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### “One part politics, one part technology, one part history”

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## **“One part politics, one part technology, one part history”: Racial Representation in the Unicode 7.0 Emoji Set**

Emoji are miniature pictographs that have taken over text messages, emails, and Tweets worldwide. Although the contemporary emoji represent a variety of races, genders, and sexual orientations, the original emoji set came under fire for its racial homogeneity: minus two 'ethnic' characters, the people emoji featured in Unicode 7.0 were represented as white. This paper investigates the set of circumstances that gave rise to this state of affairs, and explores the implications for users of color whose full participation in the emoji phenomenon is constrained by their exclusion. This article argues that the lack of racial representation within the emoji set is the result of colorblind racism as evidenced through two related factors: aversion to, and avoidance of, the politics of technical systems, and a refusal to recognize that the racial homogeneity of the original emoji set was problematic in the first place.

The communicative possibilities and cultural relevance of emoji have become well-established over the past decade, both within digital and mobile media and beyond it. Emoji have been conceptualized as a language (Danesi, 2016), used as legal evidence (Lee, 2019), become the subject of Hollywood films (Leonidis, 2017), become part of major museum collections (Galloway, 2016; Lee, 2018), and been incorporated into the Library of Congress (Allen, 2013). Emoji, which means “picture message”<sup>1</sup> in Japanese, were originally developed by Shigetaka Kurita for Japanese telecom NTT DoCoMo in 1999 (Galloway, 2016). Initially constrained to Japanese mobile phone operating systems, the Unicode Consortium agreed in 2008 to encode emoji within the Unicode standard, and emoji became available on iOS and Android in 2011.<sup>2</sup> As the popularity and sociocultural significance of emoji have grown, the number of pictograms themselves have expanded; each year, the Unicode Consortium adds to an increasingly wide range of foods, animals, sports, professions, objects, flags, facial gestures, human features, and genders. Behind the scenes of this expansion, however, is a more complicated story which reveals a less tolerant history.

Beginning in 2013, the Unicode Consortium—the U.S. based, international standards body responsible for the encoding and maintenance of emoji—came under fire for the racial homogeneity of the original emoji set: minus two “ethnic” characters, the people emoji in Unicode 7.0 were entirely light-skinned in a way that read as white.<sup>3</sup> This lack of equitable representation understandably upset users whose full participation in the emoji phenomenon was constrained by their exclusion (e.g., Cheney-White, 2014). A 2013 petition imploring Apple to expand the racial composition of the emoji set succinctly summarized these concerns:

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<sup>1</sup> e = picture; mo = writing; ji = character.

<sup>2</sup> For a more detailed timeline of how emoji were incorporated into the Unicode standard, see Berard, 2018.

<sup>3</sup> Citing Etherington (2015), Sweeney and Whaley point out that “the representation of homogenous and light-skinned emoji human characters developed out of a culturally specific Japanese context, likely in ways that encode identity and status in Japanese culture. Yet, American users overwhelmingly ‘read’ these same characters as default white and phenotypically Caucasian, rather than as Japanese” (2019, p. 2).

If you look at Apple's emoji keyboard, what do you see? Two different camels. A smiling turd. EVERY PHASE OF THE MOON. But of the more than 800 emojis, the only two resembling people of color are a guy who looks vaguely Asian and another in a turban. (Chaey, 2013).

The Unicode Consortium recognized that “the choice of emoji to be represented in Unicode has left many people confused or disappointed” (Davis and Edberg, 2014) and responded by encoding variation selectors for emoji skin tones in their Unicode 8.0 standard that was released in 2015. However, the fact that the original emoji set was released with an almost exclusively light-skinned character set points to a series of deep-seated and interrelated issues regarding race and technology; in particular, issues of race and racism in the construction of technological systems, the representation of racial categories within digital technologies, and the impact that the former has on the latter.

This article draws on what Ruha Benjamin (2019) calls “race critical code studies” to unearth and examine some of the power dynamics that circulated within the decision-making processes at the Unicode Consortium during the encoding process for the original emoji set. Through a combination of close-readings of official Unicode Consortium documentation, analysis of emails from public and members-only Unicode Consortium distribution lists, and an interview with a high-ranking Consortium member, this study investigates and analyzes the assumptions, processes, and decisions that resulted in the racialized configuration of the Unicode 7.0 emoji set. In doing so, it offers a case study of “how race and racism impact who has access to new devices as well as how technologies are produced in the first place” (Benjamin, 2019, p. 3)

As many have argued over the past several decades, (e.g., Winner, 1980; Gillespie, 2010; Noble, 2017), computers and other technological systems are not neutral or objective; as human-designed artifacts, they necessarily reflect the standpoints of their creators and are consequently (and inevitably) imbued with politics. As the case of the original Unicode emoji set shows, however, a desire among technology creators to avoid these politics often results in the (re)entrenchment of inequalities and biases. Benjamin argues that racist and otherwise biased technologies are often not the result of “racist programmers scheming in the dark corners of the web” but rather out of a desire for objectivity and efficiency, among other things (2019, p. 7). Indeed, this investigation illustrates the racial composition of the original emoji set was ultimately shaped by an institutionalized form of colorblind racism which insists that concerns regarding racial representation and identity are irrelevant to “neutral” technical systems and workplaces.

### **Race and/as Technology**

It is widely accepted amongst historians of technology and critical race scholars that the relationship between race and technology is deeply imbricated and even co-constitutive: not only are race and technology mutually shaping, but race is also a technology in and of itself. Wendy Chun argues that examining “race and/as technology” offers a way of seeing race not only as an object of representation and portrayal, of knowledge or truth, but also a technique that one uses, even as one is used by it—a carefully crafted, historically inflected system of tools, mediation or enframing that builds history and identity. (2009, p.7)

In other words, thinking about race and/as technology allows for the examination of multiple intersections between race and technology: how racial difference is constructed by and through

technology, how perceptions of technological expertise and skill are connected to racial identity, and how race operates within the environments where technologies are produced.

Sinclair (2004) explains that technology has always been—and continues to be—crucial when it comes to the formation of racial identity in the United States. Technological ingenuity and prowess have been central to the construction of whiteness throughout American history, and the consistent portrayal of marginalized racial groups as technologically incompetent, incapable, or otherwise lacking in expertise has been used as a strategy to assert the ‘natural’ superiority of dominant groups and maintain racial difference (e.g., Sinclair, 2004; Abbate, 2012). As Fouché argues, “the racial politics of difference and inferiority that allow one group to enslave or subjugate another manifest themselves within historical and contemporary discussions of technology creations and use” (2013, pp. 61-62). In this way, race is “an epistemology at play in all technological production and consumption” (de la Peña, 2010, p. 923).

Dinerstein (2006) argues that the concept of technology that circulates within American culture operates as a “white mythology” where whiteness is often sidestepped, despite the fact that technologies themselves are directly implicated in the construction of racial difference. As Dyer’s historical research on photography and cinema illustrates, technologies often “assume, privilege, and construct the idea of the white person” (1997, p. 54) because they are created with whiteness as an assumed default; Browne’s (2015) investigation of contemporary biometric and surveillance technologies suggests that this centering of whiteness persists in our current moment. However, despite the fact that digital technologies reinforce “long-standing American racial practices” (Brock, 2012, p. X), the insistence that race is immaterial within digital contexts is a long-standing trope within sociotechnical discourses.

Early scholarship about “cyberspace” operated from the position that in “virtual” space, bodies (specifically, raced and gendered bodies) were irrelevant, and that as such, the internet was “colorblind” (e.g., Jenkins, 2002). However, as Nakamura points out, the policy rhetoric around internet participation and access may be “inflected strongly with the neoliberal discourse of color blindness and nondiscrimination” but digital environments are rife with “uses and users who unevenly visualize race” (p. 5). Indeed, as both Matamoros-Fernández (2018) and Benjamin (2019) illustrate, both the affordances and material politics of digital platforms regularly foment the circulation of racial inequalities. Benjamin further argues that not only are inequities encoded into technical systems, but that through tech designers’ claims that “the racist results of their designs are entirely exterior to the coding process”, racism “becomes doubled—magnified and buried under layers of digital denial” (2019, p. 11).

The “digital denial” that Benjamin refers to is often perpetuated through the logics of colorblind racism that pervade the workplace environments where these technologies are designed, created, and governed. Eduardo Bonilla-Silva defines colorblind racism as the attribution of contemporary racial inequalities to “non-racial dynamics”, such as “market fluctuations, naturally occurring phenomena”, and “the imputed cultural limitations” of non-white groups (2014, p. 2). By rearticulating aspects of traditional liberalism such as work ethic, meritocracy, equal opportunity, and so on, Bonilla Silva argues that color-blind racism operates as “ideological armor for a covert and institutionalized system in the post–civil rights era” that “aids in the maintenance of white privilege without fanfare, without naming those who it subjects and those who it rewards” (ibid., pp. 3-4). As the work of Amy Slaton (2010) illustrates, engineering and other highly technical fields are deeply invested in the idea of scientific work as a colorblind meritocracy. From this perspective, Slaton explains, “technology by and large remains a category of cultural activity

that is supposedly raceless, undertaken in the classroom, laboratory, or workplace without regard to social matters such as practitioner identity or occupational equity” (p. ix). Of course, this insistence upon technological practice as “raceless” is often responsible for the reproduction of “inequitable ideologies” within these disciplines (p. viii).

Despite a deep cultural investment in computational systems as “neutral observers” whose output is “unimpeachable fact” (Gregg and Wilson, 2015), the fact remains that computational systems reflect the worldviews of their creators. Grint and Woolgar (1997) established that technology companies have an imagined user in mind when they design their products; the identity of this imagined user isn’t stable, and is defined and shaped by a variety of actors, including hardware engineers, product engineers, project managers, marketing executives, and even legal personnel. In negotiations over who the user is or “what the user is like” (p. 74), Grint and Woolgar demonstrate how the assumptions of system creators are reflected in product design. As D. Fox Harrell (2010) argues, a great deal is at stake in this process: if those responsible for creating technologies and bringing them to market don’t expand upon “everyday models of identity”, the result could be prejudicial or inequitable systems and applications. Unfortunately, this awareness and consideration is rarely part of the process:

The reliance of computer scientists on intuitive understandings of identity, rather than nuanced theories that view identity as enacted, infrastructural, and imaginative, has resulted in software that at best ignores opportunities for empowerment, and at worst results in perpetuating longstanding social ills of discrimination and disenfranchisement. (Harrell, 2010, n.d.).

Indeed, as Browne (2015), Chun (2018), Whittaker et. al (2018) have recently shown, discrimination and disenfranchisement have become hardwired into myriad computational



systems—ranging from credit systems to airport security— in ways that reflect the larger racist structures of the social context where they are used. As McPherson reminds us, “code and race are deeply intertwined, even as the structures of code work to disavow these very connections” (2013, p. 36).

## **Method**

This project investigated the various circumstances, processes, and decisions that resulted in the racially non-representative emoji set available in Unicode 7.0. Using archival materials, I reconstructed the decision-making process through a series of available documents. The Unicode Consortium hosts a digital document archive dating back to 1999. Through these public archives, I was able to retrieve all emails from 2007-2014 relating to the release of the original emoji set from the public Unicode list (n = 585), as well as all emoji-related documentation including technical reports, proposals, guidelines, and meeting minutes (n = 53). As a member of the Unicode Consortium, I also had access to the archives of the members-only “Unicore” email list; 331 emoji-related emails from this list were also included in the corpus. While the content of these emails cannot be conflated with the conversations that took place behind closed doors during official emoji-related meetings, they do reflect the opinions and perspectives of many of the people whom, per the minutes included in the corpus, took part in those meetings. Additionally, the official documentation in the Unicode Document Register does reflect the on-record positions of the Consortium; consequently, emails and official documentation were compared. In total, the corpus consisted of 969 documents.

In addition to the document corpus, a ranking member of the Consortium who was deeply involved with the emoji project (“David Johns”) agreed to be interviewed over video chat in

November 2014. The interview was recorded with consent and transcribed after the fact. Johns also reviewed an earlier draft of this article and acknowledged that it “presented a reasonably balanced view of the situation” (personal communication, 01/14/15).

This study aims to unearth and examine some of the power dynamics and racial discourses that circulated within the decision-making processes at the Unicode Consortium during the encoding process for the original emoji set. In order to do this, Foucauldian discourse analysis was used to examine the presence, power, and operation of certain types of ‘knowledge’ within the study corpus. McHoul and Grace (1993) argue that “Foucault's idea of discourse shows the historically specific relations between disciplines (defined as bodies of knowledge) and disciplinary practices (forms of social control and social possibility)” (p. 26). In examining what is said and not said— and/or what is considered to be true or false— within the study corpus, the ways in which entrenched technological discourses imprint themselves upon computational systems becomes (at least partially) clear. The entire corpus was coded and iteratively analyzed. While discourses about race were of particular interest given the research question, this study was also exploratory in nature; therefore, I took an inductive, data-driven approach in establishing the coding categories and overarching themes. Once themes were established, the corpus was re-coded; Finally, each theme was analyzed for connections to established discourses regarding race and/or technology.

For their protection, all participants were anonymized; all names referenced below are pseudonyms.

### **“We don’t NEED to racialize hundreds of characters”: Colorblind Racism in Action**

In her historical analysis of African-American participation in university engineering

departments during the latter half of the 20<sup>th</sup> century, Slaton (2010) found that despite the fact that engineering is “constituted of a profoundly raced set of activities”, discussing race in technical workplaces outside the context of diversity initiatives is widely considered to be inappropriate because technical workplaces are constructed as “places of profoundly cognitive labor where the very definition of rigor is felt to include the banishment of social concerns” (2010, p. x). Because race “doesn’t matter” in engineering, the logic of colorblindness prevents any frank discussion of institutionalized forms of racial inequity; raising these issues is often framed as “playing the race card”, demanding special treatment, or otherwise subverting the premise that technical work is neutral (ibid.). Writing about the use of racist analogies in technical literature (e.g., the master-slave metaphor<sup>4</sup>), Eglash argues that these kinds of analogies “are attractive to engineers because their free use ‘proves’ that they inhabit a nonsocial or culture-free realm, which is a matter of professional pride” (2007, p. 368). When it came to the initial encoding of emoji, the Unicode Consortium attempted to distance themselves from the “social concerns” raised by the issue of racial representation by framing a social and cultural issue as a technical one. While this may have been politically expedient, it did not address the problem at hand; the more the Consortium tried to avoid politics, the more political these decisions became.

The Unicode Consortium—and the individuals who comprise its membership and executive structure—are deeply embedded in a discourse that positions technology and computational systems as functional and “neutral”; from this perspective, computational systems aren’t inherently political, but rather have politics thrust inconveniently upon them by agitators who are unreasonably invested in “political correctness”. As such, the racial composition of the

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<sup>4</sup> In any computing system, the master hard drive (or disk) will set the computer in motion and the “slave” (or secondary) drive operates as an “auxiliary storage drive”; in other words, “the master drive is the one in command, and the slave drive is the one taking the orders” (Michael, n.d., paras 1-2).

Unicode 7.0 emoji set was not considered except with regard to potential controversy. This privileged position is closely connected to the fact that the decision-making power of the Unicode Consortium is largely held by white men employed by predominantly white organizations (e.g., Apple, Microsoft) in an industry where “diversity” is not taken into consideration until it is a “problem” on one or more levels (see Whittaker et. al, 2018).

### *“Universality” in the Unicode Standard*

As Streeter (2010) and Chan (2013) have established, computing and other forms of information and communication technologies have “universalizing ambitions” (Chan, 2013) that insist that “everyone” engages with computing—or has the potential to do so—in the same way (Streeter, 2010, p.12). This discourse of “universality” arose frequently in early discussions about encoding emoji and was deployed as an unassailable rationale as to why they belonged in the Standard. Most ranking members of the Unicode Consortium (particularly from the Executive and Technical Committees) looked at the encoding of emoji—a labor and time-intensive task—to be essential for interoperability reasons and “real-world engineering concerns”. This group viewed the Unicode Standard as a useful, functional entity with aims toward an ideal of “universality” as dictated by the needs of users. From this perspective, since emoji were in heavy use in East Asia and Unicode is an international standard, emoji should be encoded into the Unicode Standard. As Executive Committee member Scott Hill explained,

As [*redacted*] pointed out, one of the major attributes of Unicode is its universality. The standard *\*must\** interoperate with all significant representations of text. If it doesn't, then we have a major gap in its universality. And right now, the representation of the emoji SJIS extensions is a major gap in that universality that is causing real problems for Unicode Consortium members.

In our interview, David Johns positioned the adoption of emoji as a matter of pragmatism: if a

character was used or needed, it was included in the standard without judgment.

We in the Unicode Consortium tend to be very pragmatic, and if they are characters that people will use and that computers do need, those are our main criteria – we don't discount something because it's cute or not... There are some characters in the standard that are attested in three or four documents three hundred years ago—they've still gotten in. So, we try to be fairly... secular's not the right word—we look at them really from a pragmatic sense.

However, not all Unicode members agreed with this perspective; a great deal of conversation on the Unicode list in December 2008 revolved around whether emoji belonged in Unicode to begin with, and many felt that encoding pictograms would corrupt the “purity” of the Standard. “I can't believe that the Unicode Consortium is seriously considering encoding emoji ... how sad!” one member protested, while another called them “arbitrary, fashion-driven, ASCII-derived, impolitic, junky, obscene”. Yet another insisted that “creepy little icons<sup>5</sup> don't belong in a plain text encoding system” and expressed amazement “that someone has come up with an idea even dafter than encoding Klingon”.<sup>6</sup> Despite (or perhaps because of) their impassioned nature, the Executive and Technical committees overwhelmingly found these perspectives filled with “prior conviction” and “value judgments” about emoji to be “irrelevant”. As George Green argued:

The concern about the emoji characters is not driven by concerns for the language of [proposal] N3452, but based on value judgments about the entities. Otherwise, people would take a more dispassionate attitude.

For those who were primarily focused on the universality of the Standard, the qualitative value of emoji was of little interest. As Philip Swift of the Symbols committee stated, “Emojis are just a set of symbols proposed for encoding and have to be judged as just that. How they are used in various protocols/context is informative but not strictly relevant to this discussion.”

However, while treating emoji as “just a bunch of symbols” might make it easier to eschew

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<sup>5</sup> While doing a deep dive into the politics of cuteness is beyond the scope of this article, it is important to note that cuteness is gendered and raced in specific ways; as Ngai notes, cuteness is “marked as feminine or culturally and nationally other” (2005, p. 814).

<sup>6</sup> At various points in the past decade, several languages from popular fantasy series, including Star Trek (Klingon) and Lord of the Rings (Tengwar), have been the subject of proposals for encoding within the Unicode Standard.

their politics and history in theory, doing so in practice was far more difficult. While pragmatism may have been a guiding principle for some members of the Consortium, the reality of character encoding was slightly more complicated. As Scott Hill noted, character coding is “one part politics, one part technology, and one part history, with a few dashes of randomness and whimsy [*sic*] tossed in for seasoning”. Indeed, while the party line regarding encoding focused on universality and interoperability, concerns about representation and “controversial” characters did end up surfacing during the original emoji encoding process, ultimately illustrating that the “universality” that the Consortium so deeply desired was, perhaps, not so universal after all.

*“A very nice can of worms”: The (Attempted) Avoidance of Racial Politics*

Despite the fact that social issues were largely considered not to be within the purview of the Consortium, concerns about encoding specific racialized emoji were present from the outset of discussions about the inclusion of emoji within the standard. In December 2008, apprehension about the racial representation (or lack thereof) began to surface; in an email to the main Unicode list, George Green pointed out that the inclusion of “ethnic backgrounds” in the existing emoji set was notably unrepresentative and intimated that this could cause issues:

There is a symbol for "BLOND PERSON" -- but in Japanese this is a 西洋人 or 白人 -- in other words, a Westerner or Caucasian. And "MAN WITH LONG MOUSTACHE" is really a 中国人 -- a "Chinese Man". And "MAN WITH TURBAN" is really a インド人 - - a Hindu. OK, that's fine and dandy (Or is it?). If this stuff goes into Unicode, should we not also clamour for encoding symbols for EVERY major ethnic group? [...] Wouldn't it really be much more \*tactful\* if we had some symbols for people of other ethnic backgrounds as well? So there's a very nice can of worms for all Unicoders to consider right there.

Adding to the “can of worms” was the fact that certain characters were (justifiably) seen to traffic in racial stereotypes (See Fig. 1-3). Several Unicode members raised concerns about these emoji;

in one instance, the dark-skinned emoji with a turban (Fig. 1) was likened to a golliwog.<sup>7</sup> These issues were raised officially in the Emoji 4 Unicode forum, which was used to track comments and issues related to the encoding process.

This feedback is regarding e-1A4 "BLOND PERSON", e-1A5 "MAN WITH LONG MOUSTACHE", and e-1A6 "MAN WITH TURBAN". I feel obliged to point out that characters of this sort, dealing as they do in ethnic and racial stereotypes, are likely to be considered objectionable by many users—myself among them—at least in their current embodiments.<sup>8</sup> In this case, I think the committee's focus on graphic appearance rather than semantics for naming has proved unhelpful, because it is precisely elements of their current graphic appearance that make these objectionable, while at the same time the graphic names notably fail to convey the import of these characters. If the names were to be taken as straightforward translations from the Japanese, these characters would be called something like "WHITE PERSON", "CHINESE PERSON", and "INDIAN PERSON". Under descriptions of this sort, it might be easier to provide less-objectionable graphic representations.

[Image removed. Please see final published version.]

*Fig. 1-3 (L to R): Unicode 7.0 versions of Man with Turban, Man with Gua Pi Mao, Western Man*

However, despite Green's concerns about being more "tactful" in regard to representation and the specific suggestion that Unicode alter the existing graphic representations of the "ethnic" emoji to be "less objectionable", the Consortium instead decided that the best way to address these concerns was to change the names of the glyphs in question instead.

Project Member #1 [redacted] December 22, 2008  
BLOND PERSON -> WESTERN PERSON  
MAN WITH LONG MOUSTACHE -> OLD CARICATURE OF CHINESE MAN?  
MAN WITH TURBAN -> leave as is

Project Member #2 [redacted] December 22, 2008

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<sup>7</sup> The Golliwog is a character created by children's author Florence Kate Upton in the late 19<sup>th</sup> century. Golliwog rag dolls were popular in the early to mid 20<sup>th</sup> century, and are characterized by having black skin, frizzy hair, a large red mouth, and white-rimmed eyes; given their close resemblance to minstrel figures, they are now widely considered to be deeply racist (see Pilgrim, 2012).

<sup>8</sup> Freedman (2018) explains that many of the original emoji included in the Unicode standard required knowledge of Japanese culture to understand their original meanings, stating that "the inability to read universal meanings in emoji has given rise to secondary meanings in local contexts". While Freedman does not discuss the "Chinese" and "Indian" emoji, it is possible that these emoji refer to culturally specific characters that are unbeknownst to non-Japanese people; the poo emoji, for example, is a reference to the best-selling Kanji character guides for children that feature *Unko-sensei*, or Professor Poop (ibid.).

As discussed in the meeting, the other possibility for the MAN WITH LONG MOUSTACHE is MAN WITH CHINESE SKULLCAP

Project Member #7 [redacted] Jan 6, 2009

As suggested above, 2 changes were made:

BLOND PERSON -> WESTERN PERSON

MAN WITH LONG MOUSTACHE -> MAN WITH GUA PI MAO

Note that GUA PI MAO is 瓜皮帽, a name used in Simplified Chinese for a skullcap. No change is made for MAN WITH TURBAN

**Status:** Fixed

The tactic of re-labeling controversial emoji also appeared when addressing concerns about “WESTERN PERSON”, which both the German National Body and “US experts” found to be “problematic”:

This one still has "WETERN" [*sic*] which means Caucasian [*sic*] in the name. The image also looks like anybody without a specific feature. The original images from KDDI features blond hair and pale colored eyes. One from Softbank features a long nose. How about changing the name to just represent such features e.g. "PERSON WITH PALE EYES", "PERSON WITH LONG NOSE", etc.? I agree it is controversial.

While this comment acknowledges that equating “Western” with “Caucasian” is controversial, the eventual solution was to change the name to “PERSON WITH BLOND HAIR” and to render the glyph “gender neutral” in response to concerns about using an explicitly male character to represent “person”.

The solution of changing “ethnic” names to more “descriptive” terms was described as “avoiding [the] racial aspect”. From this perspective, the issue was not with the glyphs themselves, but with how they were labeled; once they were given a descriptive—and therefore “neutral”—name, the controversy was considered to have been addressed. This tactic of descriptive naming is an attempt to expediently solve two problems: avoiding racial controversy and standardizing a pre-existing character set. From the Consortium’s perspective, they had a technical problem to solve, not a political one: they were looking for the quickest solution to get the symbols they needed into



the Standard without having to engage in sensitive political maneuverings. David Johns explained that when it came to the first emoji set, the Unicode Consortium's main goal was a functional one: to unify and map the pre-existing characters in broad use by the Japanese telecoms. "We didn't really know initially, how popular emoji would be in Unicode", he explained; consequently, most of the members weren't really thinking about representation (or the potential fallout from the lack thereof) during the encoding process. This sentiment is summed up in a comment posted on [Emoji 4 Unicode](#):

The problem here is to create a standard mapping code point in Unicode for the emoji symbol listed at e-1A5. The problem is *\*not\** to solve some generic issue of how to represent all races, skin colors, and masculine facial hair styles politically correctly via character codes.

When asked whether the Unicode Consortium anticipated the uproar about race and emoji, Johns responded that they didn't really see it coming. "I think it was a lack of foresight on our part," he said. "I'm not sure what I'd count it up against."

Although the "solution" of renaming the problematic emoji with descriptive labels may have seemed like a tidy answer for a complicated problem, the Consortium's unwillingness to deal with the politics of race at the outset only ended up creating more problems for them farther down the line. Despite their attempts to evade a politically sensitive situation, the Consortium soon found that the issue of racial representation and emoji was one they were forced to deal with. Unfortunately, their reliance on what Harrell (2010) calls "intuitive understandings" of identity persisted, much to the chagrin of a small minority of members who chafed against the Consortium's unwillingness to acknowledge the lived experiences of—and consequences for—the people who they were tasked with representing.

*“A tempest in a teapot”: The Skin Tone Modifier Debate*

By the end of 2013, the public outcry about the lack of diverse racial representation in Unicode 7.0 had reached a fever pitch, and the Consortium recognized that it needed to do something to address what it called its “diversity problem”. In Autumn 2014, a heated discussion broke out on the members only Unicode list regarding the skin tone modifiers that were proposed as a means for expanding racial representations within the emoji set. Despite the fact that it was the Consortium’s unwillingness to properly contend with the racialized elements of emoji that created the issue to begin with, many of the members continued to assert that these problems were issues of perception and “political correctness” and therefore not legitimate concerns for a technical standard.

[Image removed. Please see final published version.]

*Fig. 2 – The emoji skin tone modifier scale (Kelly, 2015)*

In October 2014, Michael Kieran expressed his concern about the political implications of the solution that the Consortium had decided upon, which was to provide a menu of five skin tones that would be applied to a “neutral” yellow-faced character. Upon the realization that there would be “a set of base characters which then will be effectively wearing the digital version of white-face makeup or brown-face makeup or black-face makeup,” Kieran warned that

Once it becomes understood that these skin-colour characters are applied to some sort of base character, there is a 100% likelihood that Al Jolson<sup>9</sup> will be invoked, and this will NOT make the UTC or WG2 look good.

Kieran’s concerns were ignored, and the issue of racial representation remained largely

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<sup>9</sup> Al Jolson was considered to be “the most successful entertainer in the U.S” during his peak in the 1920s; he was also considered to be “the foremost blackface entertainer of his day” (Ruhmann, n.d.)

unaddressed until later that month when the Consortium began discussing the feedback they had received from the International Organization for Standardization (ISO) on their skin tone proposal. Some member nations found “discussion of ethnic/racial differences to be a very sensitive topic” and remarked that they “do not like the idea of character names that explicitly draw attention to the topic”. Scott Hill summed up the ISO’s concerns as follows:

The SC2<sup>10</sup> requirements (as expressed by feedback passed on from WG2) are:

S1. Don't use the word "SKIN TONE" in character names.

S2. In fact, don't use the word "SKIN" in character names, either.

S3. We don't want to talk about skin tone or race or diversity, please, because that is an "American problem", not ours, and we don't want to have ourselves associated with something making the issue appear visibly anywhere -- certainly not in a standard we have to vote on.<sup>11</sup>

S4. Some (not all) expressed a desire to just encode an arbitrary set of arbitrary tone modifiers, because that could be viewed as internationally neutral, and the pain of trying to figure out what that would mean in a character encoding was viewed as nowhere near the pain of having to explicitly deal with the presentation of skin tone diversity.

The proposed solution for this naming issue was to use the Fitzpatrick Scale, a six-tone dermatological scale that measures skin pigment and photosensitivity, with One (I) as the lightest skin tone and Six (VI) as the darkest (Fitzpatrick, 1988). Much like the “solution” of applying descriptive labels to the problematic emoji in the original set, using the “sound basis of the Fitzpatrick taxonomy” (as one member called it) offered the veneer of scientific legitimacy to this design choice. However, as Sweeney and Whaley point out, while the Fitzpatrick scale may evade “explicit racial categorization”, the fact remains that “phenotype and skin-typing operate as de facto cultural signifiers for representing race in the character set” (2019, p.3).

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<sup>10</sup> SC2 is Subcommittee 2 of the ISO, WG2 is Working Group 2 within that subcommittee. For more information on the relationship between ISO, Unicode and the various working groups and subcommittees, please see <http://babelstone.blogspot.com/2007/06/unicode-and-isoiec-10646.html>

<sup>11</sup> While emoji were originally designed and created in Japan, the Unicode Consortium operates within what Dinerstein (2006) calls “American technoculture”. As Berard (2018) notes, the major decision-making power within the Unicode Consortium comes from employees of major American tech companies; when it came to emoji, employees of Apple, Google, and Microsoft were the project leads. As this comment indicates, the American-focused nature of the Unicode Consortium is seen to be problematic for the globally oriented ISO. Of course, the idea that skin tone and race are “American problems” instead of global problems is questionable at best, but illustrates a.) how issues of race vary across national contexts and b.) how widespread and deeply entrenched investments in the myth of technological neutrality are.

The issue of de facto racial representation in the Fitzpatrick Scale was raised by member Alex King, who pointed out that the Fitzpatrick scale was “originally designed to classify three sun-reactive categories of fair-skinned Australians” and that since the darker skin categories (IV through VI) were added later, the ordering of the skin tones “reflects the exclusion of dark-skinned people from the original classification”. Noting that since the lighter skin tones had lower numbers, King noted that they would most likely be listed first given “the common practice of ordering code points in ascending numerical order”. In order to address what he saw as “unintentional” bias within the system, King suggested an alternate ordering to avoid privileging lighter skin tones:

Current emoji implementations mostly display light-skinned emoji. It would be unfortunate to supplement (however unintentionally) the existing bias (and centuries of oppression) by assigning code points giving sequential priority to light skin over dark skin. How about reversing the order? Have any specialists in ethnic studies, equity studies, institutional bias, dermatology, etc., participated yet in drafting [proposal] tr51? Could we see more input and evaluation from such experts?

While a few responses to King’s suggestion expressed concern about using the Fitzpatrick scale because “it is totally unpredictable whether that scheme will retain it’s (sic) hoped-for ‘neutral’ status,” many scoffed at King’s proposal to reverse the order, arguing that it was an unnecessary complication. King responded that it wasn’t fair that his daughter, who was Black, should be relegated to the metaphorical “back of the bus”,<sup>12</sup> subject to being “subconsciously influenced by the white-first/black-last arrangement every time”. He finished off by declaring that “I’m not going to be silent while you (unintentionally) discriminate against her and turn the Unicode Standard into one more instrument of (unintentional) racist oppression”. In annoyance and frustration, Scott Hill responded:

Perhaps we could rename them to:  
1F3FB EMOJI MODIFIER FRONT OF THE BUS  
1F3FC EMOJI MODIFIER BACK OF THE BUS

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<sup>12</sup> “Back of the bus” is a reference to the Jim Crow policy of forcing black riders to sit in the back of the bus, separate from the white riders in the front of the bus.

1F3FD EMOJI MODIFIER TOP OF THE BUS  
1F3FE EMOJI MODIFIER OFF THE BUS  
1F3FF EMOJI MODIFIER DRIVING THE BUS

... and then argue about who gets to sit where.

And of course, \*these\* bus modifiers should all have a bright yellow color, just to ensure that their intended impact on skin tone presentation is further obfuscated.

While Hill was chastised by some for his “unprofessional” response, others hopped on the bandwagon. Paul Roberts accused King of “a type of over-correctness: a white male being so overly sensitive to white maleness as to correct a ‘problem’ when only he has identified it as a problem”. He went on:

So, as far as I can tell, this is a tempest in a teapot raised by an engineer eager to see social commentary in something that nobody ever intended to be anything of the sort. It wasn't any of the individuals in the committee meetings where these got discussed who actually are people of colour that have raised a concern that the characters were proposed in the order given; it's a white male accusing committees that were mixed in terms of gender, culture and race of foisting a white male bias on the world. Nuts! When a number of actual people of colour voice this specific concern, then we'll have feedback worth discussing.

King responded,

Why would only people of color be entitled to raise their concerns about the order? I'm raising my concern right now, before it's too late. I don't know how many people of color are on this list. I look at this web page about the Unicode directors and officers<sup>13</sup> and this one<sup>14</sup> and I don't see anybody who is obviously Black. I'm sorry if I missed anyone who does self-identify as Black or partially Black. Racial identification is a tricky business, not to be taken lightly...I don't like feeling obligated to identify my daughter as Black in order for my concerns about racism to be taken seriously.

Roberts retorted,

You are insinuating that there is real injustice in the numeric order of a set of technology thingies — characters. I ask for us to wait on concerns voiced by actual people of colour precisely because I find your assertions of real injustice to be of a most subjective and tenuous nature. But I would allow that a number the presumed victims of said injustice might, in fact, perceive there to be injustice. If that were the case, then I'd be willing to listen to them, for perceptions of actual victims deserve at least some consideration. But neither you or [Alex] are among this set of presumed victims.

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<sup>13</sup> <<http://www.unicode.org/consortium/directors.html>>

<sup>14</sup> <<http://www.unicode.org/history/previousofficers.html>>

King's work colleague responded to Roberts with incredulity, suggesting he might like to clarify what "actual people of color" could mean in this context. "You can't have been suggesting that people who are not "people of color" (in your estimation) cannot offer feedback on sensitive (or potentially sensitive) racial issues", he wrote. "It would be reckless to intimate e.g. that only those who are the direct recipients of injustice can have legal standing to voice opposition to perceived injustice." Roberts ended the conversation by telling King and his colleague that their approach to the topic of racial representation was "unhelpful", particularly the "cynical remarks" that wouldn't have any impact on an already-established outcome. "Insinuating that people here are acting in a racially prejudicial manner based on one idiosyncratic measure is insulting", Roberts concluded.

Scott Hill and Paul Roberts' anger and frustration at King's suggestion that an ostensibly objective "idiosyncratic measure" could perpetuate racism reflect a potent combination of colorblind racism and a deep investment in the objectivity and neutrality of technical systems. Because the Consortium did not "intend" for the racialization of emoji to involve "social commentary", King's suggestion that the skin tone modifiers perpetuated racism not only violated the premise of technological neutrality and/or universality, but became a personal insult to the Consortium members involved in product design. This interaction clearly reflects Benjamin's (2019) observation that racist product outcomes are positioned as external to the circumstances of their production, as well as Slaton's (2010) argument that direct discussion of racial inequities in technical workplaces are seen as both improper and unseemly. The invisibility of whiteness is also on clear display in Roberts' assertions that only "actual people of color" could have concerns about race; as King is white (and therefore "raceless") his concerns amount to "over-correctness".

After reading an earlier version of this paper, David Johns acknowledged that "unconscious bias is something we all have to be on our guard against" (personal communication, 01/14/15).

However, framing the decisions made throughout the emoji encoding and modification processes as “unconscious” ultimately ignores the fact that the choices made during the emoji encoding and racialization processes were a series of highly debated, extensively considered decisions made over a period of several years. Time and again, key stakeholders and decisionmakers within the Consortium not only refused to acknowledge the concerns raised by their colleagues, but painted those who spoke up as “unhelpful”, “cynical”, and “overly sensitive”. Because they were unwilling to recognize and acknowledge that racism works, to paraphrase Paul Roberts, in “unintentional” ways, the Consortium ultimately ended up with a racist outcome.

In our interview, David Johns referred to the Consortium as “plumbing”, arguing that “ideally, [most people] should never be aware of what we do”. However, the fact that most people are unaware of how the “plumbing” works means that those who are responsible for designing those systems should take particular care to design them in a way that is both functional and ethical (Flanagin, Howe, and Nissenbaum, 2008). Indeed, the Consortium would have been wise to heed the words of Unicode member Brian Austin, who cautioned, “as a character encoding standard we need to be far more discriminating, and consider the ramifications of what we encode... encode in haste, repent at leisure!”

## **Conclusion**

Noble (2017) points out that digital technologies are often characterized as “neutral” within dominant popular and even scholarly discourses, and as such, moments of racism (or sexism) are characterized as “glitches” or one-off errors (p. 5, see also Benjamin, 2019). What this study illustrates is that the values of technological objectivity and neutrality that are so deeply prized by computer scientists and other technical workers are also deeply instrumental in the perpetuation of discriminatory technological systems. By largely refusing to acknowledge and contend with the

politics of technical systems, the Unicode Consortium ended up encoding a character set that reflected the logics of colorblind racism. As Sweeney and Whaley succinctly argue,

Though Unicode introduced skin-tone modifiers as a response to criticism about racial representation from BIPOC audiences, whiteness remained central to the design logics of emoji. Couched in terms of “diversity” and “skin-tone”, Unicode was able to respond to a critical public while sidestepping deeper questions about race and representation in emoji design (2019, p. 8).

In the years since the encoding of the original emoji set and the addition of the skin tone modifiers, the Unicode Consortium has recognized the sociocultural significance of emoji and has taken their role as gatekeepers and arbiters of the emoji set seriously. Under the leadership of Unicode Consortium President Mark Davis, the Consortium has established an Emoji Subcommittee that is responsible for considering proposals from external stakeholders, including corporations, organizations, and individual members of the public. This subcommittee not only includes members of the Consortium, but external contributors including Emojination founder Jennifer 8. Lee and Emojipedia founder Jeremy Burge. Hundreds of new emoji have been added in the past five years, and new characters including the hijabi emoji (Vonberg, Shubert, and Schmidt, 2017) and the curly hair emoji (Allen, 2017) have been celebrated for expanding the number of “diverse” emoji included in the set.

Despite this push toward inclusivity, the underlying logics of colorblind racism that were present during the encoding and modification processes discussed in this article appear to have remained in place, and Unicode continues to sidestep the “deeper questions” of race and representation in emoji design referenced by Sweeney and Whaley (2019). In 2017, Jeremy Burge of Emojipedia and the Emoji Subcommittee appeared in a segment on Al Jazeera’s *The Stream*



(2017) that discussed how emoji were chosen.<sup>15</sup> Discussing the criticism that Facebook received for the lack of interracial families in their 2017 family update (e.g., Ong, 2017), Burge stated that he found it “odd” that the focus of press coverage about the update was on “what was missing” instead of “incremental steps in the right direction”.

When you approve any new emoji, there’s always going to be something that you don’t include, right? For Facebook’s update—the families have always traditionally been in the default yellow because tech companies have said, “Look, if we wanted to have every race in every combination”—Microsoft did this last year and it ended up being 52,000 emojis for every family. And you know, I think that’s quite a good thing to have, but we also have to be appreciative when something comes out, and Facebook launched 125 new families; yes, they don’t have every combination of people, but it’s 125 new black and brown and white families that we didn’t have before.

At the heart of Burge’s insistence that minoritized groups should be “appreciative” for their inclusion in any form within the emoji set is the unspoken assumption that in their diversion from an unmarked (i.e., white) norm, they are external to a “default” (i.e., white) standard. From this perspective, any “incremental steps” or representational inclusion of “non-standard” individuals or groups should be celebrated, not critiqued.

In *Sorting Things Out*, Bowker and Star state that “moral questions arise when the categories of the powerful become the taken for granted; when policy decisions are layered into inaccessible technological structures; when one group’s visibility comes at the expense of another’s suffering” (1999, p. 320). A key “moral question” at stake with emoji (and with all digital technologies) is the fact that whiteness is considered by technology producers as “normal, universal, and appealing” (Benjamin, 2019, p. 29). As the years progress, emoji will continue to expand the number of emoji that represent minoritized racial groups; two years after this interview was aired, the Unicode Consortium ended up releasing a series of interracial couple emoji after all (Associated Press, 2019). However, as long as issues of race and racial classification are treated as

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<sup>15</sup> In full disclosure, I was also featured on this segment and was critical of Burge’s perspective on incrementality.

problems that need a technical “fix”, as long as the “moral questions” around the centering of whiteness within digital technologies go unexamined, the underlying logics of colorblindness that governed the emoji encoding and development process—and the development process of so many digital technologies— will continue to persist.

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