The SAGES University Seminar Essay Awards

2015-2016

*The SAGES University Seminar Essay Awards
highlight the best student writing produced
in SAGES University Seminars each year.*

*The essays included in this booklet were selected
from those nominated by SAGES faculty
for this award in academic year 2015-1016.*

December 9, 2016

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Written for USSY 285V: Castaways and Cannibals: Stories of Empire; Kristine Kelly (Seminar Leader)

Assignment Description: 10-12 page, researched analysis on an issue raised in one of the novels assigned in class (Defoe, Conrad, Coetzee, or Gurnah)

Instructor's Nomination: Katherine's essay offers an exceptionally well-developed argument on translation as a source of authority and dependence in Abdulrazak Gurnah's post-colonial novel, *Paradise*. She demonstrates smooth integration of secondary sources and excellent close readings of selected moments from the narrative.

Written for USSY 289J: Beauty Myths Today; Megan Jewell (Seminar Leader)

Assignment Description: 10-12 page argumentative researched essay on a topic that addresses the cultural politics of beauty.

Instructor's Nomination: Erin's essay on the term "Resting Bitch Face" is an original analysis of an everyday, pop culture and ultimately derogatory term to which mostly women are subjected. Erin closely analyzes this seemingly innocuous term's very serious implications for women's professional success, the contradictory ways in which women's anger is interpreted, and the ways in which they need to perform *emotional* labor in the workplace and in other contexts.

Written for USNA 287P: Women and Science; Barbara Burgess-Van Aken (Seminar Leader)

Assignment Description: 10-12 page research paper in which students identified and explored a question related to assumptions about gender in a selected scientific paradigm. Examples of such questions included: How have prevailing scientific beliefs about male and female anatomy affected the struggles of a specific female scientist? What were/are

the cultural, political, and scientific factors that facilitated (or are currently facilitating) the shift from one scientific paradigm of gender beliefs to another? What are some current competing perspectives regarding the science of gender?

Instructor's Nomination: Jessica addresses a relevant question: Why, in a time when enrollments of women in STEM majors are increasing nationally, are they dropping in Computer Science? In a lucid, logically organized, and engaging essay, she incorporates well-researched and illuminating historical context, an insightful analysis of the problem and its "so-what factor," and compelling recommendations for remediation of the problem.

"Conserving Culture: CBPR as a Framework for Group Research"

Written for USNA 287K: Human Research Ethics; Michael Householder (Seminar Leader)

Assignment Description: Students read a collection of instructor-selected journal articles that address the controversy that resulted from a study of blood specimens taken from members of the Havasupai American Indian tribe. Based on their understanding of the debate (and adding at least one source they found), students articulated what they thought should be done to ensure that human subjects research is done ethically, especially when scientific values conflict with the cultural values of the research subjects.

Instructor's Nomination: The first part of Ondrej's thesis (and subsequent argument) stakes out the standard view that Community Based Participatory Research (CBPR) is an effective technique for avoiding potential cultural harms when working with identifiable, structured groups such as American Indian tribes. The logic and clarity with which he executes that argument are laudable by themselves. But what makes this paper truly outstanding is his ability to extend his thesis to apply it to larger and less structured groups. It is easy for non-experts to overstate the claim or to miss crucial nuances. Ondrej does neither. Instead he guides the reader through the stages of his argument with the confidence of an expert.

Translation in *Paradise*:
The Intersection of Languages and their Impact in Gurnah's East Africa
by Katherine Steinberg

Details of linguistic translation are not an obvious source of intrigue for a novel. In theory, translation should add no content to a conversation; it is merely the literal rendering of a message in a different language. However, in his novel *Paradise,* Abdulrazak Gurnah places considerable emphasis upon the act of translation between cultures. Dispersed through the novel are scenes of multilinguistic encounters in which the attitude of the translator shapes the outcome of the exchange, in which Gurnah bends the trajectory of his storytelling to incorporate the perspectives of those who find themselves between languages. In stressing these moments of translation, Gurnah adds depth to the dynamics between communicating parties, intentionally using these episodes of multilinguistic contact to characterize the complexity of intercultural relations in colonial-era East Africa

  To understand Gurnah's use of translation, it is first necessary to comprehend the need for translation in his novel. *Paradise* is set in colonial-era East Africa, a space defined by great ethnic diversity. The majority of East African society at the time was Swahili, but as John Middleton emphasizes in his book, *African Merchants in the Indian Ocean,* Swahili culture itself was far from homogenous. Its members were divided into ethnic groups based loosely on place of origin, a system quite different from traditional European ideas of race based on skin tone. However, Swahili society was by no means egalitarian, as it was divided into a number of distinct subgroups: slaves and their descendants versus their patrician counterparts, interior versus coastal peoples, and indigenous Africans versus immigrants. Arriving from Arabia and the Indian subcontinent in a fairly consistent stream since the twelfth and sixteenth centuries respectively, this final group, the immigrants and their descendants, added another layer of complexity to Swahili culture as a well-established and influential minority (17-25). Also involved in Swahili society from 1889 onward was a contingent of German imperialists whose rule was largely defined by violence that existed in "many forms and to varying degrees of intensity throughout the entire period of German colonial rule" (Moyd 6). Threaded through all of these groups was a contingent of merchants, who in their role "mediating between traders of many cultures, languages, and expectations in both Asian countries and the African interior" acted as "international cultural brokers" (Middleton 79). In *Paradise,* the protagonist Yusuf's Uncle Aziz falls precisely into this category, so as the story follows his travels, it weaves through contact with a multitude of cultural groups.

  With each of these cultural groups comes a linguistic identity. The majority of Swahili people speak Kiswahili, but as the trading party in *Paradise* travels further into the African interior, they happen upon communities speaking local dialects. Also present is Arabic, as the language of both the Quran and the Arab-descended merchant elite, and German, the language of the European colonizers. When writing about two of Gurnah's other novels in her article "Measuring Silence – Dialogic Contact Zones in Abulrazak Gurnah's *By the Sea* and *Desertion*," Sissy Helff says that in these works, "cultural encounters inevitably take place in multilingual, culturally diverse contexts, and monolingual perspectives tied to one-dimensional perceptions of culture become a liability rather than an asset" (1). This holds true for *Paradise* as well. As Yusuf travels and encounters new segments of East Africa, particularly those he experiences at the side of his merchant uncle, different languages form a palpable presence and ignorance of new cultural groups often leads to conflict.

Generations of scholars have devoted significant discourse to studying the dynamics of this type of multilingual encounter. In 1911, approximately the time that Yusuf's story in *Paradise* takes place, British literature scholar D. S. Margoliouth published an article entitled "Language as a Consolidating and Separating Influence" in which he argues that the role of languages in situations of power balance is often overestimated. To him, language is simply a byproduct of cultural identity, not an essential component of it. Attempts to either unify a group with a shared language or suppress it by limiting its language are misdirected, as language is merely a utility. He even goes so far as to suggest that the world should adopt a single shared language, arguing that the only significant question in the field of linguistics is "whether it is desirable that the world should continue or should cease to be a Babel" (57-61). However, other Europeans of the age had more interest in linguistic diversity. Sharon Turkington Burke describes the German colonial study of African languages in her review of *Africa in Translation: A History of Colonial Linguistics in Germany and Beyond, 1814-1945.* German colonialists used their studies of African linguistics to strengthen their imperial ideology, as the ideas they developed about African languages like Swahili "served to harden stereotypes… construct[ing] ethnic boundaries and ultimately a racial hierarchy" (433). European research into African languages influenced colonizers' views of African society to the extent that the ideas it produced "supported colonial transformation, imagination, and even formation of ethnic groups and corresponding borders in Africa" (433) whether or not the European scholars were correct in their analysis of African linguistic ties.

However, Gurnah's *Paradise* must not be analyzed only within the context of European linguistic study. In his article "Imagining Unmediated Early Swahili Narratives in Abdulrazak Gurnah's Paradise," James Hodapp proposes that *Paradise* is actually specifically meant to convey traditional Swahili narratives in the deliberate rejection of traditional European colonialist literature. Hodapp cites allusions to Swahili legends within the texts, like the episode when a man from Mombasa tells Yusuf of his uncle's travels to Russia, where he found that "the Rusi people were not civilized," living in an extreme climate and drinking heavily (Gurnah 105). Not only does this story reverse the traditional imperialist narrative, in which a European travels to a non-western land and finds appalling savagery, it also directly references a traditional Swahili legend. Hodapp says that this salute to Swahili storytelling is a "corrective gesture" that "imagines an unmediated Swahili literature preceding European colonialism" (92). With that in mind, *Paradise* should be read within a non-European-centered linguistic context.

With this broad frame of reference, Gurnah's use of translation in *Paradise* can be studied more intimately. The instances of translation in the novel can be grouped into two general categories: those in which the act of translating is a source of power and those in which it generates vulnerability. These characterizations may seem at first antithetical, but their contrast reflects the complexity of intercultural contact in *Paradise.*

Historically, in colonial systems, translation is often a manifestation of power dynamics. In their article "Colonial and Postcolonial Encounters with the Indigenous: The Case of Religious Translation in Africa," Jacobus A. Naudé and Cynthia L. Miller-Naudé write that "translation has often served as an important channel for empire" (318). They say that generally, the dominated culture translates their language for the colonial power, and that when the colonial power does do the translating, they only translate works that fit into their preconceived ideas of the conquered group. One especially common form of colonial translation is religious translation. In Africa, the Quran and the Bible were both widely translated in the effort to spread Islam and Christianity through the continent; Naudé and Miller-Naudé even go so far as to claim that

"translation in the African context is mainly associated with religious translation" (313). Religious translation is a clear attempt to harness the power of translation by gaining access to indigenous spiritual life through native-language contact. Though religious translation of this type is not an emphasis in *Paradise,* it is worth noting that when Yusuf talks about religion with Hamid, Hussein, and Kalasinga, Kalasinga mentions wanting to translate the Quran into Kiswahili "to make you stupid natives hear the ranting God your worship" (Gurnah 84). This scene is a prime example of language differences representing cultural dynamics. Kalasinga's desire to translate the Quran is a linguistically complex proposition: he cannot read Arabic, so he insists that he would use the existing English translation to write a Kiswahili version. These languages represent a collection of cultures with stark religious differences. Kalasinga is a Sikh who finds Islam brutal, while the English translation of the Quran was most likely made by British Christians studying Islam from afar. It is also evident here how translation can be used to assert power, as Kalasinga's clear goal in this circumstance is to write a translation of the Quran that would shift Swahili Muslims' view of their religion.

This powerful quality of translation is certainly not lost on the translators in *Paradise.* Nyundo, who translates between Kiswahili and the tribal languages of the African interior for the trading party, seems to relish the importance his role gives him, especially at the beginning of the journey. He uses his position to tease his comrades. In the first village they visit, he jokes about Uncle Aziz's refusal of the sultan's offered beer: "'He asks why?' Nyundo said, grinning. 'It's good beer. Is it because you think there's poison in it?'" (Gurnah 139). As the journey continues and tensions arise in Chatu's village, Nyundo's role becomes even more important and he holds a vital position as gatekeeper of communication passing between the two negotiating groups. Gurnah specifically states that "the words they spoke were impenetrable, unless Nyundo was available and willing," and that Nyundo's "good humour was on the mend with his new importance" (154-5).

The power of the translator extends beyond simply the ability to pass messages between groups; Gurnah includes multiple scenes in *Paradise* in which the translator personally affects the message conveyed. One of the more passive methods Gurnah's translators use to alter the conversations they facilitate is simple omission. Nyundo employs this device at times, like later in the conversation in the first village mentioned above, when Gurnah describes that "his gesture was ambiguous, as though he had not understood or thought it best not to translate" (139) when asked about a joke the sultan makes after the merchant's refusal of the offered beer. In her article "Measuring Silence – Dialogic Contact Zones in Abdulrazak Gurnah's *By the Sea* and *Desertion,*" Sissy Helff describes the power at play in such a situation. She insists that silence in multilingual conversations is a "zone of cultural encounter in its own right," quoting a classic Swahili poem that includes the line "Silence makes a mighty thump" (1). According to the article, this "mighty thump," the impact of silence, is not unknown to Gurnah's characters. It is used for a function and is not to be confused with absence or powerlessness. In Nyundo's previously-mentioned case, it is quite possible that he refrains from explaining the sultan's joke because it was vulgar or crude; perhaps he did not wish to offend Uncle Aziz and create conflict in the exchange. However, the text does specify that his lack of translation could be simply because "he had not understood." This supports another of Helff's major points, that "the complex task of understanding an uttered silence is further complicated in a situation in which people from different cultural backgrounds and languages communicate" (154). Because none of the other traders in the situation understand what the sultan said, it is difficult to gauge how

intentional Nyundo's silence was, but intentional or not, omissions on the part of the translator in multilingual conversations can certainly impact the result of an exchange.

In addition to the ability to filter conversations through pragmatic silence, the role of translator offers the opportunity to directly editorialize upon and twist the content of messages being conveyed. Later on in *Paradise,* when the Mistress calls Yusuf into the merchant's house in an effort to seduce him, this power is used by Khalil and Amina as a buffer between the two communicating parties to prevent emotional and physical intimacy. Khalil especially slants messages as he passes them between Kiswahili and Arabic. He is very protective of Yusuf, framing the words he conveys with phrases like "'Now we begin, little brother'" (208) and offering his advice for Yusuf as the conversation progresses. He even sometimes speaks for Yusuf before the latter has the chance to form his own responses. Amina is less direct with her opinions in translating, but her reactions still shape the conversation. Her discomfort with the situation is clear as Gurnah describes Amina's translations for Yusuf and the Mistress, repeating that "her eyes [were] dull with distance" and "her voice was small and distant" (222). As the sole intermediary between the parties in the conversation, the only point through which information can pass, Khalil and Amina can shape the messages they transmit to promote the outcome they favor for each situation.

Clearly, the position of translator offers a unique type of power at several instances in the novel. Translation is an opportunity to push colonial and religious perspectives on other cultures, a moment when one individual can be vital to the conveyance of negotiations between whole groups, and a chance to filter what gets transmitted or act as a buffer in an emotionally-charged conversation. However, as much as Gurnah depicts it as an empowering role, acting as a translator is just as often a position of great vulnerability in *Paradise.*

This vulnerability takes several forms, one of which is simply emotional vulnerability; the role of translator automatically puts an individual into a position of deeper connection with both parties involved in dialogue. According to Naudé and Miller-Naudé, from a macro perspective, translation functions as "cultural mediation" (313). Without it, cultures would be "isolated [and] localized," with "clannish ethnic groups unable to cross language and ethnic borders and ignorant of the knowledge, wisdom, and faith of other cultures" (313). Translation offers connection on a more personal level, too. The very effort to speak someone's native language automatically strikes down certain defenses. Sissy Helff writes about an instance of shared language breaking down cultural barriers in another of Gurnah's novels, *Desertion.* In it, the African protagonist becomes friends with an Englishman, a friendship made possible by the latter man's knowledge of Arabic, which "deconstructs the idiom of his own colonizing culture" (163-4). Likewise, in *Paradise*, Nyundo's language abilities deconstruct some of the cultural divide between him and the interior tribes he meets. At the very least, addressing them in their native language is a polite gesture: even when a sultan speaks Kiswahili, Uncle Aziz and Nyundo agree that "it would be more courteous to address him in his own language" (Gurnah 137). At its most profound impact, shared language can even prompt loyalty across generally antagonistic lines. When the journey to Chatu's village becomes especially difficult and Mohammed Abdalla blames the group's indigenous guide for the struggle, Nyundo takes on a protective role. When Abdalla begins to beat the guide, Nyundo, the only person who can communicate with him, abandons his characteristic levity in an attempt to protect the guide, suffering a beating himself for his efforts. The act of connecting with the guide in a shared language over the course of the journey has created a bond between the two that supersedes Nyundo's loyalty to Abdalla. By

promoting empathy through shared language, translation has the potential to create a sense of emotional vulnerability between parties.

However, Nyundo and the guide's situation also highlights a different type of vulnerability that the role of translator often brings: physical vulnerability, the danger of being the middleman in a situation of conflict. Though officially affiliated with the trading party, Nyundo is responsible for delivering the messages of both the party and the guide, so he assumes a position of relative neutrality. When conflict arises, that role makes him a target. Even when situations are not overtly violent like that episode, Nyundo becomes a source of suspicion as tensions grow within the party. Abdulla approaches his translator with "unconcealed disgust" (151), questioning the validity of his words. This distrust of the narrator becomes even more dangerous as Nyundo is forced to play the intermediary in important negotiations. When the trading party is held hostage by Chatu, Nyundo's presence is necessary to every word of negotiation that occurs. The translator's job is a daunting task, and the subtleties of language are no help. At times, reliable translation is impossible, as certain words have no equivalent in the other language. For example, Chatu uses the term "khoikhoi," which Nyundo can only describe as someone who "will let strangers steal from him while he dances under the moon" (165). Naudé and Miller-Naudé describe the sensitivity of such a situation, saying that sometimes translation can "bridge the cultural gap," yet other times the translator must simply leave the disconnect in place and try to act as a link across it to help others "understand the otherness" (314). The translator's central position forces him or her to consider and adapt to the conflicting needs of both the source and the target of a translation, sometimes subjecting him or her to substantial physical vulnerability (Naudé 314).

The fact that Gurnah so clearly emphasizes moments of translation in *Paradise* but gives conflicting meaning to the impact of the translator and their impact on the translator is striking. The act of translating is at once empowering and endangering, individualistically influential and collectively empathetic. Translation is fickle, and Gurnah leans into that reality for a reason. He focuses so closely on these moments of translation because they have the unique ability to capture the exact point of contact between ethnic groups and societies. In multilinguistic interactions, the translator is the intersection between groups, and with such a central position, the experience of the translator can represent the dynamic of the entire interaction. With that in mind, the power assertion and the vulnerability that Gurnah weaves into his descriptions of the translation process echo similarly interconnected power struggles, pain, and empathy within the interactions of the communicating cultures themselves.

In emphasizing these cultural interactions through moments of translation, Gurnah comments on the ethnic makeup of colonial-era East Africa. In his article "Exchange, Bullies, and Abuse in Abdulrazak Gurnah's *Paradise*," David Callahan says that the novel is set in an environment where "a fascinating mixture of peoples seems incapable of living in fruitful harmony, where a rich and complex legacy of historical, mercantile, religious, and linguistic factors has regrettably given rise to frequent suspicions, inequalities, and lack of generosity" (56). The conflicting depictions of translation in *Paradise* support that idea; though sometimes different cultural groups find common ground and empathy in moments of shared language, the exchanges are often ultimately dominated by either assertion of power on the part of the translator or subjugation of the translator to another's power. Just like the groups of people the translators connect, the existence of the translators themselves is defined by struggles for power.

These power-defined interactions comment on colonialism itself. By depicting such a varied array of cultural groups at odds with each other in these moments of translation, Gurnah

rejects the archetypal western literary view of African imperialism. Rather than a simple, uncivilized paradise conquered by Europeans, Gurnah's Africa is a place where complex and often tempestuous intercultural relations have always existed, a zone where sophisticated ethnic groups are perpetually reevaluating their relations. In Callahan's words, "all ethnic posturing, including the threatening and autocratic colonial presence, [is] merely part of the continuum of the hierarchy- and power-driven human relations" (55). For Gurnah, conflict is a human quality, not simply an imperialist one. By depicting situations of translation, the purest samples of intercultural contact, with such an emphasis on power struggles and vulnerability, Gurnah describes an Africa defined by complicated societal interaction.

As Yusuf's travels progress through *Paradise,* Gurnah periodically pauses his narrative to include the experiences of a translator who would be otherwise relatively insignificant to the story. These translators considerably shape the outcome of the dialogues they transmit, and they themselves are often also substantially impacted by those conversations, pulled into either a situation of changing power dynamics or one of emotional or physical vulnerability. Gurnah does so intentionally, using these encounters to represent the complexity of intercultural relations in East Africa in the early twentieth century and thus rejects traditional colonial narratives about the continent. In *Paradise,* the act of translation is far more than the repetition of a message in two languages; it is the definition of the connection and disconnect between cultural groups.

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RBF and the Reluctance to Accept Women's Anger
by Erin Camia

The pop cultural phenomenon of "Resting Bitch Face" (RBF) is treated as fairly innocuous by many, but its implications suggest that standards for female beauty stretch to the impossibly high expectation that women only have certain emotions in public. An increasingly popular slang term, RBF, is more and more frequently attributed to people who have a lack of expression on their face or often have an annoyed or angry expression. Celebrities and normal people alike have been singled out for having RBF, but nearly all of those who are cited for this facial expression are women. This pattern suggests a general lack of acceptance and dissatisfaction within our culture at having to see women's anger, contempt, or even lack of emotion. Indeed, it seems we have an expectation, subconscious or not, that women should always present themselves publicly as happy and friendly. They must always be smiling. Like many other standards of beauty that women face, no matter their attempts to navigate them, they find themselves unable to escape criticism. Ultimately, the recent phenomenon of RBF illustrates that trying to live up to societal expectations for female emotion and appearance is a no-win situation for women.

Rise to Cultural Phenomenon

Although women's appearances have been dissected and degraded for countless years, the cultural importance of RBF has only developed in the past few. In 2013, the comedy group Broken People released a satirical video entitled "Bitchy Resting Face," in which women explain how they suffer from this condition. This popular video may very well be traced to the origination of the term. As the video points out about the women who have (or who are suffering from) "Bitchy Resting Face," "they might not even be bitches at all. They might just have faces that, to you, look bitchy." Interestingly, the video also describes a condition in men called "Resting Asshole Face." However, the nearly nonexistent and unheard of use of the latter term suggests that it is only women who are forced to have a complicated relationship with their emotions. The video, although meant to be comedic, reveals a truth in how quickly women can be written off as "bitches" for having anything less than a friendly facial expression. While this video certainly did not originally spur the contempt for female displays of emotion, it did provide a phrase that enables people to quickly label a woman's appearance based on emotion and facial expression.

Since 2013 and the popularity of the "Bitchy Resting Face" video, the term has gained traction both in the media, especially in reference to particular celebrities, and in casual conversation. Women often acknowledge their own RBF, choosing to either joke about it or, even worse, to apologize for it. It has become ingrained in our culture as just another way to categorize and qualify women. Research has even been done to find out why some people have RBF. In a 2015 study, Abbe Macbeth and Jason Rogers of Noldus Information Technology used technology that scans faces and identifies certain emotions in the facial features. They used faces of celebrities that are known for having RBF and found that their usual facial expressions tended to express contempt. However, these researchers and the software they have developed do not take into account the subjectivity of people. In other words, although their FaceReader software does sometimes find contempt in the faces of men, these men will be much less likely to be singled out in a negative way for having a stoic facial expression than are women seen as having the same RBF. In fact, Macbeth and Rogers seem not to be worried about the gender politics of

RBF, arguing that "the root causes [of the stoic expression] may not even matter, as *that* face continues to stare at us, haunt us, and make us second guess our every decision" (Macbeth and Rogers). This treatment of RBF as something women need to change about themselves for the benefit of others adds yet another insurmountable task to women's plates.

A No-Win Situation

Whether they choose to embrace their RBF or fall in line with societal expectations, women will find they always come out worse for wear, pun intended. That is, as Naomi Wolf points out in *The Beauty Myth*, women face such decisions regarding professional versus provocative or, even, dowdy clothing on a daily basis. The same theory applies to RBF—if women choose not to mask their anger, annoyance, or indifference, or if they simply choose to "smile" in acquiescence, then their reputation may publically suffer. And, a lack of respect from peers and superiors can have serious ramifications that can hinder a woman's success. In a study published in 2008, Victoria L. Brescoll and Eric Luis Ulhmann, researched the intersection of status, gender, and anger. They found that "professional women who expressed anger were consistently accorded lower status and lower wages, and were seen as less competent" (273). Simply expressing negative emotions can have a very harmful impact on a woman's life. It can impact her career and other areas of her life in which she needs to have relationships with peers, superiors, and subordinates.

Frowning or looking angry also seems to invite unwanted comments, adding yet another obstacle in a woman's day-to-day life. This is most easily identified in media that critiques the appearances of female celebrities. Kristen Stewart, known for playing Bella Swan in the *Twilight* movie franchise, is one of the most popular punching bags for tabloids and celebrity gossip outlets that seem to thrive on pointing out cases of RBF. As a result, she is known less for her work as an actor in an incredibly successful franchise and more for her facial expressions. Robert Pattinson, her costar in the *Twilight* movies, is also known for often donning a moody expression, but instead of being demonized for it, he has become a sex symbol.

It is not just tabloid news sources that feel they have the authority to comment on a woman's emotional appearance; it is currently best-known as a general cultural phenomenon. Casual observations about a woman's RBF are made by family members, acquaintances, and even strangers. One of the frequent types of catcalls I personally receive is a shout or seemingly helpful comment along the lines of, "Smile, beautiful!" This, unfortunately, is an all too common experience for many women, as evinced by a scene in the television series *Broad City*. Here though, the starring characters, played by Abbi Jacobson and Ilana Glazer, respond to a passing man's suggestion of, "You should smile!" with resistance. In response to this catcall, they push up the corners of their lips with their middle fingers. Jacobson and Glazer, who are also the creators and writers of the show, allow women to laugh about the discomfort of not only having men they do not know commenting on their appearance, but also the distress of not being able to show certain emotions without drawing unwanted attention. If women choose not to conform to the expectation that they need to present themselves as happy all the time, they often have to evade or suffer through a discussion on why they must smile more. Dealing with this, along with the lack of respect in professional relationships, means a woman can find herself facing various consequences for being seen with anything less than a smile on her face.

If, however, a woman chooses to attempt to always present herself with positive emotions, she will face different obstacles, but obstacles nonetheless. As I hinted at earlier, there is a correlation between displays of anger and being in dominant positions, either socially or

professionally. As a result, the natural next step for many is to assume that if women should not display their anger, then they should not be in positions of power. A study conducted by cognitive scientists Hess, Adams, and Kleck in 2005 found that "anger displays were chosen less frequently as appropriate for a low dominant woman than for a low dominant man" (528). Furthermore, they concluded that "men were rated as more dominant than were women even when they were described as equivalent in social dominance" (528). The perception of women by many people is that they are submissive and unable to play dominant roles in society. Emotion plays a significant role in keeping women from those dominant roles. For instance, if a woman is angry, she will seem unfit for a powerful position, even though anger would make a man seem more qualified. On the other hand, if she keeps her anger hidden, whether it is because she has been taught to do so or it is because she thinks her best bet is to play the system, she is characterized as less dominant. The woman who rarely shows her anger might not be written off as "bossy" or "bitchy" by those around her, but her chosen displays of emotions seem to confirm the assumption that her place is in a less dominant role.

A woman carefully schooling her facial features faces another challenge in the form of sheer exhaustion. In her book *The Managed Heart: Commercialization of Human Feeling*, Arlie Russell Hochschild explains how putting on an emotional façade is actually a form of labor:

> This labor requires one to induce or suppress feeling in order to sustain the outward countenance that produces the proper state of mind in others…. This kind of labor calls for a coordination of mind and feeling, and it sometimes draws on a source of self that we honor as deep and integral to our individuality. (7)

Hochschild's argument is mainly a critique of capitalism and the need for workers in service industries to be ever accommodating to customers, but women tend to do this type of labor much more frequently than men do. Furthermore, women are expected to hold these less dominant positions, so the pressure to always smile is felt twice as much by women in low-ranking service positions.

This emotional labor is yet another form of work that women are expected to complete every day. A woman, assuming she has a job outside of the home, is expected to perform the labor she is actually paid for, the "Second Shift," during which she completes housekeeping and parenting duties, the labor necessary to maintain her appearance, and, finally, the labor required to pretend she is feeling certain emotions and to mask others. The amount of effort and time women must put into each type of labor is excessive and exhausting. This works in favor of the patriarchal system that thrives on women being relegated to the inferior, submissive class of society. Wolf discusses this concept in *The Beauty Myth*. When discussing the impossibly high standards of beauty for working women, she argues that these women have "just enough energy, concentration, and time to do their work very well, but too little for the kind of social activism or freewheeling thought that would allow them to question and change the structure itself" (Wolf 53). Wolf was only talking about the exhaustion women feel after dealing with their jobs and beauty standards, but when emotional labor is added to the mix, it seems impossible for women to win. They will find themselves unable to overcome these complex relationships with emotion, either from simply being too tired to attempt to or from not being taken seriously when they do try.

The Angry Woman

　　Although women are trapped in a no-win situation, those with RBF and those who do not cover their feelings of anger face a more severe and more direct backlash than others. Anger in women and girls is defined as taboo. Yet, for men, anger is associated with dominance and competence. Angry people are unhappy about the situations they are in and wish to effect change. In a society built upon labels and hierarchies, it is extremely dangerous to have an inferior class able and willing to express their anger and utilize it. It is for this reason that angry women are demonized in our culture.

　　From a young age, particularly middle-to-upper class girls are taught that their anger is inappropriate. Young girls often display anger, but are quickly told by elders that they must keep their anger in check. In her book *Raising Their Voices: The Politics of Girls' Anger*, Lyn Mikel Brown argues:

> What was once a sign of girls' strength and resiliency – their capacity to feel their anger, to know its source, and to respond directly – becomes a liability, at least in those places where white middle-class values and conventions of femininity prevail…. [Girls learn] good girls are calm and quiet, they speak softly, they do not complain or demand to be heard, they do not shout, they do not directly express anger. (12)

Obviously, it is not the case that women are simply not born with the propensity to feel anger. Instead, girls are conditioned to hide their anger and understand it as inappropriate behavior. They then become women who have practiced suppressing their anger for so long that it becomes second nature. Through this process women learn to reject their anger and never discover its usefulness as a tool for progress.

　　Further, the disapproval of female anger is constantly reinforced by depictions of angry women in the media. Sometimes the angry women are action heroes or otherwise tough characters, which seems like it would lend a hand to feminist representations of women in television and movies. However, these heroines do not become beloved characters because viewers recognize their anger and respect them for it. In the book *Action Chicks: New Images of Tough Women in Popular Culture*, a question is posed: "When women are being portrayed as tough…are they being allowed access to a position of empowerment, or are they merely being further fetishized as dangerous sex objects?" (ed. Inness 47) In order to get away with being angry and willing to act on their anger, these characters have to be sexy as well. Just like nearly all other aspects of media, they exist mainly for the benefit of male viewers who are able to focus on the attractiveness of these characters and largely ignore that their heroic actions may be spurred on by anger and the drive to correct injustice. Additionally, as one might note, there is a distinct lack of merchandise with female action heroes, while every male hero has their face emblazoned on any and all types of products. For example, Marvel's Black Widow, played by Scarlett Johansson, is the only female member of *The Avengers* film and has appeared in five Marvel movies to date. Her anger is easily identifiable and it is nearly a job requirement to have RBF, as she is an undercover agent; she must remain stoic. Yet, while her male teammates, who include Captain America and Iron Man, have incredible amounts of related merchandise for sale, Black Widow's fans struggle to find any products that include her. In addition, while most of her male colleagues have the privilege of entire films dedicated to their backstories, she is relegated to being the supporting character time and again. In this context we can clearly see that Black

Widow, along with her anger, which is a negative characteristic but linked to her "badass" persona, have been relegated to mere decorations for men to enjoy.

The issue of women's anger, however, is not entirely black and white. It is important to note that race and class often come into play, making it so women of different backgrounds have different relationships with their anger. While white women of the middle and upper classes are assumed to not ever be angry, or at least expected to pretend that they aren't, black women are perceived to have anger as an ingrained character trait. The "Angry Black Woman" stereotype reduces black women to aggressive, illogical people with a continuous stream of anger that can escalate to violence at the drop of a hat. In the article "Renisha McBride and Evolution of Black-Female Stereotype," Noliwe M. Rooks argues that this has been shaped by the centuries-old perception that black women are "more threatening, more masculine, and less in need of help" (Rooks). Black women are expected to be angry because they are not seen completely as women, but as objects, even sexualized beasts (Bordo). Their assumed and exoticized bestial threat goes hand in hand with their assumed anger, though unlike in white men, these traits—even if they are not actually present—lose them the respect of the people they interact with. This issue deserves its own paper, particularly due to the concurrent oversexualization of black women, but it would be remiss of me not to note the challenges that minority women face in the cultural interpretation of anger.

That Time of the Month

There are various reactions men commonly have to female anger, but none suggest an understanding of it. Male reactions to women's anger can leave the latter feeling frustrated, annoyed, embarrassed, and even angrier, encouraging men to continue making disparaging comments. As long as men continue to be ignorant of women's anger and refuse to accept it as a natural emotion, women will continue to be hindered by their inability to express a full range of emotions without reproach. Although they are not the only ones who do it, men contribute to societal expectations for female emotion. They must work to accept anger instead of writing it off if women are to free themselves of this issue.

One of the significant ways that men write off a woman's anger is by linking it to a fictive biological process. In other words, many attribute women's anger to pre-menstrual syndrome (PMS) or "that time of the month." First, this implies that a woman cannot be justifiably angry about something. Often in this situation, the target of a woman's anger is a man, and he is able to avoid blame by claiming a woman must be in her menstrual cycle to be angry. Second, it perpetuates the stereotype that women are lunatics and she-devils while on their periods. This is one of the only times women are expected to display anger, but it stems from a lack of understanding of menstruation and incredibly outdated ideas about women and their mental states. This type of comment makes it difficult for women to be taken seriously and have their voices heard. It can have very real consequences for women, as evidenced by political reporters with millions of viewers stating on air that they believe a woman cannot be President because of her illogical behavior during her menstrual cycle. Not many people seem to care that women have periods without male coworkers ever knowing, or even that many female candidates for President would not even menstruate anymore. Ignorant arguments aside, it cannot be said that this type of write-off is a harmless joke.

Another way that men write off women's anger is to call it "cute." Just like the previous type of comment, this severely hinders a woman's ability to be taken seriously. It is interesting to note that men do not actually find anger attractive in women. A 2015 study conducted by Jose

Antonio Munoz-Reyes determined what type of facial features men find attractive in women. Munoz-Reyes found that men preferred average, youthful faces with friendly expressions (13). This implies that men do not find female anger attractive, but instead are amused by it. It seems to have become a trend to tell a woman that she is cute when she is angry. By telling a woman this, it undermines whatever argument she is making and lets her know that her voice is not being heard. The man is suggesting that anger is not for her, but it is adorable to see her try to step into a role she was not meant to play.

   These comments are simple and may seem completely innocuous, but their underlying meaning is malicious, whether men know it or not. They suggest to women, as well as anybody else who may hear them, that the anger of women is not something to be taken seriously. It makes light of issues that women have a justifiable reason to be angry about. Allowing these comments to masquerade as a joke encourages more people to say them and believe them. As a result, men must recognize the harm their words and actions do, and make a conscientious effort to take the anger of women around them seriously. Only then will women be able to face their personal challenges with emotion and work to gain the freedom of expressing a full range of emotions.

   Women's struggles with the appearance of emotion is a tough issue to tackle because it is neither clearly defined nor visible. Some of the only clear attacks on women expressing negative emotions are references to RBF or a joke made by an adolescent boy who clearly had a distinct lack of comprehensive sex education in school. However, it is important that we use these as a vehicle to discuss why our culture views female anger as taboo and what needs to be done to reverse that way of thinking. It starts with women identifying and embracing their anger. Righteous anger is a tool of revolution, indeed. Women can accomplish so much if they collectively identify sources of injustice and wield those emotions that people pretend they do not have. While it is true that this problem is multifaceted and deeply ingrained into the workings of our society, it can start to be dismantled when women refuse to conform to the roles that have evolved to maintain their passivity.

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Re-fashioning the Field: On Gender and Computer Science
by Jessica Nash

Dramatic changes in the field of computer science over the past century have led to a new technological era that has transformed the way societies think, communicate, and navigate through daily life. From humble origins to economic powerhouse, this technology has experienced tremendous growth over the past century. Computers and electronic devices have become increasingly intertwined with modern life and play a defining role in how people self-fashion and interact with one another. At the heart of this cultural shift are the computer programmers and software engineers responsible for developing the technological field to its current status and numerous, dynamic applications. Undoubtedly, the common perception of the expert computer programmer is a geeky, young to middle aged white man with minimal social skills and average attractiveness. Considering the implications of such a narrow, specific sect of people dominating one of the most influential facets of modern business and life, we cannot help but suspect a one-sidedness in the design of the products and technological applications that have become both ubiquitous and indispensable to our culture.

How did this image of the "techno-geek" become so finely ingrained in western culture? Are the stereotypes of computer scientists merely that—stereotypes— or do they actually provide a reliable snapshot of IT professionals as a whole? The answers to these questions may be surprising, especially when considering the underrepresentation of women in computer science (CS). Although it would be incorrect to assume that any stereotype could accurately portray the entirety of the group it refers to, in this case the overall generalizations about the average computer scientist are alarmingly accurate, particularly in regard to gender. In fact, women are among the most grossly underrepresented groups in the computer science field, earning only about 13.8% of all bachelor's degrees in CS in 2010 (Taulbee Survey Report 2011). Furthermore, of all US college freshman enrolled in STEM degree programs, only 5.7% of participants were women in computer science compared to 27.1% for men in the same CS programs (Parviainen 88). Steadily decreasing rates of female enrollment and retention in undergraduate CS courses and degree programs combined with an overarching inhospitable atmosphere for "atypical" CS scholars has had a direct impact on women's interests in contributing to this influential career (Beyer 153).

In order to understand the full impact of what this underrepresentation means for the technological community, we must analyze a myriad of factors and phenomena, such as historical trends, current statistics and employment trends across different cultures, the effect of stereotypes on public opinion towards women and CS, and the presence (or lack thereof) and potential importance of female support figures and role models. Understanding the contributing factors for the lack of female presence in the field of computer science is an essential first step in reversing this trend and discovering ways to motivate women to pursue meaningful and fulfilling careers in computer science. Not only does this have the potential to benefit women in western cultures where negative educational and employment trends prevail, but it also spells promise for the improvement of computer science as a whole if the field can integrate the unique perspectives of women into the development of new and innovative ideas, programs, and products that may not have been possible without such diversified collaborative efforts.

Interestingly enough, it was not always the case that women played such a minimal role in shaping the technological scripts of history. Women of the past have made rich contributions to the burgeoning field of computer science, shaping it into the discipline it is today. Nineteenth-

century mathematician Ada Lovelace pioneered a prototype of the modern computer as early as 1822, long before John Mauchly invented the Electronic Numerical Integrator and Computer (ENIAC) in 1942, the first true general purpose computer (Gürer 45). Jean Jennings Bartik and a team of six other female scientists were in charge of programming some of the very first lines of code for the ENIAC. Bartik recalls even then men looking down on her job, with the popular male opinion being that programming was not nearly as important as building the physical hardware of the machines (Gürer 46). Shortly thereafter, Bartik teamed up with Grace Murray Hopper, who wrote some of the very first programming languages while working on projects for the US military. She even coined the term "debugging" after removing moths from a malfunctioning computer (Gürer 46). Lovelace, Bartik, and Hopper are only three examples of how technological science owes many of its brightest achievements to women, demonstrating that they not only have the capacity to contribute to computer science, but also to make groundbreaking discoveries. So why have women fled the field?

    In what appears to be a reversal of the American gender disparity among CS professions, different cultures from around the globe have had great success in the employment of women in computer science jobs—in fact, they constitute roughly 50% of IT workers in countries like Malaysia, which is more than double the amount of women working in US computer science jobs (Lagesen 5). Interestingly, the inclusion of women in the Malaysian technology market is not simply a result of a greater cultural appreciation of women's skills. Instead, it is in effect a reversal of the masculine stereotype characteristic of Western countries. In an attempt to protect women from harsh and potentially dangerous workplaces, such as factories and construction sites, women are encouraged to take up office jobs such as those in CS due to the safer environment of the office (Lagesen 5). When perceived as a feminine profession, the climate of CS seems to change entirely, although not for particularly liberating reasons. From this, it may be important to consider a second point in the analysis of factors contributing to the current state of women in CS: cultural expectations of each gender have a significant impact on each individual's interests and desires to work in fields they perceive as compatible with their own identity.

    Keeping the above points in mind, it is possible to effectively evaluate the current state of computer science in the United States and identify corrective steps to mitigate the growing gender disparity. As noted, the face of CS before and just after WWII was not necessarily a masculine one. In fact, the United States experienced a steady growth of women in CS along with other STEM related careers until about 1980, when the numbers of women enrolled in CS programs in college dropped off significantly ("Women's Bureau Occupations"). A possible explanation for the loss of the somewhat "delicate" depiction of the ideal programmer was the increased availability of personal computers around 1984 that manufacturers marketed almost exclusively to young boys. The resulting cultural trend seemed to give boys a competitive programing edge even before arriving at college, leading many female students to believe that they were inadequate compared to male peers and that other careers were generally more suitable for them (Varma 181).

    In order to quantify the stereotypical conceptions of computer programmers that have become so widespread over the last few decades, Sapna Cheryan and her colleagues at the University of Washington devised a set of studies in 2013 designed to record opinions about computer scientists among students at various West Coast universities. Regardless of sex, undergraduates described computer engineers as antisocial, unattractive, socially inept, devoted singularly to computers, pale, overweight/skinny, and male (Cheryan et al. 62). Not surprisingly,

many of these descriptors may appear unappealing to and incompatible with certain female and even male students who may have otherwise taken a great interest in technology-based studies. Intimidating computer science classroom settings and media portrayals of computer engineering geared towards men appeared to be driving forces behind a general unwillingness of women to pursue a technology related career. The same factors typically did not sway men's opinions on the topic (Cheryan et al. 62). Images of computer engineers prevalent in the media and society conflict with perceived feminine gender roles, resulting in a general sense that a female's mental ability is inferior compared to male counterparts. The end product is a continuous feedback loop wherein both males and females act to perpetuate current stereotypes.

Overall, one of the most influential factors that was shown to influence a student's genuine interest in computer science was actually taking an introductory class on the subject, regardless of whether or not he or she considered majoring in the field before. Data from the surveys concluded that women who had not taken a computer science course in college were much more likely to provide stereotypically-motivated responses to questions about computer science majors than women who had, suggesting that media and peer-driven perceptions of members of technological fields may play a role in promoting female disinterest in computer science if the individual has no actual experience with CS (Cheryan et al. 63).

A second study by the same researchers aimed to evaluate the influence of media on male and female perceptions of technology-related fields (Charyan et al. 62). A random sample of students at the same two colleges received either an article declaring that computer scientists adhered to current stereotypes or an editorial that portrayed a more inclusive view of the computer science field that was moving away from common negative perceptions. The study found that male undergraduate students were less likely to change their opinions of computer scientists after reading the articles, while women were much more interested in computer science as a career option when they read the article that promoted the breakdown of common CS stereotypes (Cheryan et al. 63). The data suggest that women may be more likely to discard computer science generalizations that appear incompatible with female gender roles if participation in introductory computer science classes were to increase, since women who had taken computer science courses in the past were less likely to rely on stereotypical descriptions of computer scientists when talking about a typical IT employee. Altering the pervasive image of technology professionals in the media is imperative to making the field more appealing, attainable, and rewarding for women.

A promising effort to effectively and permanently reduce the effects of gendered CS stereotypes early in life is ongoing in Norway, where small villages have opted to host children's coding clubs. By providing exposure to technology and coding techniques during childhood, these clubs have not only introduced computer science as a potential career for various children, but have also better prepared them for life in a technology-driven world, regardless of their future profession (Corneliussen 97). By wiping out the gender gap in prior coding experience between college-age students, coding clubs have the potential to reverse some of the long-standing disadvantages women have traditionally had when entering a competitive, male-dominated computer science degree program.

While the number of females in non-CS STEM degrees has generally risen over time, percentages of both women and men in computer science over the last decade have fluctuated sporadically, with high rates of female attrition in CS programs currently defining the field (20% average attrition rate for women compared to 10% for men in the US) (Cohoon 108). Certain schools' CS programs report female retention rates almost equal to that for males, while other

institutions have much less success retaining interested women. Among some of the most notable traits of universities with poor female participation in technology-based courses were a lack of supportive female faculty members and peer groups, limited opportunities for work after graduation, and an under-supported CS department. These factors, in combination with external forces, have contributed to women earning only about 13-18% of bachelor's degrees in computer science each year (Cohoon 112).

This downward trend has not gone unnoticed. In an attempt to attract women to lucrative careers in computer science, many concerned activists and school officials have asked how to make computer science more appealing to feminine tastes and how to change computer science programs to better suit the female mind (Frieze et al. 426). However, these initiatives, which rely heavily on the perceived differences between male and female personality traits, have experienced limited success. Male and female peers report that modification and simplification of department curricula in order to create a "more appealing" environment for girls with less coding experience is not only detrimental to educational standards as a whole, but also linked to reinforcing stereotypes that girls do not "dream in code," and therefore need special assistance to succeed in CS courses (Frieze et al. 427). Similarly, implementing strategies such as two separate gendered CS tracks propagates the idea that men and women are inherently different— with men preferring hard, fast code and women gravitating towards design and the application of computer programs on everyday life (Blum and Frieze 113).

By contrast, the computer science department at Carnegie Mellon University has adopted an approach to mitigating the CS gender imbalance that focuses much less on accounting for the perceived differences between women and men and more on leveling the playing field for all students regardless of gender. In order to revamp the stereotypical image of the CS program at Carnegie Mellon, the school has introduced high school outreach programs for students and teachers that provide coding and application experience before college (Blum and Frieze 115). In addition to providing the skills necessary to succeed and uphold a sense of self-confidence and accomplishment in challenging CS coursework, outreach programs have the additional benefit of recruiting a diverse range of students who otherwise may not have felt comfortable or even capable in a technology-oriented career. By advertising and exposing real-world tech career opportunities to boys and girls, programs such as these help to inspire a sense of personal belonging and interest among a wide range of high school students regardless of perceived gender roles or personal values.

In addition, the technology department opted not to change the curriculum at the expense of educational standards but instead implemented a series of seminars for incoming freshman that act to provide multiple entry points into CS coursework for interested students of different backgrounds (Blum and Frieze 116). The institution also altered the admissions criteria, paying less attention to prior coding experience and giving more weight to larger predictors of future success in computer science careers, such as "evidence of giving back to the community" or "problem solving" (117). Additionally, the school hosts a professional organization called Women@SCS that focuses on motivating women to continue their studies in computer science and to contribute their tech skills to a variety of causes on campus (118). Such non-targeting strategies at Carnegie Mellon have been very successful, with a significant increase in the participation of women in bachelor's degree CS programs from the national average (13%) to about 40% over the course of ten years (Frieze et al. 425).

In a survey with a subtle, eleven category questionnaire designed to uncover students' underlying gender stereotypes, upperclass scholars in Carnegie Mellon's CS program responded

unanimously with answers that transcended traditional stereotypes. Instead of thinking of computer scientists as antisocial nerds or geniuses, students reported that they thought of these individuals as "intelligent," "well-rounded," "and not the traditional geek." (Blum and Frieze 113). These surveys also revealed that offering a level playing field to students highlights more differences *among* genders than *between* them. Students of both genders reported a wide range of personal interests, beliefs, and tech skills that were not bound by typical gender expectations. Some females were just as competitive in coding classes as males, while males also had great successes in design and application classes (Blum and Frieze 115). Strikingly, both genders thought of the computer more as a tool for tackling problems in everyday life than as a machine that defined their likes and interests. A male student summed up the effort with grace:

> Computing is going to be affecting our whole society and it probably makes a difference on who is giving input into this, but that's just from the societal point. As far as being fair, that should just be dependent on whether they are interested or not. I would hope that it could be that just traditionally the field hasn't attracted women because it hasn't exposed, hasn't properly recruited them, so let's give it a shot. (qtd. in Blum and Frieze 116)

Similarly, other institutions have addressed these issues and developed successful programs that have boosted the participation of women in technical sciences. Instead of drawing on perceived differences between genders, Harvey Mudd College attributes its extremely high retention rates of women in CS programs to a system of skill-level specific introductory courses that place students with peers possessing a similar level of experience (Voosen 12). This strategy aims to mitigate the far-reaching effects of early male-oriented marketing strategies for computers, video games, and other devices that have left many women behind in hands-on experience as early as elementary school. In addition, Harvey Mudd boasts multiple skilled female faculty members and peer support groups for students to promote a comprehensive understanding of course material for women and men at all experience levels (Voosen 12). Interestingly, studies show that increased female participation is not the only benefit of including female faculty in computer science programs. According to survey results at schools across the US, both men and women were more likely to ask questions in class if the professor was female, perhaps suggesting that students feel more comfortable and competent when exposed to a diversified teaching staff that students can relate to (Cohoon 112).

With women comprising about 57% of the working population in the United States according to the US Department of Labor, these revamped models of study are not perfect, but certainly display a working understanding of how to correct and address the issues that institutions often experience when attempting to diversify programs of technical study by recruiting more women ("Women's Bureau - Data and Statistics"). Not only do these efforts improve the diversity of the field on paper, they also greatly enhance the outflow of ideas and productivity that were previously limited to a small group of people.

This analysis of the current state of computer science suggests some major reasons for the general lack of female interest in the field that we can correct in order to increase female interest in technology. Specifically, providing a network of supportive male and female faculty members as well as creating a hospitable environment for students of different experience levels are strategies that can have lasting impacts on the retention of women in CS programs. By altering the current antisocial and masculine stereotypes associated with technology, it may also be possible to invoke interest among a wider range of students by promoting and accepting a

more inclusive public image of the computer scientist. In the end, the gender gap present among computer science professionals is largely the result of a self-perpetuated belief that the field belongs to a very select range of people who have an innate, masculine and calculating talent. The main aim of CS programs throughout the country should be to wear down the barriers that have prevented many gifted individuals from contributing their talents simply because they believe they do not possess a certain set of traits and skills that are seemingly trademarks of a majority of those who succeed in the field. Computer science has and will continue to suffer from this illusion as long as western cultural standards continue to divert unique and individualistic approaches to age-old problems to other career paths.

Although we often overlook them, culturally perpetuated stereotypes of what it means to be a computer scientist have played a dynamic role in the shaping of the field, not only in the US but also abroad (and with dramatically different outcomes). Instead of focusing on shifting the stereotype of CS itself to the opposite end of the spectrum, it may be even more useful to recognize the innate talents and skills of a diversified group of men and women working together to produce a holistic view of technology. By addressing the concerns that have prevented women in Western culture from taking on careers in computer science, the realm of technological development has the potential to benefit greatly from a well-rounded and well-trained workforce that reflects the thoughts and concerns of a wider audience than previously possible.

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Conserving Culture: CBPR as a Framework for Group Research
by Ondrej Maxian

Recent research emphasizing shared genetic traits among members of a population has caused human subjects researchers to reexamine ethical standards surrounding interactions with groups. Specifically, the *Havasupai v. Arizona Board of Regents* case, in which researchers from Arizona State University (ASU) took blood samples from members of the Havasupai under the pretext of looking into their high incidence of diabetes, only to use these samples for research that stigmatized the tribe, drew a lot of attention to research misconduct between researchers and Native American tribes. In response to this, numerous reforms relating to beneficence, justice, and respect for persons were proposed among the research ethics community. Of these proposals, the only one that truly prevents future ethical problems, particularly in cases when scientific values conflict with cultural beliefs, is Community Based Participatory Research (CBPR), which successfully mends past breaches of trust between tribes and researchers by opening a channel of communication between the two. Additionally, despite claims to the contrary, CBPR can be successfully applied to larger, non-isolated groups that share a socially identifiable trait to prevent future ethical breaches.

Increased interest in groups that are "socially identifiable" is not surprising given the nature of genetics. Beginning with the Human Genome Diversity Project (HGDP) in the early 1990s, researchers have had an interest in finding out why members of a population with a common ancestor are particularly vulnerable or resistant to certain diseases. In the Havasupai case, this was true for both the original intent of the study and the later intent of the ASU researchers, as they were originally seeking to find out why diabetes was so prevalent, but wound up reporting that a Havasupai ancestor had been schizophrenic. The failure of HGDP was, in fact, a precursor to the failure of ASU researchers in the Havasupai case. Native Americans concerned about the possible consequences of HGDP's findings on their tribe's dignity were part of the reason the "plug was pulled" on HGDP (McGregor 2007, 359). Similarly, the Havasupai tribal council banished ASU researchers from their grounds after the latter published information about tribal migration and ancestry that contradicted the tribe's origin and migration story, thus possibly causing them to lose their rights to their sacred Grand Canyon land. Thus, the increased interest in doing research on groups has brought with it intense scrutiny about the results that should or should not be published by researchers.

Misconduct by researchers, while severe, is not the first time Native American trust has been betrayed by Western civilization. Deborah Morton et al. list tribal grievances against non-Native peoples as "theft of land, culture, language, children, sovereignty, natural resources, artifacts, and ancestral bones and native symbols, as well as lack of respect for values, culture, tribes, elders, individuals, religion, and sovereignty" (Morton et al. 2013, 2160). Given this long list of conflicts where Native Americans were downright disrespected by outsiders, it is not surprising that research misconduct has caused many tribes to refuse or even banish researchers from nearby universities.

In order to heal the divide between Native American tribes and researchers and ensure ethical research conduct, some ethicists have proposed new laws and regulations for researchers to adhere to. For example, Michelle Mello and Leslie Wolf propose a new informed consent process known as "tiered consent," in which participants in a study are given a sort of consent "menu" where they can specify what is and is not appropriate use of their sample (Mello and Wolf 2010, 204). However, in addition to it being logistically impossible to keep track of all the

potential uses of each *anonymized* sample against the wishes of the *named* person who donated it, calls such as this one for regulatory reform actually further marginalize Native American tribes. As Nanibaa' Garrison discovered when she interviewed IRB chairs and researchers in the aftermath of the Havasupai case, increased scrutiny of consent forms is only causing them to become more broad, causing Native American tribes to be less inclined to agree to an "all in" option for research studies, leaving them with no other option but not to participate at all (Garrison 2012, 216). She also points out that "increased regulation and broad consent language may… shift attention away from thinking about equal access … for research" (Garrison 2012, 216), evidencing that both Native American tribes and researchers are less inclined to work with each other in research if new regulatory reforms are introduced. It is therefore clear that regulatory reforms intended to protect Native Americans have had the opposite effect when it comes to working with tribes, further marginalizing them and preventing them from participating in research.

While some have sought to increase regulation on researchers, other proposed solutions advocate making it easier for Native American tribes to seek redress against rogue researchers. For example, Kristof Van Assche et al. argue for three important reforms to the tort system so that tribes like the Havasupai can be compensated for their losses as a result of research misconduct. Namely, Van Assche et al. call for a fiduciary relationship between researchers and their subjects (so that participants can seek reparation for breach of fiduciary duty) and an expanded scope of harm to include dignitary harms, which they define as harms resulting from "participants not being treated with the dignity they deserve" (Van Assche et al. 2013, 54). They also claim that easing the burden of proof on the tribe to prove such harms would help them win lawsuits, thus making it more imperative for researchers to work with them ethically (Van Assche et al. 2013, 79-81). While these solutions do indeed make it easier for tribes to seek financial compensation, they do absolutely nothing to heal the divide between researchers and tribes, which is in fact the real threat to continuing research, as long, drawn-out court fights would only add bitterness to an already toxic situation. Consequently, it is clear that amending existing tort law to allow for more lawsuits between tribes and researchers will only perpetuate the existing climate of distrust between the two sides, preventing future beneficial research.

Instead of cumbersome regulatory and legal reforms, research ethics should focus on cooperation between researchers and tribes and a balance of tribal beliefs and scientific goals. Because tribe and group members are the best advocates for their values and researchers are the best advocates for scientific progress, a sensible solution is to have the two parties work together in Community Based Participatory Research (CBPR). Anna Harding et al. present their version of CBPR when working with the Confederated Tribes of the Umatilla Indian Reservation (CTUIR). They lay a framework for negotiation between tribal elders and researchers that includes agreement on the "purpose of the project, types of material and data collected," constraints on "material and data use," agreements about "data access and security," risk-benefit analysis, and mutual review of any potential publications (Harding et al. 2012, 9). The negotiation and agreement on each major part of the research project thus allows tribal leaders, who are used to speaking for the entire tribe, to know and understand what they are agreeing to and be advocates for the researchers in recruiting participants. The interests of both parties are then properly balanced: researchers are able to make discoveries and produce publications while the tribe is able to gain knowledge about diseases or other genetic traits that characterize it.

In addition to addressing the balance between scientific values and cultural beliefs, implementation of CBPR prevents any Havasupai-like case from occurring in the future because

it successfully bridges the present gap in trust between researchers and Native American tribes. To begin, CBPR forces researchers to reveal the real project scope to tribal elders, and thus in the Havasupai case the tribal council would have only given license for diabetes research. The tribal council can then monitor this research by making sure constraints on sample use are properly implemented, and could demand the return of samples were these agreements violated. This component of CBPR rectifies a key cultural difference between researchers and Native Americans: the value of blood samples. Katherine Drabiak-Syed discusses the long-held Havasupai (although not uniquely Havasupai) belief that members need to have all of their blood buried with their bodies in order to pass over to the "spirit life." Accordingly, she states, the three members of the tribe who passed away while the study was ongoing were never able to pass over to the "spirit life," causing emotional harm to their families (Drabiak-Syed 2010, 214). CBPR addresses this grievance, as agreements over material access allow tribal families to access the blood samples and bury their loved ones in peace. Once again, the ability of CBPR to address the failures in the Havasupai case shows its applicability in working with Native American tribes when researchers are not privy to key parts of tribal culture.

An interesting extension of CBPR that best represents its goal is the introduction of a tribal IRB that has both input and final say in all parts of a study involving tribal members. Morton discusses her group's experience with the California Indian Health Council (IHC) IRB, in which she states that the IHC IRB was able to analyze cultural risks and benefits effectively because they themselves were tribal members and therefore experts in tribal beliefs. Meanwhile, since they were all employed by the tribal clinic, IRB members were also professionals in science and could therefore effectively negotiate a research proposal and make sure that consent forms were understood by tribal members while accurately reflecting the goals of the study (in this particular case, consent forms were read aloud to the participants, which allowed researchers to easily confirm subjects' understanding of what would occur in the trial). Finally, the tribal IRB promoted participation among patients of the tribal clinic and reviewed any potential publications with medical expertise (Morton et al. 2013, 2162). Most importantly, every tribal member who received services from the clinic was assured that the researchers could be trusted, allowing them to "release their… negative concepts of … university scientists" (Morton et al. 2013, 2162). While the tribal IRB does add an extra level of tribal authority to CBPR in giving the tribe final say over all decisions surrounding a study, it can be viewed as an extension of CBPR because it effectively accomplishes all that CBPR sets out to do: ensure ethical research while bridging the trust gap between researchers and tribal participants. While it is not essential for CBPR, the tribal IRB is certainly a useful tool for tribes that are adequately suited for it.

It will inevitably be argued by those who favor the regulation approach that CBPR is simply too cumbersome and therefore discourages researchers from working with Native American tribes. However, CBPR is, by definition, a way of *increasing* participation from tribal members in research. In fact, CBPR represents the most effective path to work with Native American tribes because, by its implementation, tribal members are more inclined to trust researchers and therefore participate in the study enthusiastically. The alternative, where members feel forced to participate and are not actively encouraged by their tribal council, all while feeling a looming sense of fear and distrust for researchers, is far more dangerous. So CBPR is not just a way to ethically do research on tribes; it is a way to encourage tribes to participate in research and ensure trust between the members of the tribe and the researchers who work with them.

While CBPR is undoubtedly the most effective way to work with tribes and ensure ethical research in small, structured groups, many of its opponents argue that it cannot be effectively generalized to groups other than small Native American communities. But there are many groups that have their own motives for research and have a structure similar to Native American tribes that also feel a sense of distrust for the researchers. For example, foundations centered on looking for cures for rare diseases, often started by parents whose children are inflicted with the disease, present a good opportunity to conduct CBPR. In these cases, the fight of parents against time is pitted against the slow process of proprietary publication and intellectual property rights in a cultural battle. In *Greenberg vs. Miami Children's Hospital*, parents that were part of a Canavan disease foundation sued a Miami Hospital after it halted research and testing on the disease by claiming a royalty on use of the gene for Canavan disease that one of its researchers had discovered (Lewis 2012, 200-201). Here it is clear that the importance of the ownership of the gene trumped the parents' fight against time. But a CBPR-type agreement prior to the research being conducted would have prevented these values from ever coming into conflict, as the parents would have been able to stipulate prior to the research being conducted that their goal was for the test to be offered free of charge. For example, Hannah's Hope Fund, a group run by parents of children with giant axonal neuropathy (GAN), supplies grants to and monitors researchers in a CBPR-type collaboration, allowing both sides to retain ownership of any discoveries so that future progress will not be impeded (Lewis 2012, 168). It is therefore clear that the use of CBPR is not limited to Native Americans; it can also prevent other cultural-scientific conflicts, such as this one that pitted scientific ownership against parents' concern for their children's health.

CPBR can also be applied when researchers are looking to work with larger, unstructured groups that share a socially identifiable trait. As with small, structured groups, members of larger groups such as the African American or Hispanic communities can suffer from dignitary harms as a result of research. For example, conclusions about a particular disease, such as schizophrenia, having a higher incidence among either population would lead to stigmatization just as it did with the Havasupai. In this case, it is still possible for the group to have leaders chosen from its ranks that can effectively represent the interests of its members. When implemented in this manner, CBPR can be effective when working with larger, unstructured populations.

An excellent way for CBPR to be applied among larger populations is for the group to select an internal structure for itself. Lainie Freidman Ross et al. explore the complexities of working with unstructured groups, arguing for the implementation of CBPR among these populations. They offer three possible avenues by which groups can become structured: researchers can choose representatives of the group, a third party organization can empower the group to structure itself, or the researchers can empower the group to structure itself (Ross et al. 2010, 11). The first case, as Ross points out, is toxic since instructions from leaders that the group might not perceive as legitimate will likely be ignored. However, if the group is able to structure itself, those leaders will be perceived as legitimate and can therefore effectively negotiate for the group, implementing CBPR effectively and ensuring ethical research in the same way as for Native American tribes.

The means by which leaders and representatives are selected for CBPR will vary from group to group. Consider two representative examples, the African American community and the community of homeless people in Ohio. The African American community is a large group which spans all regions of the education spectrum. As a result, there is no shortage of potential

experts that could form an "African American IRB" and/or become leadership that negotiates with researchers. The difficulty here is in selecting representatives, but in reality this is not as complex a task as it seems. In fact, African Americans and other large, diverse communities already have leadership in place through organizations such as the NAACP and Congressional Black Caucus. These leaders already represent and speak for the African American community on a variety of social justice issues, and it is not unreasonable to add research ethics to this list. The idea for developing "internal leadership" of larger, unstructured groups would therefore be to effectively combine the leadership from already established sub-groups, leaning on informal leaders of the entire group to form a "council" of experts in medicine and other leaders that could effectively work with researchers to implement CBPR.

On the other end of the spectrum, groups that have little gap in education level and yet no established leadership, such as the homeless, might be unable to find effective leadership simply because of their nature. For these groups, a third party source that already interacts with the group should be chosen to both represent and empower the group to select some representation. Ross points to the fact that there are already organizations in place that care for homeless people by providing them food, shelter, and clothing (Ross 2010, 11). It is obvious that these groups have the best interests of the homeless at heart, and so allowing them to negotiate with researchers in a CBPR-type collaboration would ensure that the homeless would both benefit from a research study and be protected from any possible dignitary harms that might result from it. Furthermore, third party groups already familiar with the homeless would be able to bridge the cultural divide between one group of people whose goal is to survive each day and another whose jobs are in jeopardy if all they do is "survive" without a publication. Therefore, CBPR can be effectively implemented and ensure ethical research with larger, unstructured socially identifiable groups whose cultures are also different from that of researchers so long as proper leaders are selected for the group, whether through third party or internal means.

It is often at this point that opponents of CBPR reject it, finding it absurd that any large, more diverse group can be represented against a larger research institution to the group members' satisfaction. They contend that the collective culture of Native American tribes is what allows group representation by the tribal council to supersede individual autonomy, and that as a result it is not possible to apply CBPR in non-tribal settings (Harding et al 2012, 6). However, these opponents miss the point that allowing individuals to participate in research despite objections from group leaders opens up the entire group to third party harms, no matter whether the group places value on the individual or collective identity. They also fail to offer any effective alternatives other than increased laws and regulations, which once again remove justice from research by marginalizing groups. As Ross states, researchers having to negotiate with leadership *in addition* to individuals can only protect individuals further (Ross 2010, 11). The fact that these leaders are either part of the group or advocates for a vulnerable group, and therefore well-versed in their culture, only strengthens the case that they protect it, as they undoubtedly keep the group and its members' best interests at heart. Thus selecting leadership for a group to implement CBPR provides the additional protection it needs against dignitary and cultural harms, some of which could be caused by individuals who unknowingly subject their peers to third party harms via their participation.

The final question to be answered after considering smaller and larger groups is how to ethically work with large groups that do not share a socially identifiable trait. In this case, no changes to current regulations are necessary because there is no risk of cultural, dignitary, or third party harms. For example, consider a sample of the people of Arizona that just so happens

to include a member of the Havasupai. Some would argue that the Havasupai sample should be clearly marked so that it is not used for any tests that are not condoned by the tribe, but this argument misses the point entirely. The purpose of CBPR, and any possible reform for that matter, is to bridge the gap between conflicting cultural values and in doing so protect against dignitary and cultural harms that could result from research. In the case of research on large, non-socially identifiable groups, there are no novel cultural values to be concerned with aside from basic human decency. In this case, marking the sample as Havasupai, as opposed to keeping it anonymized, would only open up the possibility of cultural harms, as tests done on the sample would be known to give results about Havasupai blood. According to Mello and Wolf, "case law is fairly clear" that researchers are permitted to use anonymized samples in any way they wish without seeking donor consent (Mello and Wolf 2010, 205). This should not be changed for large, non-socially identifiable groups because it will be impossible to line up any results from an anonymized sample with a particular socially identifiable group, therefore making it impossible to do any harm to this group. Some contend that the sample should be marked Havasupai in order to prevent it from being used in an objectionable way, but this path creates the need for burdensome record-keeping which could once again marginalize tribal members in addition to opening up the possibility of stigmatization. Therefore, current law provides adequate protections for large groups where any one particular sample cannot be identified as from a person with a socially identifiable trait.

It is clear that necessary changes to research practice when working with groups are most drastic for small, structured groups and are not necessary for large groups that do not share a common trait. This scale of changes can also be lined up with the strength of the cultural values of a particular group. The stronger and closer-knit a particular community is, the more precautions must be taken when working with it in human subjects research. For small, tribal communities, researchers should implement CBPR and work with tribal leaders and, if possible, a tribal IRB to ensure ethical and responsible study scope, data gathering and access, and publication of results that do not inadvertently inflict harm on a group. This framework can also be adapted to larger, unstructured communities with more informal leadership, where leaders can be selected through third party or internal framework. These larger groups still have cultural values that are different than those of the researchers, although they might be less obvious and more nuanced than those of Native American tribes. Leaders who are also experts in the group's culture can therefore only *help* protect the group against harm, as they hold the groups' best interest at heart and can ensure ethical research is done. Finally, for groups that do not share any identifiable traits and thus no distinct cultural values, no changes are necessary as existing regulation ensures anonymizing of samples and renders it impossible for any harm to be done. Implementing CBPR-type reforms when working with groups will eliminate the stigmatization that surrounds researchers who are simply attempting to make scientific progress while healing the trust gap between researchers and participants, making human subjects research great again.

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