpetuating the fiction of race by "compounding it, spreading it around" [11]. While I have focused on educational settings, I do want to point out the danger of such sleights of hand at HCI conferences. I cite a paper here not to single out the authors –I think they have good intentions –but to illustrate how HCI papers may be published that exhibit racecraft. At CSCW 2019, I attended a paper presentation which might be summed up as 'racial differences in how people use technology' [14]. This study compares technology use of a 'racial group' –"White Americans" –with an immigrant subpopulation, "Asian Indians," which it construes as another race. Rather than attributing differences to cultural upbringing and local forces, differences in behavior are construed as due to a participant's race. By transforming an act performed on someone into an attribute of people, such language denies agency of self-definition to participants, confusing their identity for the author's identification –which is, in fact, the very act at the core of racism [12].

In sum, I am hopeful that an intercultural vantage point on race, in HCI education and in our conferences, can help us step outside our "cultural algorithms" and begin to destabilize their monstrous fictions. The Fields' substantial and deeply historical knowledge of racism asks us in HCI to be more careful about how we speak about race, even when such care might go against our intuition or personal experience. It suggests that the only way to dismantle the slave-owner culture is to be able to step outside it and glimpse how its framings and terms may not be as natural as they first seem, but are in fact traps devised to perpetuate its monstrous ontology. On the one hand, what the Fields posit may be upsetting to some: that the very terms used to mobilize people around combating racism may be entrenching its fictions, grounding its ideology. On the other hand, if race was made from racist ideology, it can be un-made. The trick will be how to combat racism while keeping in mind, always, the falseness of race. Whether we in HCI can walk that boundary remains to be seen.

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