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Bored Techies Being Casually Racist: Race as Algorithm

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Abstract

Connecting corporate software work in the United States and Germany, this essay tracks the racialization of mostly male Indian software engineers through the casualization of their labor. In doing so, I show the connections between overt, anti-immigrant violence today and the ongoing use of race to sediment divisions of labor in the industry as a whole. To explain racialization in the tech industry, I develop the concept of race-as-algorithm as a device to unpack how race is made productive within digital economies and to show the flexibility of race as it works to create orders of classification that are sensitive to context. Using evidence collected through observation in tech offices and through interviews with programmers over five years, I track race as an essential but continually disavowed variable within the construction of global tech economies. Historical racializations of casual labor in plantation economies illuminates how casualness marks laborers whose rights can be muted and allows corporations to deny their culpability in promoting discrimination within and outside of the tech industry. These denials occur across a political field that divides "good" from "bad" migrants. Using the ethnographic symptoms that Indian tech

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workers identify in their environments, this essay reads these signs as an antidote to these continued denials.

Keywords
race, India, algorithm, Germany, labor

> The digital economy . . . is about the extraction of value out of continuous, updateable work, and it is extremely labor intensive.
>
> Tiziana Terranova (2004, 48)

> For race to be considered technology, it first must be denatured—that is, estranged from its history as a biological fact.
>
> Beth Coleman (2009, 78)

Sid entered into an elevator at his Seattle office building, noticed some changes to the poster hanging on its back wall, and flinched. He moved in to get a better look and retrieved his cell phone from his pants pocket, snapping a photo before the carriage reached the next floor. On the poster, every person had been given a big, scribbly bindi, and the eyes of a man with a mustache had been filled with the same, angry red. A few days later, Sid found another poster, this one for a company game and film night include a Bollywood movie, bindified. The vandal had taken extra time with this poster. While the bindis were red, the eyes glistened a bright, highlighter-tinged, green. On the bicep of one of the figures, a heart-shaped tattoo with an arrow piercing its sides was drawn in black. Inside the heart were the words, "I love mom."[1] Sid took another photograph and moved on.

Sid's pictures inaugurated a vigorous conversation with his friends Reshma and Vinay, who also worked in Seattle-area tech firms as engineer and product manager. Scrutinizing the pictures while having dinner together, Sid intoned, "oh, it was probably bored techies being casually racist." Reshma broke out in an embarrassed grin. "I don't know," she said, "I think an Indian did that." Vinay was not so sure. It looked like it might be a disgruntled white engineer to him. Sid, tall and angular with close-cropped hair, is an Indian American programmer who had grown up in California. He had been working in Seattle's tech industry for seven years. He agreed with Vinay, it was directed against Indians. "That's the kind of thing that I would do in my history books when I was bored at school," countered Reshma, who went to high school with her fiancé Vinay in the

industrial town of Coimbatore, in the South Indian state of Tamil Nadu. Reshma, irreverent and mischievous, was well matched by Vinay, whose dimples gave him a deceptively sweet look that belied his far-seeing pragmatism. Each had come to the United States on temporary work visas after launching several small start-ups together in India. They explained to me that they were by and large treated well at work, but that there were subtle differences in the work that was expected of them, some examples of which I discuss below.

In the end, the graffitied posters disturbed them. They thought they might indicate an unstable mind. I asked them if they thought they should report the vandalism. All three demurred: would the firm even do anything if they did? "They would probably just hang another poster *next* to the elevator explaining how not to graffiti on elevator posters," Vinay surmised, chuckling derisively.

Reshma and Vinay are both temporary high skilled programmers in the United States on H-1B visas. Each year approximately 75,000 H-1B visas are granted in the United States, a full 75 percent of these visas are issued to workers in tech industries. A similar program in Germany for highly qualified workers issues approximately 15,000 visas per year, and the Australian 189 visa issues about 20,000 per year. There are also programs in the UK, issuing approximately 90,000 per year, making the yearly total of temporary tech workers circulating globally roughly 150,000 people.[2]

These visas are used by firms to fill temporary needs without having to provide benefits. Because the visa is tied to an employer, these workers are in some senses "bonded"—their residency is tied to a firm and they often feel significant pressure to be silent in the face of exploitation.[3] At the same time, the visibility of these workers on the political stage frames them as alien job stealers.

Sid, Vinay, and Reshma's colloquy opens up the theoretical issue at the heart of this paper: how race is folded into and proliferates within the corporate tech workplace. The elevator posters suggest that race and diversity are valued by the firm. Applauding diversity masks the hierarchies that make visa-dependent, migrant workers more casual and precarious. The graffiti becomes problematic because it calls attention to specter of racism that is otherwise supposed to be hidden. Graffiti tags a welter of techniques through which race is produced and disavowed in tech workplaces, along with the multiple ways in which Indian tech workers register the racialized terms of their employment.

Sid's evocation of "casual racism" is a haunting that reveals the long histories of racialized casual labor that make Indian software engineers,

debuggers, and technical project managers seem suitable for temporary and replaceable positions (Gordon 2008). Casual racism feels less serious than organized race-based hatred. But, "casual" within a labor market means someone who is employed temporarily. This other meaning of casual evokes the historical layers through which what is casual can become what is persistent. In other words, I use Sid, Reshma, and Vinay's alternating mockery and concern as a prompt to ask, how is casual labor racialized in corporate coding worlds? I find the answer in three modalities of race operating as an algorithm to produce replaceable workers, productive diversity and latent correlations between race and labor, and the long tail of racist imaginings.

In this essay, I build on Beth Colman's (2009) reading of race as technology. As Coleman argues, race as a technology is not concerned with the veracity of racial traits. It is rather concerned with the productivity of race. While Coleman rightly points out the possibilities for moving race into more productive, less hierarchical directions when race is understood as a technology, I emphasize here that historically race has been a technology to sort and classify populations. Though algorithms are precise rather than casual, they are also adjustable to multiple situations. The continual adjustment of race as an algorithmic operation produces: South Asian visa-dependent programmers as *replaceable casual workers*; race as a marker of *productive diversity* for firms; and *a* "*long tail*" *of racist thought* that is left to fester outside the formal boundaries of corporate offices.

Algorithms use a definite number of steps to solve a particular problem given specific inputs (Knuth [1968] 1997). Algorithms are always multiple, with many different historically determined affordances about decision-making built into them (Mazzotti 2017; Seaver 2017; David and Ohm 2017). For the purposes of this article, the important facets of algorithms worth highlighting are: most algorithms sort and classify in the background with little oversight into their operations (Citron and Pasquale 2014); algorithms working over time can produce latent variables, correlations that are taken to be meaningful even though these variables were not built into the algorithm in the first place (Ajunwa 2020); and algorithms can produce rankings, which are results ordered from most to least prominence and therefore have a long tail of results associated with them (Tufekci 2018). When I argue that race operates algorithmically, I mean that it functions behind the scenes to sort workers according to racialized characteristics, it produces race as a marker of valued differences within firms, and it treats racism as a latent variable that exists outside of tech firms, even while these

firms remain complicit in creating the conditions of labor that racialize visa-dependent workers as casual workers.

Race-as-algorithm in the present day is tied to the long history of creating migrant casual workers in colonial and later periods where casual labor was used to replace slave labor on colonial plantations in the British Empire, and as quick labor to reconstruct bombed-out German cities through the guest worker program. Focusing on the historical relationship between casual labor and racialization shows that firms that value race as a source of creative vitality remain complicit in racism against Indian tech workers within and beyond their walls.[4]

This paper moves across scenes from Berlin, where I lived from 2002 and 2004 and visited in 2006 and 2009, and from Seattle, where I have lived and worked since 2008. The intent of this paper is not to compare Germany and the United States as if they were equivalent places because they are both nation-states (Weheliye 2014, 15). Instead, by means of examples from the United States and Germany, I offer an analysis of race as a powerful global operator in tech economies (Goldberg 2009). A brief reading of Germany's post–World War II guest worker program provides an accounting of how longer imperial histories of casual labor come to inform contemporary visa-dependent racial migration schemes in global coding economies.

At tech firms in both countries, racially diverse workforces signify a firm's membership in a community of multinational corporations (Amrute 2016; Upadhaya 2016) even while race operating algorithmically divides workers into fully human, not-quite-human, and nonhuman subjects (Weheliye 2014, 3), in which tech workers from India are often deemed "not-quite-human" labor. While Germany and the United States have different histories of racial hatred (Bunzl 2007), they share an industry-wide orientation to race that both creates race as foundational to the operation of technology-driven firms and distances the firms themselves from their role in this creation. I describe this creation and its disavowal through the term race-as-algorithm.

Race-as-algorithm

Algorithms are sometimes discriminatory, and there are many reasons why. Search results reflect, for instance, advertising strategies as much as anything else, and the history of black women's bodies and their pornification feeds advertising revenue (Noble 2018). People make algorithms, and the majority of algorithm creators possess a worldview of privileged, educated, young, white men (Hu 2015). Hate groups deliberately skew search results

(Friedberg and Donovan 2019). Algorithms produce echo chambers in which racist ideas proliferate unchecked (Ray et al. 2017). And tech companies' own attempts to correct algorithmic racism, which rely on human censors to tag content, reproduce discriminatory practice through the uneven design of censorship guidelines (Solon 2017).

Exposing racist algorithms is crucial, yet limited in reach because it imagines a horizon of possibility in which racist breaches might be corrected and concomitantly narrows attention to addressing the issue of race as posed in these terms (Scannell 2019). This essay stresses race as productive of value within tech economies. Twenty-first-century sorting and classificatory functions of race illuminate the workplace "performances of . . . gender, sexuality, race, ethnicity, and so forth" that enable minority workers' employment but also limit their ability to negotiate over the conditions of their labor (Tsing 2009, 158-59). In other words, describing the algorithmic properties of race—its classificatory and responsive aspects—helps explain how tech workers from India might in one moment be valued for the cultural knowledge they carry and in the next, vilified as alien job stealers.

Describing race as algorithmic has two advantages. It enables us to think about race in tech economies as both ubiquitous and productive; it can be used to develop tech products for racial categories and respond as these categories change (Chun 2009; Benjamin 2016). Race-as-algorithm also captures the productivity of race from the vantage point of the organization of labor transnationally, which comes into being in geographically dispersed, flexible enclosures, producing changing landscapes of racialized labor (Deleuze 1992; Tsing 2009; Terranova 2004; Williams 1989).[5] Both senses of race's productivity—the value-added of diversity and the value of divided labor—extrude racism as a social problem to be distanced from the firm rather than eliminated.

Staying with the Casualness

Casual leans on a lack of volition, an act unplanned, with diminished culpability. Something casual falls to someone. Casual racism happens by happenstance. In tech economies, casual are the relaxed office dress code, open floor plans, and gaming areas ubiquitous across the industry. But, the casualness that Reshma, Sid, and Vinay discuss points toward the braided histories of race and casual labor. Much of this history is hidden in coding work, which treats this labor as a largely "mental" and neutral phenomenon,

divorced from both historical precedent and contemporary embodiment (Amrute 2016).

Most tech companies' promotional material suggests that they are neutral with regard to social problems, that they are overcoming the need for manual labor, and that they create equality in the long run (Wong 2017). This results in the advancement of a universal subject of avant-garde capitalism—the programmer—who is most often imagined to be middle or upper class, male, and white (Coleman 2014, 166). Centering on this type as a paradigmatic figure misreads the productivity of race as a category within technically driven economic systems (Benjamin 2016, 2019; Nelson 2016; Stoler 2018).

Staying with casualness opens a fissure in this presentation (cf. Haraway 2016). Reshma believes the casualness might come from school-age habits, the defacement a sign of ennui and frustration. Sid finds in the scribblings the kind of unconscious racism that bubbles forth when tech workers are left to fill time in the office between work projects.[6] Moving away from certain judgment of these graffiti one way or the other, I suggest they mark two areas of concern that when focused together illuminate the multiple sides of race-as-algorithm. One concern is the meaning of race—marked by the bindi, body odor, and images of alien hordes as well as discussions of cultural difference (the latter three discussed below)—and anti-Indian racism in an office. The other concern is the disquiet felt by programmers from India who may indistinctly protest their slots in the office and the boredom that these roles imply. Linking casual racism to casual labor, I demonstrate that race circulates as an iterative mechanism to sort and classify workers behind the scenes even while racism appears as an external factor for tech companies.

Producing Visa-dependent Asian Programmers as Replaceable through the Long History of Labor Casualization

The history of casual labor begins with seasonal migrations of agricultural laborers and with craft journeymen moving between urban centers. Legal statues designated such workers in metropolitan European and Spanish colonial cities as those with no right to employment as early as the seventeenth century (Smith 1886).[7] The rise of a truly global system of casual work however begins in the plantation economies of the British Empire across the eighteenth and nineteenth centuries.

In the interwoven narratives of the British Empire, the history of the casual worker as one without a right of employment converged with the extraction of labor from native populations. On sugar and tea plantations, in indigo fields and during opium harvests, casual labor increased in the factory and the field, and a colonial hierarchy of global labor helped organize it (Mintz 1985; Prakash 1990).

The "coolie" epitomized casual workers within colonial India and between India and the island plantation economies of the British Empire. The British Empire deployed contract laborers from Asia as replacements for plantation slave labor elsewhere in the Empire. As Lisa Lowe argues, finding these replacements was key to the 1834 abolition of slavery within the British Empire. Fear of slave insurrection and the desire to expand production in plantation crops such as sugar led colonial officials to turn to the port cities of Hong Kong, Calcutta, and Bombay for replacement workers (Lowe 2015, 23). Rather conveniently for the indenture system that would employ such workers on contract, these ports were full of impoverished rural migrants, who themselves had been starved by the conversion of land, in the case of India, to cash crops such as indigo and opium, and through the elimination of small landholdings.

Lowe describes the coolie as a figure marking a shift in imperial economics from mercantilism to liberalism, which coupled "the promotion of free circulation" of bodies and commodities with "the rule of law" (p. 132). This shift in political ideology found its echo in a corresponding shift in the mode of labor expropriation. The entire pattern of labor on Jamaica sugar plantations, for instance, shifted as planters' calculus on extracting value from labor changed. Over the decades after 1843, "new laborers . . . were employed more *casually*, or, rather, more commonly employed only when they were strictly needed" (Craton 1978, 289 [emphasis mine]). This pattern included craftsmen, who "tended to be laid off, not only in the off-season but in the dead periods of the week too" (Craton 1978, 290). The cheapening of free labor was accomplished by making work precarious, so that labor that was not formally owned would be paid only when the work was strictly needed, an early form of what we now call just-in-time labor, calculated down to the day, if not the hour. Within this new pattern of labor, race featured as a justification to employ indentured laborers from Indian and China on contract—that is, for limited periods of time. In combination with age and gender, indenture served to establish different wage scales for women's, men's, and children's work and residential segregation between Asian workers and both indigenous subjects and former slaves (Khan 2004; Jackson 2012; Reddock 2008). These tactics were part of the disciplining of

labor across the British Empire, from Jamaica to Assam (Chatterjee 1995; Daniel 2008; Tinker 1974).[8]

The United States also used "coolie" labor, especially from China, to build the transcontinental railroad. The depiction of such labor as free reversed course in the United States in the Chinese Exclusion Act of 1882, which argued contract workers were unfree because the contracts specified low wages and kept workers employed at these wages for seven or more years (Lowe 2015, 27). These legal developments continued to render such workers aliens, vulnerable to segregation, nativist violence, and the mobility "demands of capital" (Day 2016, 34).

A carcanet studded with cultural fantasies encircled these workers, including that they were clannish and hardworking, docile and inscrutable, family-minded and hierarchical. The official policy of indentured labor within the British Empire ended in 1917. After World War II, a new kind of casual worker was created out of the reconstruction programs for major German cities: the German guest worker program.

The guest worker program, formulated in the 1950s as part of Germany's *Wirtschaftswunder*, was also carefully designed to limit the immigration of workers to low-skilled laborers who would be highly mobile, flexible, and above all, temporary (Herbert and Hunn 2000, 189).[9] The guest worker program should be seen as a major innovation in the global circulation of casual migrant labor that would later apply to highly skilled workers, like software engineers, through the H-1B visa program in the United States and the green card in Germany.

A Watershed in Casualizing Coding Work: The German Green Card

The United States H-1B visa program began in 1990. It was used to recruit professionals, especially in engineering, research and computer science, to work in US-based corporate offices for limited periods of time. Similar skills-based visa programs were instituted over the next decades in Canada and Australia, among other countries. In 2000, Germany debuted its own version of a temporary visa for IT labor called the German green card. This measure drew on both the H-1B visa program and the German guest worker program of the 1950s to 1970s.

Debates over the German green card offer a window onto how racial typologies developed as immigration polices intersected with the growing dominance of software economies across the globe. In a widely publicized report, the ruling Social Democratic Party of Germany (SPD) and Green

party government sought to overhaul German immigration policy. The government proposed a temporary visa program for high tech labor, arguing that in an era when "the qualifications and knowledge of people are decisive [economic] growth factors," Germany would grow in the future through "the international exchange of information [and] together with people from diverse backgrounds" (Süssmuth 2001, 1). In subsequent battles over the measure, Indian IT workers emerged as good migrants—those with tolerable diverse background—against supposedly problematic Turkish guest workers and their Turkish-German children.

These terms echo ambitions of late-liberal empire, where economic dominance interweaves with carefully managed multiculturalism—another evolution on the idea, first circulated in the age of indenture, of the free circulation of commodities and people within the boundaries of a given rule of law (Povinelli 2002). Scholarship on Turkish guest workers, who came to Germany after World War II through state to state agreements to reconstruct the country's ruined cities, demonstrates that economically, politically, and linguistically, these immigrants and their children were excluded from German national belonging.[10] As elsewhere in Europe, the overt signs of their Muslim identity, such as headscarves, construed Turkish Muslim culture as patriarchal and unchanging (Partridge 2012; Yildiz 2011). German democratic norms derived their force in part through opposing these putative Muslim cultural identities (Ewing 2008). As evidence of the German state's failure to integrate the children of guest workers, politicians, scholars, and activists named some Turkish German social groups parallel societies: separate social, economic, and cultural minority circles that do not interact with majority populations (Belwe 2006; Coury 2013; Kortewg and Triadafilopoulos 2015). The term parallel society was most often used to describe Muslim populations in Germany, who especially after the rise of Al-Qaeda and the Islamic State of Iraq and al-Sham (ISIS), became newly subject to public fears of terror cells and cultural separation that threaten the secular identity of Europe.

The Indian IT worker was described as a good migrant against the specter of this parallel society. A good migrant, in the twenty-first century, is educated. She is also not a Muslim. She is docile, especially when it comes to a willingness to be moved to where the work is needed and the visa laws permissive. The Indian IT worker appeared tolerable to the degree to which she seemed non-Muslim, technically capable, and casual. As one Indo-German commentator wrote of the green card program, "many [Germans] were suddenly convinced that Indians had a genetic predisposition for abstraction, a feel for numbers, and a very high readiness to learn"

(Yogeshwar 2010, 4). At one level such debates—also prevalent in the United States as a contrast between good migrants and bad (read Mexican, Muslim)—play out within the terms of nationality and citizenship. At another, they operate within a global division of labor in which nonwhite, white-collar migrants are made acceptable within a workforce because they are racialized in opposition to "problematic" others. These maneuvers configure racialization as a necessary component worker migration in tech economies.

In order to function in the background, race-as-algorithm also needs to set limits on the location and degree of its operation. In setting these limits, we might identify a specific aspect of tech economies that surpasses some aspects of racialized labor in global factories more generally. In studies of racialized labor in global factories, workers' nimble fingers and propensity to work make them seemingly more suited for electronics manufacture or for assembly line work (Ong 2010; Salzinger 2003). Similar logics are at play in software worlds, where Asian coders are said to be more suited to grunt work because they are more mathematically minded, enjoy rote jobs, and come from overpopulated regions where fierce competition makes them naturally hard workers. These are all explanations I heard for the kinds of jobs and the type of work coders from India and China are given when I was interviewing managers in Berlin.

On the other hand, in corporate tech offices, diversity initiatives recognize race as value-added to a firm, since a diverse workforce is widely considered necessary to creative productivity, a point often elaborated by tech managers during fieldwork in Seattle. In tech firms, it is widely believed that diverse workforces embody the knowledge about different populations and places that can lead to innovation and new markets. The result is a divided discourse that at once allows race as a technology to proliferate but also sets acceptable limits to the kind of racial logics that can circulate, at least within the boundaries of the firm. That is, while race as marking productive diversity is encouraged and race as a marker of casualized labor accepted, overt racism is deemed both unacceptable and a problem that exists only outside the workplace.

Race as Marking Productive Diversity: Monetizing Culture

Overt race-talk lands out of bounds in most firms. In the office, questions German and American managers asked programmers from India

addressed ethical stances, sartorial habits, and religious practices rather than the explicit bodily markers of race, like skin color, or an underlying theory of racial difference, like genetic predilection. In a series of encounters, migrant tech workers I met in Germany were asked, for instance, why Indians use marigolds at weddings, why Indians always brought food from home to the office, and why they did not seem to care very much about the effects of a recent tsunami on their fellow-Indians. The questioners never considered their curiosity racist. Instead, managers, co-workers, and neighbors told me that such questions are a part of their "world-open" attitudes toward Indians and an example of their curiosity about others.

Interviewing, observing, and hanging out with green card holders from India and their European and American managers in Berlin tech offices in the mid-2000s revealed a pattern in the way difference was managed within and outside global corporate offices: Indian migrants were governed by broad notions of liberal German acceptance of unthreatening foreign identities *and* by a logic of culture as resource, where cultural difference could be treated as potential to be monetized. In my interviews with project managers in Germany, Indians were valued in part because they appeared to distill future earnings potential for the firm by virtue of simply being Indian (Amrute 2016).

One manager glossed this as the *etwas anders* [something different] that Indian programmers brought with them. Unspooling just what this "something" could be, the manager suggested that they would have insight about Indian markets and generate new products. He believed that he could ask them questions to develop a greater understanding of Indian consumers. Another manager felt that once some programmers were trained in Germany, they could go back to India and oversee a workforce there. He questioned them about India to hone their future potential to act as intermediaries between Europe and India, as managers of Indian workers. Ideologies of market development and worker control center race—here defined as the enactment of degrees of subordination—as a means of discerning the potential embodied by a diverse workforce (Wynter 2003). A programmer I met during fieldwork in Berlin demonstrated the effect of this mobilization of race on workers, as she learned to toggle between her on-paper job and her secondary job of providing these moments of potential development.

Rajeshwari showed me how her working practice of putting on headphones to listen for dings of broken code had to be modified when she got to

Berlin. As a debugger, Rajeshwari spent her day reviewing lines of code using a program that displayed lines of code in different colors to make spotting mistakes easier. When she ran code on her compiler, the code would "ding" when it hit an error. Rajeshwari had now gotten into the habit of wearing her headphones over one ear only, keeping the other ear uncovered. She did this so that she could hear the questions her Anglo-European colleagues from Germany, Australia, and elsewhere directed toward her. She had been asked, for instance, why Indians worship monkeys, why the color red is auspicious, and what the name Lalita means. Rajeshwari felt she needed to have the answers, as much as she needed to know how to solve debugging problems. This pressure came from the explicit emphasis in corporate tech environments on developing new directions for the firm, a kind of speculative labor that is widespread in technology-backed firms across the globe (Amrute 2017; Irani 2019; Cooper 2008; Sundar Rajan 2006; Upadhya 2016).

These speculative uses of race in the office meant that temporary coders from India both did the grunt work on coding projects and provided the cultural resources for the further accumulation of personal and corporate value.

Expunging the Racist: Latent Variables

I use the idea of the latent variable in this section to illustrate another aspect of race operating algorithmically. In addition to race as a technology that creates particular populations as replaceable casual workers and race as a technology that produces diverse content that can be monetized for firms (by asking casualized workers to produce this content in everyday interactions), race operating algorithmically banishes overt racist content from firms even while leaving that content unaddressed as a feature of everyday life for tech workers.

One example of how race-as-algorithm both expunges racism from tech firms and leaves racist content untouched as a latent variable outside the industry comes from an employee message board for a Seattle firm. At many companies, employees can access message boards where they can begin and contribute to employee-led conversations. Employees can choose to post anonymously. These message boards function as a space to have conversations about payscales, workplace dynamics, and skill building. Most of these services can be used only by employees of the companies, but all permanent employees, from the CEO to a newly hired coder, can access these sites. On a weekday in the summer 2017, a coder showed me a

post on the site for a company with a branch office in Seattle. Someone with the handle TwoIfBySea posted a question about Indian co-workers.

> Topic: Why South Indian's Don't Groom Themselves Well?
> Can someone please help me understand why most of the South Indians don't care about their grooming, attire, and body odor?????
>
> How much does it take to put on a nice cologne or deodorant?????
> Why is there a lack of basic mannerism and etiquette????? Why?????
> . . .
> Please spare me the grief, I'm not a stereotype or a racist or a bigot . . . we have a great person doing that job already at Oval Office!!!!!
>
> BTW I've couple of very close friends who are South Indians . . . amazing guys and they always take great care of these things—so I think it can't be as hard for others . . .

This post was banned thirty minutes after it went up, and the alias was banished from this section and the writer designated a "shitposter," who only posts useless things. In the half hour that the post was up, it was seen seventy-three times, received no likes and four comments, two of which suggested the poster did indeed fit the stereotype of a racist and flagged the post for discrimination. Another response suggested that some people are not aware of their own body odor.

The speedy prohibition against this post suggested that many in tech companies draw the line at explicit denigration of a group's bodily habits. These fine-grained limitations on the uses of race construct openness to difference as the dominant trope of discourse in tech firms. Questions about dress and food exhibit the questioner's tolerance and policing posts on the message board establish overt racism as the harm to be repaired, without addressing the underlying labor devaluation that creates typologies of workers in the first place. Such discourse both establishes the moral authority of tech firms and some of their employees and hides the constructed inequalities among kinds of workers who work within these companies (Melamed 2006).

A further example makes even more explicit how demonstrating tolerance of racial differences forecloses questions of how labor is divided in IT industries. On learning that I studied race in tech economies, I was told a story by an architect visiting his wife at a Seattle start-up. On entering the office, the man was greeted by a woman in hijab, whom he believed "must be Pakistani." Seeing him, the woman told the man, "you have to meet

Mike, he looks exactly like you." So, the man followed the woman to the engineering deck. The man saw a room full of Indians and Chinese. Finally, he spotted Mike, a chubby redhead who did not resemble the man at all. For the storyteller, this incident portrayed, in his words, "a kind of cool racism directed towards me"—"kinda cool" because it was a person of color being "racist" toward a white guy, thinking all white guys looked alike. The architect carefully marks his own knowledge of the world—a woman in hijab must be Pakistani, presumably because in his mind Indians were Hindu, and Bangladeshis (well, who knows)? He also carefully notes the weirdness of the scene—the whole deck was full of Indians and Chinese. His being subject to a cool kind of racism, and his lack of offense at it, can then take center stage as proof of his multicultural credibility. On hearing this story, another American Anglo who works in the same company suggests that one simply cannot be racist and move up into management, because all the managers at a certain level are from India. Sharing these stories performs the diversity of tech offices even as the stories themselves provide cover for other kinds of discrimination—such as against black tech workers, Muslim janitors, short-term coders from India, and women engineers—that require such workers fit the behavioral norms of mostly white and largely male heteronormative tech culture (Forsythe 2002).

The appellation "shitposter" for the kinds of questions that began this section demonstrates how race-as-algorithm sets limits to appropriate uses of race in corporate workspaces. In tech workspaces, management can confidently assert there are limits to racism. There, race is important as a generator of speculative value. By masking corporate complicity in using the historically produced correlation between India and cheap, replaceable, and transnational labor—by treating this correlation as a latent factor unintentionally produced by hiring and sorting processes—diversity also produces plausible deniability for firms in perpetuating racist imaginaries about these workers. Chief officers can reaffirm a company's commitment to diversity in the face of assertions by their own employees that diversity is harmful to companies. In a recent case, the vice president (VP) of diversity, integrity, and governance at Google responded to a posting to an employee message board criticizing what the poster felt was a "leftist" and "authoritarian" ideology promoting misguided diversity programs, especially for women. Danielle Brown, the VP, responded in part by reaffirming Google's "unequivocal . . . belief that diversity and inclusion are critical to success." She also quoted another employee who suggested that inclusivity was core to Google, and the right thing to do. "Nuff said" (Emerson and Matsakis 2017). Such denunciations dismiss too quickly the hard work

required to undo discrimination and do little to confront racism as a systemic problem.

Celebrations of corporate diversity make race visible yet underplay how corporate racial diversity emerges from the "historical constitution of racial difference" (Rosa and Bonilla 2017). When Vinay quips that his company would simply place a sign next to the elevator explaining how not to graffiti, he captures exactly this critique—the underlying constitution of casual labor as a racialized labor force is submerged beneath corporate diversity bromides packaged as optimistic declaratives. Packaging race as a value-adding and cost-saving device leaks into overt discourses blaming Indian workers for US-based job losses. In spaces adjacent to such corporate offices, race-as-algorithm yields virulent racist discourse.

Programmers' Nativism: the Long Tail Whiplash

On a website[11] that collects comments from articles on H-1B visa reform from around the web, the topics turn the previous discourse on valuing Asian labor on its head. Examining these stories demonstrates how histories of racialized labor mobilized in tech industries can move beyond the idiom of tolerance to that of resentment. One representative comment on this website inclines toward this abject logic:

> if only they could PEEK inside the gargantuan offices of Freddie Mac, Fannie Mae, Capital One, DOJ, USCIS, SED, Bureau of Labor Statistics (BLS), Amtrak, EPA, DHS, NIMH, CMS and countless health agencies . . . the very federal govt. they are protesting is REEKING with Indians on visas . . . filled to the brim.

And another post implicates companies that hire them:

> In the late nineties, very few Indians. In 2010, nearly all the offices have some Indian or Middle Eastern names on the office nameplates. They are everywhere. American citizens become temps. . . . Anyone who supports H-1B and L1 visas abuse are anti-Americans on the American land. . . . American corporations with their armies of fork tongue lawyers are anti-Americans. THIS IS WHAT 8 YEARS OF OBAMA DID TO THIS MARVELOUS COUNTRY. And, it will take Trump and others more than twice as long to undo . . . sobering thought

These posts gather steam in political movements dedicated to fighting the H-1B visa program. One such effort describes its reasoning as follows:

> Nonimmigrant Guest Workers are Hunting American jobs using legally obtained visas like the H-1B and when they find them, this creates a Displaced American in this finite job market that has been created via Free Trade Agreements which send jobs to other countries. This one two punch is destroying the middle class in American [sic] by (a) sending jobs to other countries and (b) importing nonimmigrant guest workers to take the remaining jobs leaving the Displaced American worker with no way to provide for their families.

An e-mail conversation I held with the organizers of this group over two days addressed the purpose of the group and the group's relationship to labor and migration. The organizer works as a programmer in a medium-sized telecoms firm in California. He describes how he joined the group when he was in his thirties because it was a good way to be in contact with other programmers. At the time, programming cultures in the United States were largely white and largely male (Forsythe 2002). The group began as a way for other programmers to "share tips and job leads." But, according to the organizer, "in 2001, during massive tech layoffs, Congress increased H-1B from 65,000 to 2,225,000 per year." At that time, the members of the group "were harmed and demanded action on that issue." The penultimate question was, "do you ever worry that your positions might lead to violence against immigrants (as what happened to the Garmin worker in Kansas) or be taken up by figures of the extreme right (for instance by groups marking [sic] in Virginia this past weekend)? The organizer answered,

> the answer is no. If anything, it would be the H-1b program itself that has led to any violence—for example, as Americans are being walked out of their jobs so that H-1B can sit in their desks. I'm more concerned with the well-being of Americans. I am aware of many extreme hardships caused by H-1B and at least one suicide.

When asked for clarification on the issue, because it seemed like the organizer was saying American lives were more worth saving than immigrant lives, he separated the work he did from right-wing violence, writing, we "are clear in our effort to change the law, expose the largest

H-1B users (Indian consulting firms), and bring lawsuits as we find violations of the law, regulation, or the rights of US workers. We have never advocated any violence or even disrespect against H-1B workers themselves." The organizer added, "if CNN published an article about the extent of Americans that are displaced and loose [sic] their homes due to H-1B, and violence resulted, would you blame CNN for inciting violence?"

This organization separates law from person. But, in less precise formulations, these workers are vilified as foreign job stealers, dirty, and backward. A video filmed by a person who described himself as a programmer in Ohio targeted Indians taking American jobs. The video presents Indian tech workers—referring to the IT layoffs in the area and the Indian workers who replaced them—as takeover multitudes ruining American small towns and putting "American" programmers out of work. It circulated in several newspapers and on WhatsApp soon after an Indian citizen who worked for Garmin was shot in Kansas in 2017. The videographer followed around people as they play in the park, the voice-over commenting on how the park had been taken over by Indians. In the twenty-three-page document that accompanied the video, the author captioned stills of these park visitors, and their cars, all shot from behind. The first caption read, in bold, capital letters,

> Ohio Rich Ass Suburban Park is Occupied by Rich Ass Indians With Various Green $$$ (H-1B L-1 H-4) Visas. A $60,000 Porsche SUV and a Big Ass $$$ BMW were sited at the Indian Park Cricket Match. It is Called Occupy and Displacement. What Happened to the People Who Used to Live There? They Lost their Jobs to People From Foreign Countries. How and Why? The Political And Economic Elites of the Ohio Business Establishment Made IT Happen For Their Own $$$ Interests. They are Nodding in Happiness at the Local Country Clubs.

The author narrates his trip through the park.

> [I] was on the ground, IPhone camera in hand; recording images and videos that tells [sic] a story that a photo can tell in which [sic] thousands of words could not explain. I was stunned over the numbers of Indians that overwhelmed this park. The adjacent Little League Park was empty. What was once a park for the community has been taken over by the guest workers now turned VISA holders in possession of many $$$, I know of the IT layoffs in the area over the years and have observed the Indian [sic?] moving into the neighborhood slowly over the years, but this year was different.

Captions in the document use terms like hell hole, bringing the neighborhood down to a lower caste, refer to the H4 Mommies who will take your jobs, complain that cricket has replaced baseball, talk of the "on slaught" [sic] and the transfer of wealth, refer to the traditional Indian garment "sara" [sic] and the starving Indians back home, and talk about the lovely matrons gathering to chit chat about all the money they make and how to spend it. The rhetoric is hateful and sexist. Newspapers that featured the video suggested that such material fueled hate crimes like the Kansas shooting.

In algorithmic searches, results are ordered in a rank of what is considered the most to the least likely result to meet the question asked. The algorithm behind a search determines what goes into this ranking, while ranking can be influenced by the number of other links to a result; the result's popularity; and money paid by advertisers to have their results appear higher up in the rankings. Crucially, there is a "long tail" of results that trail behind the most likely ones. These long tail results persist because they might contain the result wanted by a particular searcher. Algorithms must "learn to rank" according to widely shared preferences to meet these needs (Finn 2017).

I use the idea of the long tail of racist thought in this section to illustrate how binding together casual labor and casual racism within firms while simply banning through imperative statements overt forms of racism leaves a proliferating and ever-changing set of associations—the long tail—between the race of H-1B workers and white displacement. These screeds displace onto the Indian coder the abstraction of capitalism itself (Day 2016, 171). They seem to embody a runaway capitalism in which they play the part of "toiling automatons" who grow rich by displacing white middle-class lives from white middle-class neighborhoods (Comaroff and Comaroff 2002, 793). The Indian H-1B worker, like a capitalist zombie, distills the threat of replacement.[12] The mentions of reproduction (H4 Mommies), money (all the dollar signs), and an onslaught of foreigners dehumanizes these workers, turning them from individuals with rights and free will into undifferentiated masses that might justifiably be eliminated. By evoking the single family home and the park as white middle-class suburban spaces, the video elevates the rights of real, human white workers to the spoils of the very capitalism these workers decry, when it comes in the form of Asian labor (Palumbo-Liu 1999; Day 2016; Postone 1986).

Race-as-algorithm

Race-as-algorithm operates on top of underlying racial categories developed in the developed in the nineteenth century. As such, race operating

algorithmically produces three particular transformations of race this essay witnesses. Allow more unseemly manifestations of racialized Asians to proliferate and produce tech economies as neutral. As a sorting and classifying mechanism, an algorithm can be adapted according to the kind of feedback it generates. This means that, as firms evolve to be more accepting of diversity as a corporate value, race as a technology adapts to value certain manifestations of race in the firm—those that support cultural diversity together with those that create differently valued labor pools. While race operating algorithmically values racial difference as a marker of valuable creative difference within tech firms, it also demarcates casual workers as Asian, recapitulating nineteenth-century fantasies of the Asian worker as buffer. Those denaturalizations of race that might question the very category of casual labor for the continued proliferation of racist sentiment remain latent within this schema (cf. Coleman 2009).

The Asian casual worker is the nonindigenous, foreign and insular laborer who accepts with barely a murmur the shifting landscape of pay, priorities, and specifications produced by the tech industry. And surely, the Asian worker is described as the perfect buffer. Srinivas Kuchibhotla, the Garmin employee shot dead in Kansas, was described by his boss as an, "almost perfect employee . . . a great engineer, technically very, very good. . . . quiet and very, very friendly" (Burch 2017).

Very, very, very, very. These verys meant to protect such workers from harm, which of course, they cannot do. The verys can never extend far enough to create a permanent mark of separation between the good and bad migrant, brown person, Muslim, and so on. Idioms of race proliferate because of the "long tail" and latent racial deployments that preserve even the most offensive sentiments. At the same time, idioms of race also mark off the "casual" from the permanent worker. The verys instead redirect attention back toward the migrant to make herself good enough to warrant protection. The verys then deflect attention away from the industries that rely on casual laborers set apart from permanent employees.

The sorting functions of race-as-algorithm, running behind the platforms, make the gaps in corporate hiring, retention, and payment appear "social" rather than "technical," existing outside the office and a problem that society at large has to solve (Suchman 1995). At the same time, the sorting of race in tech knits the industry together across nations by creating the human-technical units it needs to function, from labor force, to clients, to markets. This sorting sometimes constructs Asian labor as a reservoir of untapped potential. But, it just as equally can construct such labor as out of place and without rights (Door 2017). Indians can use a similar sort,

Figure 1. An image of a rogue advertisement following the Google diversity statement, comparing the supposed creativity of Steve Jobs with the supposed lack of creativity of Google's Sundar Pichai. The racial imaginary of casual back office labor is on display here at a different register. Photo credit: Jefferson Graham.

deploying rural and urban, regional and religious, as well as caste divides, to domineer over other members of the global Indian polity (Glenn 1992; Upadhya 2016).

In an earlier moment, race as technology was a classificatory lens ground on natural science and biology, which were both grounded in human essences and flexible categorizations. But, race as algorithmic technology is instead grounded in futures, in predicted fitness for a task, a match, and a correlation. By looking at ethnographic encounters around race inside and outside the office, we can see the politics behind treating racism as an unintentional, latent, casual outcome. Figure 1 illustrates these ethnographic encounters. These politics continue to allow the tech industry to rely on and produce worker racialization as a means of producing a casual labor force globally.

Conclusion: Techies, Bored and Casual, But Racist?

The casual racist and the casual laborer evade a direct connection. Sid's comment would be a thin filament on which to hang a causal argument. He drafts a jagged history, where subterranean stories arise and colonial labor migration emits its twenty-first-century half-life. The casual laborer is a

non-native migrant outsider (Munshi 2016). She bears the markings of casualization through her epidermis, her dress, her smell, and her badges, her passport, and her papers. The casualness—in the sense of irregular and fleeting—of the racism found in Sid's photos abets tech industry neutrality by externalizing "true" racism. Vinay's sarcastic taunt that the company would hang another poster next to the elevator bank with the graffitied poster affirms the industry's commitment to its own neutrality. The company cannot admit that it might have a problem with racism. Instead, it turns to processes to direct its employees to not display their racism. Casualness reduces culpability.[13]

Vinay identifies what I have been describing as an algorithmic operation in his description of that process. The idea that inappropriate graffiti would be solved with a directive about how not to graffiti reveals the logic of race-as-algorithm. Confronting racism directly is not of concern; the concern is to reduce its public expression in highly traveled public and quasi-public spaces, like elevators and message boards.[14]

Identifying race-as-algorithm places the corporation and a larger social fabric in the same frame (Aneesh 2015; Hayles 2006). This is a necessary step, given corporations' predilection to claim neutrality for their processes. Not to do so would be to allow some industries' uses of race operating algorithmically—for the sake of creating labor pools and a reservoir of developable cultural knowledge—to be alibied out of the story of anti-immigrant, nativist sentiments.

Coda: Defacement as a Ghostly Presence

Graffiti appears on an elevator poster. Someone takes a picture. The anthropologist is sent the photo, and a discussion begins. Are these the scribblings of a racist? Or, are they the doodles of a frustrated programmer? These two interpretations understand the graffiti's intent differently. A bored techie is being casually racist. A casual worker is bored by the kind of labor she is being asked to perform. If we could track down the doodler, we might discover which one she is. Then, we could tell her that racist vandalism has no place in the corporate workplace. We might escalate the case to Human Resources, the racist might be fired. If she were instead a bored casual worker, we could caution her about the risks she runs as a programmer on a work-dependent visas by doodling on official posters, offer her counseling, try to make her superiors see her capacities, and give her different projects to work on, even as we recognize the doodling as a small form of resistance against the corporate racial order.

We will not find the scribbler. Vinay, Reshma, and Sid all declined to report the incident to Human Resources. Here, we can recognize Sid, Reshma, and Vinay's complicity in the continued functioning of race-as-algorithm. We should also recognize their sophisticated reading of the firm that employs them.

The defacer shows us how race as a technology deploys in tech firms. The scribbler also makes known that the separation of workers emerges from the mostly hidden historical figure of the casual worker. The casual worker does so much work for corporate tech firms. In 2015, casual workers in technology industries was "at least a billion dollar industry employing tens of thousands of people in Washington" state (Day 2015). In graffiti, the long history of the racialization of casual work roams about and invites us to think about race within the fame of its relationship to technical labor.

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Notes

1. Strict usage agreements and the desire to protect anonymity prevent me from sharing these images publicly.
2. These numbers are compiled from https://www.uscis.gov/working-united-states/temporary-workers/h-1b-specialty-occupations-dod-cooperative-research-and-development-project-workers-and-fashion-models; https://www.uscis.gov/sites/default/files/USCIS/Resources/Reports%20and%20Studies/Immigratio

n%20Forms%20Data/BAHA/non-immigrant-worker-rfe-h-1b-quarterly-data-fy2015-fy2019-q1.pdf; https://immi.homeaffairs.gov.au/visas/working-in-australia/skillselect/invitation-rounds; https://www.gov.uk/government/publications/immigration-statistics-october-to-december-2017/summary-of-latest-statistics; and https://www.canada.ca/en/immigration-refugees-citizenship/corporate/publications-manuals/annual-report-parliament-immigration-2018/report.html

Additionally, three of five H-1B visa holders in the United States are Indian citizens, and since 2018 (which is a drop from previous years) 75 percent, of H-1B visas are granted to employees of tech companies.

3. Bonded labor is a practice by which workers must work for an employer to repay a debt incurred by themselves or by family members. In this case, the bond is weaker—H-1B workers are of course free to leave their employers, but they would lose rights to residency and their spot in line for permanent residency if they do.
4. Although my focus is on the contemporary manifestation of race and labor among software engineers, I note in the graffiti an untold story of casual workers that can no doubt be found in the historically gendered and devalued corners of corporate tech worlds more generally (Hicks 2016; Irani 2015; Roberts 2016).
5. There is a robust literature on the power of algorithms within engineering worlds and for users. While this literature is extremely useful in pulling out the assumptions built into algorithmic networks from the perspective of the software engineers who design them, they tend to be both too narrowly focused and too broadly: too narrowly because they for the most part do not think through how algorithmic thinking extends and transforms modes of organizing human diversity, and too broadly because they tend to assume a universal "user" of platforms and algorithms that who can represent all possible relationships between these technologies and their human customers (Beer 2009; Mager 2012)
6. In Sid's interpretation, the bindi marks a kind of absolute difference that may also draw on tropes of effeminate Eastern men. In Reshma's interpretation, the bindi emerges from the unconscious doodles of Indian programming boredom and may equally contain a sexist overtone.
7. For a history of the casual worker in Europe, see Braudel (1992) and Sassen (2000). For the early history of indenture in the 1600s in Virginia, see Galenson (1984), who makes the point that this form of indenture would end when a servant's debt was paid and that slaves increasingly replaced debt bondage because slaves were cheaper and because Europeans shunned toilsome labor in tobacco, rice, and cotton fields.

8. Contract and casual work in factories and on plantations was underwritten by both networks of recruitment that relied on kinship and village hierarchies and by racialized assumptions about kinds of workers and their suitability for types of work. Piya Chatterjee's studies of colonial tea plantations in Assam, for instance, unearths tea planters' charts that assign different pay rates for recruiting "pure aboriginies" who were believed to be the hardiest workers, down to "North West Province Coolies Suitable for Healthy Gardens in the Surma Valley" (Chatterjee 1995, 50). Factories that then transformed raw plantation materials into finished commodities similarly relied on casual workers who would wait at the mill gates hoping to be picked for a day's work (Chandavarkar 2008). The mill owners found such a system of casual work and "outsourced" control advantageous enough to their profits that they fought attempts to "decasualize" these industries over decades, with the Bombay Mills, for instance, reformed only in mid-1949 (Morris 1965, 141).
9. The guest worker program drew on the tradition of casual agricultural labor that had continued in German speaking counties from the 1700s through the Weimar Republic.
10. Germany's blood based (jus sanguinis) citizenship regulations meant that children born in Germany to Turkish parents remained Turkish citizens. The citizenship law was amended in 2000 to guarantee people born in Germany the right to citizenship, which they could claim when they reached the age of eighteen by choosing between German citizenship and their parents' nationality. Germany's failure to institute German-language programs meant that these immigrants had little opportunity to hone their language skills, another marker of belonging. Today, guest workers from Turkey and their German-Turkish children often function as an underclass in Germany (Ewing 2008; Silverstein 2005).
11. I purposely omit the web addresses and names of the websites and organizations in this section so as not to amplify their online circulation.
12. Indian citizens are now the largest takers of H-1B visas, according to the Migration Policy Institute (Zong and Batalova 2017).
13. The Google leak case is unique because the document was not a casual remark, note, or graffito, but a manifesto. It therefore had an agent and an author, and the author was held culpable (fired).
14. My argument should not be misconstrued as suggesting that there is no difference among these scenes of race operating algorithmically. Particular places at particular times are more or less welcoming of immigrants. Immigrants calculate repeatedly where to try, what visa to apply for, what route to take to get there, and whether to stay, even if they may have little say about where they land and how long they have once there.

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