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Human.exe: Generating Critical Theories of Humanity in Human-Computer Interaction

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An abstract of
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Abstract

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Human-Computer Interaction (HCI), a subfield of computer science, emerged from recognizing the disparate effects of technology and algorithms on its human users. The field seeks to intervene in technology that replicates or exacerbates the oppression present in society. While this field is necessary, HCI often falls short of its goals due to its normative definition of human that erase the nuance of marginalized people's experiences. In recognizing this, I will show how critical race and feminist philosophy offer a crucial intervention, enabling a critique and analysis of technology at the level of effectiveness HCI aspires to do – to mitigate the structural marginalization of oppressed people that technology has observably amplified. In this paper, I will interpret Sylvia Wynter's concept of human, critiques of techno-utopianism and technoliberalism, and techno-Orientalism, which explore the definition of human through an intersectional, humanistic perspective. I will then analyze and critique how HCI integrates critical theory into its practice and how this can be improved. Throughout this paper, I hope to display that the objectives of the HCI field are attainable and that the theory to achieve these goals does not need to be built from the ground up. To accurately and ethically create technology for all humans, the critical analysis established for decades can be used to create the most liberatory, or at the very least, not oppressive technology going forward.

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Introduction

In my sophomore year at Emory, I was a Computer Science student. For one of my electives, I decided to take a Women, Gender, and Sexuality Studies class with Dr. Alix Olson that resulted in my major in the subject. In this class, we critiqued and analyzed oppressive structures of power. This process caused me to realize that the technology I learned about in my Computer Science classes can be and is weaponized as an intersection, combination, and result of oppressive systems like capitalism, white supremacy, and patriarchy. When searching for an existing field that addresses and aims to rectify this, I stumbled upon Human-Computer Interaction. While exploring this field, I found a surprising absence or shallow application of critical theory in a field that is now concerning itself with combatting the replication or exacerbation of existing systemic inequities in technology, especially artificial intelligence. This discovery led to the cultivation of this project.

In noticing the issues of exacerbating the structural oppression of marginalized groups, the necessity of auditing and intervening in the design of this technology reveals its importance. Human-Computer Interaction (HCI), a field dedicated to improving technology and its effects on its users, was tasked with trying to mitigate bias and stop these flawed algorithms from being produced. This shift in focus caused HCI research to explore deep, existential questions about what it means to be human, who is considered human, and how the concept of human is affected by the advancement of technology. Because of this, I argue that scholars should further integrate critical theory into HCI and technological design by aggregating a symbiotic and nuanced definition of the human using philosophy and decolonial theory. After establishing this basis, I will use the analytical lens cultivated by critical theory to analyze HCI scholarship.

In Chapter I, I outline critical, philosophical, and analytical theories of the human that relate to technology and utilize call centers and their technology as a real-life example of these abstract

phenomena. In the first section, I will summarize how Sylvia Wynter, a female black Caribbean philosopher, conceptualizes the human from a decolonial perspective. Building on this, I will extend her work into the present day with my own analysis of Man. The second section integrates Atanasoski and Vora's critique of techno-utopianism and technoliberalism into this research on humanity and technology's relationship. Next, I catalyze all of these abstract theories into the tangible example of call centers with a structure of outsourcing that exists today. Lastly, I add techno-Orientalism to represent the multiplicity of ways different genres of humans are portrayed and represented. This analysis aims to question, shape, and change the technological design by questioning whom technology is designed for because it affects the intimate lives of all people, especially structurally marginalized users of this technology.

If it is unclear how the critical theories of the human that I lay out in the first chapter can affect and be implemented in the HCI field, the second chapter serves as an example. First, I gave a brief overview of the goals and history of Human-Computer Interaction since this work's interdisciplinary nature could interest many scholars previously unaware of the field. HCI is currently in its third wave, a period whose goals nicely complement the black feminist concept of intersectionality. Due to this, in the second section, I will analyze how intersectional thinking has influenced HCI and how its implementation can be improved. Lastly, I will utilize a queer and intersectional framework to analyze an HCI outsourcing call center article. This chapter can exemplify how critical theory can be implemented into HCI work and research more tangibly.

Chapter I: Critical Theories of the Human and Technology

In this chapter, I explore how critical theories of the human can be applied to technological innovation. First, I integrate Wynter's theories of the human with today's more advanced technologies. This theory is then combined and synthesized with Atanasoski and Vora's critiques of techno-utopianism and technoliberalism, highlighting that structural and societal changes are necessary to achieve a specific aspirational future. These concepts are exemplified through call centers, their technology, and their greater societal structures. Because of the race of the majority of call center workers, a techno-Orientalist lens is added to provide perspective on how Eastern racialization manifests in society. All in all, this chapter briefly surveys critical theories concerned with humans and their relationship to technology. This amalgamation of humanities scholars' work can be informative to technological design and how HCI defines the human, implicitly and explicitly.

A Wynterian Study of the Geneology of White Supremacy

Sylvia Wynter's work explores topics such as how the ideal human is constructed, who this ideal human is, and why from a decolonial perspective. One foundational concept in Wynter's conception of the human is the notion of "genres" of the human. These genres are similar to how we might think of music or movie genres, such as country, rap, action, and romance. In this case, these human genres correspond to social markers such as race, gender, sexuality, ability, and class. Wynter furthers this conception by arguing that a specific genre of humans is over-represented. Man is over-represented to the point that they theoretically represent the entire category of human (or those that deserve to be treated humanely) in the popular imagination, regardless of the widely accepted biological definition that includes all homo sapiens. In her words, the "Western bourgeois conception of the human, Man…overrepresents itself as if it were the human itself" (Wynter). This quote indicates a differentiation between the common conception of markedness or othering caused

by the oppression associated with social markers and the need to universalize all human beings into a figure of a Cisgender, Heterosexual, Able-bodied White Man. This universalization then ejects the people that do not fit into this figure from their social standing as human and creates a need to strive toward this ideal. Essentially, Wynter recognizes that non-hegemonic genres of humans are not necessarily treated as worse but still as human. On the contrary, she argues that they are not treated as human at all. This phenomenon causes whom she calls "human Others" to acquiesce to white supremacist values to get closer to embodying this specific genre of the human rather than regard their own culture as the same level of humanity as the white ideal.

Sylvia Wynter's Man1 and Man2 were the ideal conceptions of human at their respective times – how white people viewed their own whiteness. Man1, *homo politicus,* situated himself above non-white people and below God because of his godliness and morality. Man2, *homo oeconomicus,* had a more rational approach where he was still superior to non-white, non-men but because of his superior intellect and scientific knowledge. Consistent between the formulations of Man1 and Man2 is that man (within the European context) was forced to reckon with the realization that they were not as exceptional as they previously thought. A prominent Wynterian scholar, Kathrine McKittrick, characterizes Man1's invention as "alongside the rise of the physical sciences, the decline of supernatural planetary socio-spacial organization, and evangelistic contact" (McKittrick). As can be seen by this assertion, Man1's realization was brought about by discovering that Earth–and consequently humans–was not the center of the universe in the Renaissance period. Therefore, Europeans, specifically European men, had to adjust their perception of their social place in the world because they realized their physical position. This realization occurred when these same Europeans traveled to countries populated by what we now label as non-white-raced people to evangelize about Christianity. The significant role of Christianity in European society at the time caused them to use their religion to rationalize the view that white people were more civilized,

special, rational, good, and remarkable than all others in the world. As a result, Man1 considered his social place to be between non-white people and God. This meant Man1 came to be seen as moral and natural, while non-white people were considered irrational, unnatural, and abnormal. Human Others were seen as enemies or even juxtaposed with Christ because of their different religious and general societal practices. All of this culminated in the shaping of Man1.

The formulation of Man2 occurred when the Europeans stumbled upon what they dubbed the New World. They also encountered indigenous people who considered the Americas their home long before the Europeans encountered it. This coincided with the rapidly increasing transatlantic slave trade and settler colonialism that caused the mass genocide of the indigenous people. This combination of interactions with human Others resulted in the invention of Man2 "alongside the rise of the biological sciences, transatlantic slavery, and land exploitation. In both [Man1 and Man2's] cases, humanness was re-evaluated, produced in a classifactory, contextual, ideological manner—theologically/scientifically and then secularly/biologically" (McKittrick). This "production" was caused by Europeans having to retroactively justify why and how their inhumane treatment of indigenous and African people was moral and still aligned with the religion that Europeans identified with. This all came to a head in the Enlightenment period, which coincided with the rise of the biological sciences. Therefore, in pursuit of the profitable agenda of colonizing the Americas and forcibly enslaving Africans and transporting them, Man's reasoning and justification for his actions became secularized. This, Wynter argues, led to the cultivation of Man2. Man2, and consequently human Others, were defined through biological and scientific means from that point on.

Man2's definition was cultivated by emphasizing intelligence as a valuable or sought-after characteristic in many ways. This emphasis manifested in the pseudoscience of phrenology, which provided a scientific basis for deeming other races as naturally less intelligent due to their different

brain and skull shape. These practices, among others, contributed to the invention of the racial system as we know it today.[1] Analyzing oppressive structures as intersectional and co-constitutive is vital to examine the current racial system accurately. In *Fearing the Black Body*, Sabrina Strings highlights a specific example of how religious values intersected with scientific backing to degrade human Others: the intersection of fatphobia and anti-Blackness. She explains how 16th-century Protestantism interpolated these concepts to fuel the oppression of the other. She shows readers how intersectional oppression culminated by combining fatphobic and anti-black rhetoric. Essentially, fatness was demonized in the church because of its association with gluttony. The church associated gluttony with savagery and immorality because, according to this view, the civilized should be able to regulate and restrain themselves from excessive eating and weight gain. The attributes of gluttony, savagery, and immorality contrasted with European Christian ideals of abnegation, civility, and virtue. The degradation of fatness coincided with the Europeans using scientific critiques of non-white bodies and associating them with fatness. The way fatness and race were bound up made being one doubly illicit. This is just one example of how science and religion were used to uphold white supremacy. It demonstrates just one way Man2 differentiated and socially segregated himself from human Others. Additionally, this example illuminates how the production of Man and human Others is typically manifested through the degradation of intersectional oppressed identities.[2]

More formal social theories, such as social Darwinism, began to coalesce in the centuries after the Enlightenment. This, too, served to further white supremacy. Essentially, social Darwinism advanced the notion of "selectedness," whereby a better-evolved subset of a group would flourish

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[1] For further information about race before race, consult Thompson, A. (2021). Rejected: Introducing the stakes of premodern critical race studies. Literature Compass, e12648. https://doi-org.proxy.library.emory.edu/10.1111/lic3.12648

[2] I will expound on intersectional thinking and its impact on technology in Chapter II.

and populate more. Other groups would eventually die off and become less populous. Due to the racism of the time, Anglo-Saxon Europeans viewed themselves as "selected" within the realm of all humans in the Darwinist framework. Theories such as this fueled the eugenics movement, which included the population suppression of black, poor, and differently-abled bodies while bolstering the population of white, middle-class, upper-class, and non-disabled people (Sussman). According to Wynter, this belief further shaped Man2 because this naturalized and almost divine notion of selectedness of Man2 (and subsequent dysselectedness of human Others) directly correlates with Man1's view of his own positionality in relation to human Others and God. In Wynter's argument, the consistency between Man1 and Man2 is white supremacist patriarchy. The difference between them is how white supremacist patriarchy is invoked: Man1 used religion, and when religion failed to adequately justify the indefensible atrocities enacted toward black and brown people, Man2 turned towards science to provide the justification. As a result, there is not a complete rejection of religion in the transition between Man1 to Man2, but Man2 had to scientifically back the notion that human Others are inherently inferior, less intelligent, and amoral to justify how their horrible treatment still aligned with their religion. They used science to dehumanize human Others in order for their actions to be justifiable to God.

Man3, *Homo Divinus*

Although Wynter's conceptions of Man only consist of Man1 and Man2, I argue that in the 21st century, a new conception of Man – Man3 – has emerged. I believe the advent of technology, specifically widespread technology that primarily serves as a replacement for human interaction has caused a third reckoning in the conception of human and the positionality of Man. The major dissemination of smartphones with voice assistants and technology that uses Artificial Intelligence and Natural Language Processing (Siri, for example) to simulate typical human conversations caused

a tipping point due to its widespread use and human-like qualities. This led to a third reconceptualization of the concept of humanity itself.

As previously stated, Man2 defined and differentiated himself through his rationality and alleged superior intellect. In our current state, with AI assistants like Siri and Alexa that have the entire internet and billions of people's knowledge at their fingertips, the rapid access to information has produced a challenge to Man's knowledge in only a matter of a few years. Just as Man1 realized that he was not superior in the ethicality or godliness department, which led to a refocusing on the scientifically-backed supremacy of Man2, Man2 realized their perceived standing as the most intelligent human-like form had been contested. This awareness leads to Man3, The Divine Man, who invents his supremacy by being godlike. Instead of Man1's commitment to Christianity in which he serves God, Man3 *is* the God.

This theory draws from the pattern of religious imagery in technological spaces. For instance, the company Apple's store's pure whiteness evokes heavenly imagery, the bitten apple logo is reminiscent of the story of Adam and Eve's original sin, and technological expos include speeches like that of a religious preacher. When the iPhone was announced, it was quickly nicknamed "the Jesus phone" by many tech bloggers (Campbell). This is consistent with how what many call "tech bros" are viewed in society – with status and genius. The religious rhetoric from Man1 and the inclination towards a specific kind of intelligence needed to create this technology from Man2 contribute to the cultivation of Man3. It is widely known that the technology industry is largely white and male. Although voice assistants and human-like technology led to a recontextualizing of the human and challenged Man's intelligence in some ways, the fact that Man created it resulted in them ascending to a godlike standing. Instead of completely rejecting the rationality of Man2's period, Man3 utilizes this view to make rationality the religion itself. The people who made the tech

are to be praised and valorized, drawing a connection between the creators of this tech and the ultimate creator, God. As with Man1 and Man2, this new strategy of hierarchy presents new formulations of the degradation of human Others.

Techno-Utopianism and Technoliberalism

Neda Atanasoski and Kalindi Vora provide an illuminating analysis of the stratification of humanity, beautifully complementing Wynter's work, that manifests in the ever-changing human and technology relationship in their book, *Surrogate Humanity: Race, Robots, and the Politics of Technological Futures*. A central concept in this book is techno-utopianism, a common liberal belief that humanoid robots will "take on dull, dirty, repetitive, and reproductive work associated with racialized, gendered, enslaved, indentured, and colonized labor population" (Atanasoski and Vora). Many people believe that humans and technology will ultimately get to the point where technology can do the often disliked labor that is necessary for society to function. This re-organization would free humans from managing trash, cleaning, and driving buses so they could pursue their passions or spend their time relaxing. While this vision of the future may be attractive, Atanasoski and Vora recognize that in addition to technological progression, much social and structural work must be done regarding marginalized people for this to become a reality. This claim is supported by the recognition that structurally oppressed people often perform this labor. Since they are not yet treated as or considered human, a vision of all humans being treated equally and able to relax while technology does undesirable work for them is out of reach.

Atanasoski and Vora's analysis also questions the formulation of the humanoid robots within the techno-utopian framework. They push the readers to ask whom these robots are made to replace, whom they are made to imitate, and how this affects minorities and oppressed people. When adding to their critique of techno-utopianism, Atanasoski and Vora define technoliberalism as

"the political alibi of present-day racial capitalism that posits humanity as an aspirational figuration in a relation to technological transformation, obscuring the uneven racial and gendered relations of labor, power, and social relations that underlie the contemporary conditions of capitalist production" (Atanasoski and Vora). In other words, humans are often positioned above technology, but this does not consider factors that socially and structurally stratify humans. For humans to be able to relax while humanoid robots are doing undesirable but necessary tasks, there is an assumption that there is a clearly defined concept of human that has not been stratified through race, class, and gender. However, as decades of decolonial and intersectional feminist work have shown, human stratification is real. Therefore, there has to be a larger reckoning and reconciliation of human stratification to achieve this aspirational future, granted this is truly what we should aspire to as a society.

When examining technoliberalism, the authors acknowledge that a "tension arises" in bridging the gap between our current world and the ideal, techno-utopian world "because even as technoliberalism claims to surpass human raced and gendered differentiation, the figuration of 'humanity' following the post- of postracial and postgender brings forward a historically universalizing category that writes over an ongoing differential achievement of the status of 'the human'" (Atanasoski and Vora). These authors recognize that technoliberalism necessitates treating all humans humanely. However, due to people's marginalized identities, they are not always considered or treated as human. Therefore, until this happens, technoliberalist and techno-utopian futures can never truly be reached.

Call Center Work and Sanas

A real-life example can show how Wynter, Atanasoski, and Vora's theories can be applied. Suppose an American consumer has an issue with the technology they purchased. In this case, they

are typically instructed to call a phone number that connects them to a call center. Typically, the call center is not located near them but rather in a country like the Philippines or India. This is because when companies need IT or customer service, they typically outsource or pay a separate company for this service because it is less expensive. Oftentimes, the customer is frustrated because the technology they purchased needs to be fixed, and they have to go out of their way to call and ask for help. When the call center worker receives this call, they must simultaneously emotionally regulate the agitated customer while helping them fix the technological problem. Because of this additional duty, call center work has been considered emotional or "affective labor," a concept explored in feminist and critical theory (Mankekar and Gupta). Additionally, call center agencies have found that wealthier Western customers residing in the US, Europe, and the global north are the most satisfied and easy to communicate with when the call center worker is like them. When the worker produces an image of a person with the same culture that speaks the same way as the Western caller, they exude a relatable air. This is encouraged because, operating within the logic of this theory, if the call center worker and the customer share the same background, the customer is less likely to develop an adversarial or oppositional relationship to the worker.

To gain these results from the callers and consumers in the West, call center workers undergo accent, de-escalation, and assimilation training to cater to the caller's emotions and culture (Mankekar and Gupta). Cultural training can even go as far as workers changing their name at work to an Americanized one for the sake of easy pronunciation and relatability to their Western callers. Call center workers even do speech drills such as tongue twisters of English words commonly pronounced differently than in America (Fabros). This practice attempts to ensure that Western customers do not have complaints or are inconvenienced by receiving aid from someone with an accent they do not understand. There is an engineering of proximity and relatability through the commitment to this training. Due to bigotry and structural factors impeding people from different

backgrounds from seeing eye to eye, call centers have elected to make their workers appear to be neighbors in both location and culture. The appearance of proximity and relatability attempts to mitigate the cultural and geographical distance that often causes adverse reactions from Western customers that are often already agitated.

Along with intensive accent and culture training, call center workers have to take calls live from the West, meaning that their "work day" occurs while the rest of their country is sleeping, and their recuperation from work has to occur during the day. This means that they are "cut off from the normal rhythms of social life," which "fortifies" their "camaraderie" with only other call center workers (Fabros). This means that although this job is marketed as attractive because workers do not have to move to another country to find work, they must assimilate into Western culture in almost every way. Due to the intensity of this task, their work extends beyond the confines of their work hours. Fabros was advised to watch American television shows like *Friends* to perfect the accent in the language they only speak at work (Fabros). Additionally, their work and sleep schedule is so different from everyone they are around physically that they are socially removed from their country. This removal reveals how call center workers in the East are not considered or treated as humans that need socialization, camaraderie, culture, and acceptable working conditions. In a way, they are treated as robots that are assigned a task and do not need or want the things that make all of us human.

Because of how information capitalism functions, call center work is outsourced because it is cheaper, able to be remote, undervalued, and not typically people in the West's dream job. One consequence is that the Western consumer could be unsatisfied with the consequential "internationality" of outsourcing – an interaction with a different culture, accent, and way of life. The desire for a proximal (near in culture and accent) but outsourced (cheap labor) call center

worker is so universal that Sanas, an artificial intelligence company, made a technology for it. To aid in the further assimilation of call center workers, the company has created a scarily similar technology to the "white voice" in the movie *Sorry to Bother You* (*Sorry to Bother You*). In this film, Cassius Green is a black American call center worker that is unsuccessful. This changes when one of his black co-workers suggests he uses his white voice, a dubbed-over voice that is a noticeably different white actor, which causes him to make his first sale. The Sanas software similarly intakes audio of a non-white, non-American accent and outputs the audio in what is supposed to be a white, American accent. The reality is that it comes out flat and robotic. This natural language processing (NLP) technology takes most of the life out of the original voice just to cater to the accent that callers in the West are accustomed to. The inflection of the inputted speech is warped, and it is obvious that the audio has been distorted by a computer. It would be difficult to tell the difference between different voices after Sanas's technology has processed the audio. Taking out the voice's inflection, human quality, and individuality furthers the dehumanization that call center workers experience structurally and through potentially racist callers.

The Sanas technology is marketed for companies that have workers with non-white, non-American accents to fit in or assimilate better. There are seemingly empowering statements all over the Sanas website, such as "Make Yourself Heard" and "Your Voice. Your Choice" (*Hear The Magic*). These phrases show that the website is marketing its product as an empowering tool for the non-white, non-Western consumer, even though technology like this can uphold white supremacy by erasing cultural variation. Instead of problematizing the structure and institutions that uphold the ridicule or humiliation call center workers may encounter due to insensitive callers and providing a temporary solution, they market this as a pull-yourself-up-by-the-bootstraps way of navigating systemic inequities. Despite Sanas's targeted market, call center companies that service with callers

from the West, the ultimate consumer is a Western consumer. The caller will be appeased because the technology is made in the image and desire of the Western consumer.

The "tension" that Atanasoski and Vora highlight between the ideal techno-utopian world and reality is evident in the example of call centers and Sanas's technology. In the techno-utopian world, there is a single, unshakeable definition of human, and all humans are treated equally and humanely. Call centers directly contradict techno-utopianism because repetitive, degraded, and unwanted labor is being outsourced and pushed onto those with fewer choices of upwardly mobile financial options. This lack of options is a result of imperial powers exploiting the global south's homes and countries for natural resources and economic gains. Additionally, Sanas's technology shows that this unshakeable definition of human is not the case in the real world because this technology is made for humans that are looked down upon by other humans because of their differences. In this situation, the power between humans is imbalanced because race and gender differentiation have not been surpassed, as technoliberalism and techno-utopianism would require. It assumes that the Western consumer would rather hear a robotic voice meant to emulate white American speech patterns than an actual human that sounds different from the regional accent the callers are used to. This assumption contrasts the technoliberal assumption that all humans are aspirational figures to technology.

Additionally, the call center workers are meant to do the dull, repetitive, and tiring task of call center work. Therefore, Western consumers benefit from this labor while the people in the East provide the labor – a more stratified image than techno-utopianism's equal, ahistorical picture. One may argue that this configuration is simply because adequate technology has not yet been made to replace this work; this state will simply progress into a techno-utopia once the technology is made. I – and presumably Atanasoski and Vora – would argue that this trajectory has not been made in the

past. While self-driving cars have been invented and released to the public, the majority of people that are not rich still have to drive because they cannot afford this technology. This automation can be used by the rich and elite – the human – while others do not have this luxury. Therefore, society has to make economic, social, and structural strides for this techno-utopia of automation for all to come to fruition.

The authors acknowledge the technoliberal notion that "rather than freedom being on the side of modernity…the states of both freedom and unfreedom are part of the violent processes of extraction and expropriation marking progress toward universality" (Atanasoski and Vora). The concept of modernity, "or being modern," is often linked with freedom, like how the US is widely seen as modern, liberal, and free. In the quote, the authors trouble this notion by acknowledging America's destruction of other countries are the basis of its wealth. Additionally, they acknowledge the effect that modernity and technology can have on people – the universalization or collapsing of variation into a single archetype – something that should not indiscriminately be associated with freedom. Sanas's technology is an example of this phenomenon. Because of Americanism, America and the West are generally conceptualized as the default accent, culture, and way of life by most of technology's creators. This NLP algorithm quite literally takes the variation of culture out of the call center worker's voice and changes it to the default – white and American. Although through the technoliberal framework, human-human interaction would be better than human-robot interaction, Sanas's technology shows that a robotic white American accent is viewed as better than a real person's accent that is non-white and non-American. Additionally, Sanas's mission of "creating a more connected, friendly, and empathetic world by revolutionizing how we communicate," insinuates that the world will be better if everyone is the same, specifically white and American (*Hear The Magic*). This is not the case; to liberate marginalized and oppressed people, the goal should be embracing differences and finding the beauty within them.

Orientalism and Techno-Orientalism

When examining how racism affects the structure of call center work (a predominantly Asian enterprise), discussing Orientalism – Edward Said's theory of how racism can manifest in "the East" – is necessary. Said defines Orientalism as the West's belief in "the basic distinction between East and West as the starting point for elaborate theories, epics, novels, social descriptions, and political accounts concerning the Orient, its people, customs, 'mind,' destiny and so on" (Said). He has specified the location that Orientalism applies to as Asia, North Africa, the Middle East, and, more widely, the countries that reside in the Eastern hemisphere. While it is seldom mentioned, Oriental analysis can also apply to Sub-Saharan Africa (Andreasson). The "distinction" he mentions often includes a collapsing of different cultures or thinking of Asia and "the Orient" as all the same. For example, the Disney movie *Aladdin* contains a heavy mix of both Middle Eastern and North African (MENA) and South Asian cultures, resulting in an inaccurate representation of both. This trend reflects the unwillingness of the West to accurately research specific cultures to create nuanced and informed depictions of other cultures. In addition to not appropriately respecting or recognizing multiplicity in Eastern cultures, Orientalist views and representations often include an ancient, stuck-in-the-past, and mystical element. This aspect can be seen in a lack of Western technology often associated with modernity or snake charmers associated with "the East," respectively. It is important to note that the lack of technology in the East has often been used to justify the perceived antiquity of the East that fuels Orientalism and, subsequently, racism.

Along with technoliberalism and techno-utopianism, call center work is an example of techno-Orientalism in real life. In their titular work introducing the topic, David Roh, Betsy Huang, and Greta Niu define Techno-Orientalism as "the phenomenon of imagining Asia and Asians in hypo- or hyper-technological terms in cultural productions and political discourse. Techno-

Orientalist imaginations are infused with the languages and codes of the technological and futuristic"
(Roh et al.). This is born out of the way "the East" is often relegated to non-human technology:
China is viewed as a "human factory" that creates technology, India is also rendered a factory that
creates goods for the West, and Africa is a mine that provides raw materials that are used to make
the technology (Roh et al.). In addition to the hegemonic view of different countries' functions, the
individuals from "the Orient" are also viewed similarly to technology – particularly Asians are often
portrayed in media as "nerds" that are "technologically savvy" while having "passive" emotions
(Zhang). This portrayal is very similar to AIs and virtual assistants' media depiction – an endless
source of information and simultaneous low emotional intelligence or capacity.

Techno-Orientalism is a theory born out of recognizing patterns of racist imagery in media,
so it presents itself in many ways. Seo-Young Chu suggests that because of the othering caused by
Techno-Orientalism, Asian people and other people from "the Orient" reside in a liminal space
between human and technology, which in turn causes a reaction to these human Others that heavily
resembles an "uncanny valley" the theory of an "'intellectual uncertainty' over whether something is
inanimate or alive" that causes revulsion to humanoid inanimate objects, most often technology
when it reaches a threshold of being too human-like. This analysis means that due to the
formulation or interpolation of people from "the Orient" into technology, they are cast into a space
of being too non-human – through racism and structural dehumanization – and too human – not
fully a robot. The "revulsion" that the author discusses manifests itself in techno-Orientalist imagery
that the book cites, such as Fu Manchu.

Although *Techno-Orientalism* focuses on science fiction representations of Asians, the Orient,
and the people that reside there, call centers and Sanas's technology are examples of how techno-
Orientalist imagery manifests itself in real life. The occupation of liminal space between human and

non-human can be seen through the invention of Sanas's NLP algorithm. The assumption that can be made from this technology actively being sold is that the very robotic output of the technology is preferred to the original speaker. While the original speaker can cause an uncanny valley reaction because of techno-Orientalism, Sanas's output is decidedly non-human and easily understandable – a preferred voice to the Western consumer, specifically Man3.

An effect of how information capitalism is set up that is incredibly relevant to look at through a Techno-Orientalist lens is how call center workers can often not purchase the technology they work with. This mirrors Roh et al's acknowledgment that China and Chinese people, known for largely powering the physical creation of technology because of its cheaper labor than the West, cannot afford the technology they make (Roh et al.). This phenomenon furthers the stratification and dehumanization of the people that create technology. Man can purchase this technology without needing to perform any of the dull, dirty, or repetitive work that Atanasoski and Vora mention, reaffirming his humanity. When the people who make this technology do not have access to this same experience, it renders them robots that create other technology while humanizing those who can afford to purchase it. This then equates consumerism and humanity, furthering the idea that the liberalist and individualist consumption so often espoused in the West equates to a human subject. At the same time, the non-capitalist and communalist economic system and culture associated with the East are decidedly non-human. This stratification of humanity is due to governments and companies being most interested in actions, people, and groups with a lot of money to produce or distribute. When a country or company is not economically beneficial, these powerful institutions typically do not engage with them as if humans are involved. While this is true structurally, it also manifests on an individual level.

Technology and humans are often opposed in a binary – something/someone cannot be human and technology simultaneously – since tech is largely made for humans or to help humans or replace human labor. Since humanity is tied to who makes and who consumes technology, people in the East are interpolated into technology. Therefore, because tech is made by and not for those in the East, they are implicitly stripped of their humanity. This phenomenon manifests in the call center relationship because workers are often restricted from the technology they know so much about because of their work due to financial constraints and high prices. In other words, if techno-utopianism is the goal of many tech gurus or CEOs, they make tech for humans. This means that the people they are leaving out or actively harming – call center workers – are shown by that action not to be at the same echelon of humanity as the white Westerners.

This relationship is mimicked between the call center worker/caller relationship because while the call center worker provides individualized service for the caller, there is no structural reciprocality of people in the West having an opposite power relation to those in the East. Call centers commit to individualizing the service they provide to the point that the intensity of the assimilation that occurs in call center training can bleed into everyday life. For example, when Alinaya Fabros, the author of *Outsourceable Selves*, worked in a call center, the trainer recommended that she watch the television show *Friends* (outside of work hours) to fully "neutralize" her speech or mimic a white American accent (Fabros). Additionally, the adoption of stereotypically white American names causes the workers to lose their humanity and culture simply to pursue being the best employee possible. This, therefore, affirms western centrality by unmarking western culture within the context of a different culture. This example further shows that the universal definition of human in technoliberalism and techno-utopianism is not present due to the need for call center workers to learn to speak a different way and live in a different culture and temporality to appease their Western callers. This is an example of the fallacy of technoliberalism – because of techno-

Orientalism, humans are so stratified in treatment that techno-utopianism is not possible in our current world.

The mirroring of technological anxiety and racial anxiety, specifically referring to China and Northeast Asia more broadly, is another relevant facet of Techno-Orientalism. The authors acknowledge how hegemonically, "the reality of China's still developing technological penetration" is evaded "by projecting a present-day existential fear into a vision of the future, with technology supposedly rooted in U.S.-based innovation" (Roh et al.). This image shows how the popular anxiety of a technological future, as shown through the plethora of media featuring technology or AI revolting or taking over the world to control all humans, mirrors rightwing discourse and anxiety of China taking over the world, especially America, due to their hard work and intelligence. This anxiety is mostly due to future projections of the global economy and how China and its people might use this power. In other words, "China is a screen on which the West projects its fears of being colonized, mechanized, and instrumentalized in its own pursuit of technological dominance" (Roh et al.). This anxiety is reflected in Fabros's experience of being recommended to watch *Friends* for her work. In order to help quell the anxiety or existential dread that Asians will take over the world, the West requires that these workers engage with customers on Western terms, culture, and customs. Since the West is worried about an Eastern country colonizing them, the reverse of historical events, the West emphasizes the dehumanization of the East to ensure their dominance.

Since being conceptual creators of technology within Man3's framework is so important, the technologization of people leads to the East's dehumanization and reciprocal praise of the West. The editors of *Techno-Orientalism* describe that "while Orientalism defines a modern West by producing an oppositional and premodern East, techno-Orientalism symmetrically and yet contradictorily completes this project by creating a collusive, futurized Asia to further affirm the

West's centrality" (Roh et al.). This is why a relevant framework to think of "the Orient" is through temporal means. Orientalism and Techno-Orientalism cast the East into the past or the future while the West has viewed itself as a temporality of modernity. Simultaneously, the East is relegated to the past through Orientalism or the future, where robots and AI have taken over the planet in Techno-Orientalist discourse.

As with the transitions between Man2 and Man3, remnants of the past period carry over to the next in the relationship between Orientalism and Techno-Orientalism. Man2's period privileged science and intelligence, which caused intelligence to become the religion in Man3's period. Man's transition echoes the transition from Orientalism to techno-Orientalism. As previously mentioned, modernity and intelligence are important aspects of Orientalism because Asia and other members of "the Orient" are often viewed as living in the past. Because of how intelligence is often viewed as being gained linearly based on time, the ancient view of "the Orient" causes the West to perceive the East as less evolved, less intelligent, and therefore less worthy of humanity. While human Others are degraded this way, Man2 is praised because he is perceived as being the opposite – incredibly intelligent by comparison. While the othering present in Orientalism is maintained in Techno-Orientalist discourse and representation, Orientalism places "the Orient" in the past, while Techno-Orientalism places them in the future because of their interpolation into technology. Since the stuck-in-the-past view of the East fuels Orientalism and resulting racism, one would think that casting the East into the future the way Techno-Orientalism does would fix this bigotry. The dehumanization of call center workers shows that this is not the case. This is due to the change in the ideal human, the transition from Man2 to Man3. Where being perceived as having all the answers was the key to humanity in Man2's period, Man3 makes creating the technology (most often conceptualizing it, not the labor of physically creating it) most important. Because of this change in standard, Techno-

Orientalism is still a manifestation and fuel for racism against those in "the Orient" despite its futuristic aesthetics and effects.

The creation of technology in the East may seem incongruent with the technologization and dehumanization of "the Orient" within the framework of Techno-Orientalism. Roh et al. address this difference by highlighting that Japan, an Asian country known for its technological innovation, "is the future, and it is a future that seems to be transcending and displacing Western modernity" (Roh et al.). The authors also acknowledge that "the Asian subject is perceived to be, simultaneously, producer (as cheapened labor), designer (as innovators), and fluent consumer (as subjects that are "one" with the apparatus)" (Roh et al.). Eastern subjects embodying these different roles cause racial and economic anxiety. This is caused by how those that were vilified for being "ancient" through Orientalism now embody the West's idea of modernity. Therefore, the East being the future is incongruent with Orientalism, creates anxiety, and causes a shift in focus to Techno-Orientalism. The transition between the Orientalist view of the West being seen as the future to the Techno-Orientalist view of the East as the future replaces a bright one with a technologically anxiety-filled future. This anxiety and existential dread manifests itself in technology like Sanas's – with its most basic underlying assumption that a white, Western ontology is superior to an Asian one.

Conclusion

In this research project, I examine how call center agents are trained and valued as employees reproduce systemic inequities racially and transnationally. I use call center work structure, training, and technology as examples of Wynter's work, Atanasoski and Vora's critique of techno-utopianism and technoliberalism, and techno-Orientalism. These theories of the human and their relationship to technology from critical theory can be used in HCI to cultivate more inclusive and equitable technology for all.

Chapter II: Critical Theory in Human-Computer Interaction — The State of the Art

In the previous chapter, I have compiled and synthesized multiple theories of the human within the humanities to help reconceptualize and expand Human-Computer Interaction's (HCI) definition of the human, using call centers and its technology as a site of analysis. This work can contribute to the field's goals of making better technology that will positively impact its users. In this chapter, I will introduce HCI as a field and briefly overview its history in three waves. Next, I will examine how scholars integrate critical theory into HCI, specifically the concept of intersectionality, into design work and its resulting technology. Lastly, in concurrence with the previous chapter, I will analyze an HCI article about outsourcing call centers with a queer, intersectional lens. In doing so, I hope to continue the tradition of self-criticality in both HCI and the humanities to contribute to pursuing HCI's admirable aims and goals.

An Introduction to Human-Computer Interaction

Because the readers of this work most likely come from many different fields, it was necessary to give a more robust introduction to Human-Computer Interaction. In this section, I define the field of study, its goals, and aims, and describe the First, Second, and Third Waves. In this brief overview of the history of HCI, I have decided to focus on the field's relationship with critical theory and its integration with the humanities. As this overlap has grown throughout HCI's history, I will specify how the third wave has and will benefit from mobilizing HCI concepts.

Due to the centrality of the field in this thesis, it only seems natural to define what HCI is. Myers et al. describe "Human-computer interaction (HCI) [as] the study of how people design, implement, and use interactive computer systems and how computers affect individuals, organizations, and society" (Myers et al.). Therefore, the field studies both the creation of computers

and how computers affect their environment. This goal naturally extends to questions of how to make computers better for those who use them and how not to damage or even better the "individuals, organizations, and society" they inhabit. In my effort to expand and complicate a widely accepted definition of human using critical theory for HCI, I have attempted to address both parts of the previously quoted interpretation. I believe that actively self-critiquing, expanding, and decolonizing HCI's definition of human will allow the user to be more satisfied with their technology. This resulting technology will be made better and in the interest of bettering the user's life.

Despite the interdisciplinary nature of many of the social sciences and humanities that comprise critical theory, scholars emphasized the field of philosophy as being particularly influential to HCI. In their work, *Critical Theory and Interaction Design,* Bardzell et al. observe that "HCI is specifically philosophical, because practitioners and researchers represent the world via a system, entailing ontological, epistemological, and ethical commitments" (Bardzell et al.). This observation shows that the humanities, not only social sciences, have been profoundly influential since the beginning of HCI. Furthermore, critical theory's influence on HCI has always been present, even at the field's inception in the 1960s. "The intellectual foundations of HCI derive from a variety of fields: computer science, cognitive psychology, social psychology, perceptual psychology, linguistics, artificial intelligence, and anthropology. Decades of research in perceptual and cognitive psychology were distilled by pioneers in HCI…and several workers have explored the relationship between these sciences and the demands of design" (Myers et al.). In this thesis, I hope to continue this tradition of integrating critical theory and HCI for the betterment of the field.

HCI's First, Second, and Third Waves

HCI is frequently categorized into three different waves. Although the first wave is rarely described through specific characteristics, it is primarily typified by the significant technologies created through interaction and interface-focused methodologies that serve as the foundation of HCI. Some of these technologies include hypertext, the computer mouse, windows (of browsers or multiple apps), the scroll bar, the concepts of icons and widgets, and even drawing programs that transformed the history of animation media (Myers; Sinha et al.; Myers et al.; Bødker, "When Second Wave HCI Meets Third Wave Challenges"). Even "direct manipulation" results from HCI concepts and methodologies (Myers). Direct manipulation is the psychologically backed phenomenon of a user doing a physical action onto technology that causes the technology to respond accordingly. Most users benefit from this invention daily – tapping on an app's icon and the corresponding application opening for a user is an example of this concept. As displayed, HCI influenced much of technological innovation in its first wave. Beyond this wave, the second and third waves have stark differences. HCI's shift in focus characterizes the transition from the second to the third wave to include technology used outside of the workplace, changes in methodology, and more impactful questions of humanity.

Most HCI scholars agree that Bannon's "From Human Factors to Human Actors" paper published in the 90s was "a break with the second wave, theoretically and technologically" (Bannon). Therefore, most identify the shift from the second to the third wave as around this time. I will expound more on the impact of this paper below, but acknowledging this period shows how technological innovations moved out of the workplace and into the fabric of regular people's everyday lives. Inventions such as the cell phone, text messages, DVDs, and gaming consoles like Nintendo 64 and Sony's Playstation were all created around the shift to HCI's third wave (Leadem). Although the technology that impacts leisure was created prior to the 90s, third-wave "development

has focused on consumer technology–for the rest of life–whereas the development of innovative

technology for work has been much less of a focus than it was in the second wave" (Bødker,

"Third-Wave HCI, 10 Years Later---Participation and Sharing"). This identification of HCI's shift to

technologies outside of work and inside of the home presents a more compelling need to integrate

humanities into HCI. If HCI technology negatively impacts its marginalized users, this will impact

not only their work life or work-related processes but their everyday lives. The way users

communicate with loved ones or pass their free time is mediated by these technologies, so it is of the

utmost importance to ensure that newly developed technology does not exacerbate oppression for

its users or marginalized people around them.

As previously mentioned, Bannon's "From Human Factors to Human Actors" paper was

considered the break between the second and third waves of HCI. In this seminal paper, Bannon

proposed a shift in methodology that was soon adopted into the third wave of HCI: his distinction

between human factors and human actors "highlights a difference in the perception of the person,

the former connoting a passive, fragmented, de-personalized, un-motivated individual, the latter

connoting an active, controlling one" (Bannon). This distinction means that instead of the users of

HCI technologies being seen as merely a part of the HCI technology or process, they are treated as

subject matter experts of what technology they need or want with context that the designer or

creator of the technology may not have. This approach is now considered paramount because better

technology is made when the complexity, multiplicity, and pluralism of humans are considered . It

leads to more individualized technology that applies to the specific situations for which they are

made. This notion is emphasized because even if the most powerful AI is created but is unusable, it

is essentially useless. The conceptual change from human factors to human actors manifested in

tangible methodology changes. In the shift from the second to the third wave, "rigid guidelines,

formal methods, and systematic testing were mostly abandoned for proactive methods such as a

variety of participatory design workshops, prototyping and contextual inquiries" (Bødker, "When Second Wave HCI Meets Third Wave Challenges"). Because the multiplicity and complexity of users are considered, new aspects of critical theory that lend themselves to bettering this methodology are engaged in HCI, including the concept of intersectionality. I will explore this more in-depth in the Intersectional HCI section of this chapter.

This shift in methodology naturally manifested in the field of HCI asking different, more existential questions. Because the theoretical focus and innovation in HCI moved away from work in the third wave, "new elements of human life are included in the human-computer interaction such as culture, emotion and experience, and the focus of the third wave, to some extent, seems to be defined in terms of what the second wave is not: non-work, non-purposeful, non-rational, etc." (Bødker, "When Second Wave HCI Meets Third Wave Challenges"). Designing technology for users' time outside of work necessitated designers to explore the fullness and humanity of their users, like how they spend their free time, their feelings, and their surroundings. Exploring these topics necessitates a drastic change in methodology and interest of the researchers and designers. Instead of designers asking how they can make their users more efficient in their jobs, they might wonder what makes them happy, angry, or interested. While HCI scholars' interest in users' emotions grows, this is not always a positive trend. This engagement with every aspect of their users' lives also causes designers and arbiters of technology to have more power over their users. Because of this, good-faith actors in the third wave have started to ask more profound questions such as: "Will such developments improve the quality of life, empower us, and make us feel safer, happier and more connected? Or will living with technologies make it more tiresome, frustrating, angst ridden, and security driven? What will it mean to be human when everything we do is supported or augmented by technology?" (Sinha et al.). While the field of HCI might not have always been asking about the well-being of humans and what makes people tick, critical theory has. This phenomenon is

why integrating the humanities and critical thinking is crucial to HCI, the future of technological innovation, and the society affected by both.

I have defined and compiled a history and the current state of HCI for any readers who were previously unaware. As previously highlighted, the shift to the third wave has caused HCI researchers to utilize critical theory concepts to aid their research process, the types of projects they pursue, and the field of HCI as a whole. In the next section, I will analyze the utilization and mobilization of the concept of intersectionality in HCI so that the field and the resulting technology's users will benefit the most from the work of black feminist theorists that invented the concept.

Intersectionality in HCI

Since HCI is currently in its third wave, a wave utilizing intersectional concepts, it would be beneficial to perform a deep-dive analysis of how HCI researchers are utilizing intersectional principles and explain how these abstract concepts can be put into practice. I will detail how the author's definitions and implications of intersectionality can be expanded, what may have been missing, and what all of the articles emphasized as points of importance. These aspects are relevant to a reader looking for a more comprehensive look at intersectionality and its applications and considerations for HCI. For this case study, I looked into articles in the ACM Digital Library about intersectionality, namely *"*Intersectional HCI: Engaging Identity through Gender, Race and Class" by Ari Schlesinger, W. Keith Edwards, and Rebecca E. Grinter*, "*Intersectionality in HCI: Lost in Translation" by Yolanda A. Rankin, Jakita O. Thomas, and Nicole M. Joseph, and "Feminist HCI: Taking Strock and Outlining an Agenda for Design" by Shaowen Bardzell. Although the last article does not titularly include intersectionality, Bardzell used a "third-wave feminist" framework wherein intersectionality is at the fore (Bardzell). While incorporating intersectional analysis to design is a

positive aspect of HCI's third wave, the aspects that I found needed to be expanded lie in queering designers' approaches to design.

Queer Theory and its Design Applications

Ann Light defines "queer research" as "any form of research positioned within conceptual frameworks that highlight the instability of taken-for-granted meanings and resulting power relations" (Bardzell et al.). This definition means that designers and researchers should question norms and acknowledge and critically examine power relations. The term queer research takes after the concept of queer, which is commonly used to refer to an LGBTQ+ identity in addition to the more theoretical definition in feminist and related studies that means not straight or heterosexual, non-normative, anti-hegemonic, and "weird" like queer's other definition. I chose to bring in this methodological formulation because many of the articles I will delve into below explicitly asked for new ways and things to design – new epistemologies. I argue that queer thinking – queer epistemologies are vital for this aspirational vision to come to fruition. This definition of queer relates to intersectionality through identity politics. This connection is explained in the Combahee River Collective (CRC) Statement, a document I will often cite in this section because of its tangible explanations and applications of intersectionality before Kimberlé Crenshaw cultivated the term in a judicial sense that may be less applicable to the more practical HCI space. The CRC explains that "the most profound and potentially most radical politics come directly out of our own identity" (Collective). They use their experiences as black women and oppressed subjects to combat structural subjugation because they are intimately familiar with its effects. The black women that the concept of intersectionality was created to explain are the epitome of queer in the non-hegemonic sense. Because of their standing as doubly oppressed subjects, they are excluded from hegemony and conceptualized as queer as a result. Therefore, oppressed people's identity politics – a politic shaped by one's experience as a marginalized person – are inherently queer. The solutions reached when the

most marginalized are nurtured have weird, unusual, and queer outcomes. These results are reached when queer research is invoked and embodied. This results in queer thinking and intersectionality complementing each other well. While intersectionality can be very abstract, utilizing queer research can mobilize the concept, especially for a field that consists primarily of practitioners.

Tokenism and Identity Politics

One concern that the Rankin et al. article justifiably highlighted multiple times was the lack of racial diversity at the majority of HCI's "decision-making table," including ACM, CHI, and Grace Hopper Celebration of Women in Computing leadership (Rankin et al.). Rankin et al. argue that "intersectionality requires a shift in power…and the inclusion of marginalized populations who hold decision-making power in leadership" (Rankin et al.). Essentially, they are calling for diverse leadership in major HCI entities. While the lack of diversity in leadership is meaningful to note and bring attention to, intersectional thinking would lend itself more to a shift in power rather than people. This claim is exemplified by the Collective's discouraging of tokenism, a concept I will delve into below. Regardless of how much of the minority percentage is represented, these boards need to be allowed to make decisions that benefit and create equity for structurally marginalized groups. This distinction is vital to acknowledge because this mistake has been repeated many times. One notable example is how it was thought to be an effective solution to hire more black police officers to decrease police brutality in minority populations. This belief has largely been proven to be an ineffective solution (Nicholson-Crotty et al.). Regardless of the police officer's race, they may still engage in and uphold racist policing practices like over-policing minority-majority areas. This example illustrates a more significant reason why the emphasis on changing the structural makeup of HCI leadership to be more committed to making decisions that combat structural oppression should be a top priority, regardless of their race. To be clear, I am not advocating against racially diversifying HCI leadership. The aforementioned structural changes can and probably should

include more diverse, anti-racist, and anti-sexist hiring practices. I might go so far as to say that these hiring practices would be a good idea. Some of the best people to consult in order to proactively combat structural oppression are the people that are directly affected by it. However, this cannot be the end-all-be-all solution.

Additionally, another vital principle for HCI to follow is protecting and not retaliating against workers when these difficult and possibly not profitable conversations bubble up. What not to do can be seen in the dubious removal of Timnit Gebru from Google's AI Ethics team. She was a scholar who coauthored a paper regarding the "four main risks of large language models" that was discouraged by the company (Hao). Despite these warnings, she published the research. Soon after, she no longer had a position at Google (Simonite). The structural change that needs to come in is these concerns and pieces of advice being listened to, even if they are not in an entity's best economic interests.

The phenomenon of hiring diverse leadership while making no substantial change is called "tokenism," which the Combahee River Collective explicitly calls out and problematizes in their statement (Collective). This concept is often incorrectly conflated with identity politics, different because they have decided to fight all systems of oppression that face them as black women at once because they recognize all systems of oppression are interlocking. This definition means that they do not only focus on race and gender but also class and heterosexism. They use their experiences as black women and oppressed subjects to combat structural subjugation because they are intimately familiar with its effects. In "Feminist HCI," Bardzell argues that designers should "investigate and even nurture the marginal" (Bardzell). Centering the most marginalized is a characteristic that the verb queering and intersectional thinking and approaches have in common. As previously stated, if a person of multiple, intersecting minority identities sits in leadership positions where they can make

substantive changes that aim to combat structural oppression, then this can be one way that identity politics is utilized, among many other ways. The issue arises when companies or HCI think their work is done because they hire minorities in leadership positions. Intersectionality extends beyond simply the equality of women to men or racial categories. It is a radical way to approach things and subvert structures – it is not just about categories or identities but about how meaningless categories become after examining people of intersectional identities.

The Instability of Categorization

One example of a definition of intersectionality that needs extension or complication is in Schlesinger et al.'s "Intersectional HCI" article. The authors claimed that the "central goal of intersectionality is to better capture complex identities and relate them to their surrounding context" (Schlesinger et al.). While identity and categories are important to and necessitated intersectionality in the first place, this definition does not consider how much an intersectional lens reveals the instability of categories rather than "capturing" them. For example, in the early 1900s, white women fought for and benefitted greatly from finally being able to work outside of the home, partially breaking away from prescribed gender roles. Contrarily, black women in America have always worked outside the home, from chattel slavery to house servant jobs. In acknowledging this, the Moynihan Report claims that the patriarch and matriarch roles are switched in black households, therefore destroying black families and the wider black community (Collins). This difference means that black women fought more against being hypermasculinized and its consequences in a binary gendered world and pigeonholing stereotypes such as the mammy or the jezebel due to their treatment in slavery. This contrast means that although both groups are under the category of "woman," their political battles were for very different things, and they faced very different struggles. This is one basic example of how while categories are vital to the conception of intersectionality, the goal should not be better categorization practices. Alternatively, it reveals the

instability of categories and the lack of biological basis for these socially ordained categories. This instability can be seen in how Kimberlé Crenshaw describes the concept of intersectionality and why she chose the word to describe this phenomenon. There are multiple intersecting roads, and the intersection is related to these roads (Crenshaw). Still, the intersection is a decidedly different thing and experience than being on either of the individual roads. The intersection is related to but completely different from the roads themselves.

Schlesinger et al. highlights this by citing Leslie McCall's "The Complexity of Intersectionality," wherein one of the "methodological approaches to intersectional research" she recommends is "anticategorical complexity" (Schlesinger et al.). Among other approaches, anticategorical complexity uses "discourse analysis to deconstruct analytical categories; this application draws attention to how identity categories are flawed, incomplete, and unable to capture the complexity of the things a category describes" (Schlesinger et al.). As this quote shows, intersectionality reveals ways in which identity categories are insufficient. While the authors acknowledge that they are using McCall's intercategorical instead of anticategorical approach, this does not justify the definition of intersectionality being boiled down to "capturing complex identities," a contradiction to McCall's anti-categorical framework. This definition seems to allude to a claim that categorization is the appropriate direction, but individuals are simply not being categorized enough. Alternatively, increased categorization is not advisable because while intersectionality encourages nuance in appropriately identifying people, it also reveals how these category markers are not everything and that no category of people is monolithic.

To resist the clear-cut nature of categories, Ann Light encourages "the deliberate troubling of categories" in queer(ing) research (Bardzell et al.). This "troubling" entails explicitly questioning categories rather than emphasizing and concretizing them when designing technology. Because of

the binary and categorial nature of data and software, this queer approach of deliberately de-emphasizing and disturbing categories can feel very counter-intuitive or difficult. Light details the importance of this practice by thinking beyond the present state of technology. Since old structures that affect our daily material lives have norms and hegemonic ideals infused within them, it is crucial to directly contrast these categories and norms in the technology currently being created. She outlines three main reasons why this is important for the future of both technology and society. Firstly, "certain paths are less obvious or less possible henceforward" (Bardzell et al.). By this, Light argues that these categories and norms are harder to resist or not incorporate in future software and technology. Second, she acknowledges that technology is explicitly coded for "the user." She argues that this conversely shows the user what and for whom the technology is made. As a result, users implicitly read what and who the user should be. In combining these points, Light claims that this effectually causes "descriptions of *what we are* [to] become harder to modify; they become standard, widely used, and costly to reconfigure" (Bardzell et al.). Similarly to how media can implicitly or explicitly show us an ideal audience member or ontology, technology can do the same thing with its users. This can reinforce structural oppression and norms within technology, which can be expensive to change in the future.

Lastly, Light recognizes that "much design rhetoric shies away from considering longer-term outcomes for decisions made now, even though design as an interventionist practice is, by nature, future-oriented. I've previously criticized HCI for being apolitical and ahistorical as a discipline, ignoring that life is constantly in flux and that values, priorities, contexts and behaviors will change" (Bardzell et al.). The context of time, place, and culture provides context and influences what is considered normal. Consequently, this begs the question of what normal is, if this notion is valid, and if it should be adhered to or listened to. As Light mentioned, technology design is inherently future-oriented, including the designer trying to anticipate the future's values, necessities, and

desires. For example, most software most likely had a binary value for gender. Now, systems have to be reconfigured to encompass the wide variety of genders that are more widely recognized now. By embodying queer research and intentionally looking for ways that technology can implicitly and explicitly question norms through its structure, designers can stay ahead of these cultural changes that affect the creation of technology.

Additional Points of Interest

While I previously critiqued or expanded points and solutions that the authors above poised, I did notice that one aspect of intersectionality needed to be added to the pieces. By Kimberle Crenshaw's definition, intersectionality is necessary to recognize that multiple marginalized identities work together so that for black women, being black contributes to their identity just as much as being a woman does. Additionally, at the "intersection" of these identities are unique experiences that women that are not black do not experience, and black people that are not women do not experience. This idea was generally well conveyed in these pieces. What needs to be explored more in the HCI space is that this results from the fact that systems of oppression are interlocking. This means that if one is actually deconstructing one system of oppression, one implicitly deconstructs all systems. This is the reasoning behind the famous quote from the Combahee River Collective Statement, "If Black women were free, it would mean that everyone else would have to be free since our freedom would necessitate the destruction of all the systems of oppression" (Collective).

On the other hand, some central aspects within the articles should be emphasized because they complement the lens of queer theory. The first is that multiple authors questioned the notion of the "user" – the human in Human-Computer Interaction – and its often raceless and genderless quality. As evidenced by intersectionality and Wynter's analysis (detailed in Chapter I), the hegemonic, default way of being is a straight, cisgender, middle or upper-class, heterosexual white

man. This can be seen through the situation that prompted the need for intersectionality – identity groups only being focused on the one way that they deviate from this aforementioned way of being, or "genre" of human, as Sylvia Wynter would say. For example, the CRC explained situations in which women's rights groups ignored or did not prioritize black women's specific issues because it questioned their anti-blackness and felt as though it took away from their aims. While this language in white women's groups makes it seem as though they are speaking for all women, the raceless figure of the Woman they are referring to is implicitly white. This can be shown by how when black women explicitly explain that they have different experiences, this is ignored, marginalized, and invisibilized while white women's issues remain at the fore and the default. This situation was mirrored respectively in black spaces when the same black women spoke up about issues specific to them. The genderless quality of the figure of the Black Person that these spaces are seeking liberation for implicitly conveys that this person is a man that does not want to question his misogyny. By questioning the raceless and genderless quality of the user, the authors illuminate how an intersectionality marginalized person is typically not the image of the user that most of technological designers have. Typically, the lack of race and gender of the user's profile connotes that norms were not questioned and a straight, cisgender, middle or upper class, and heterosexual white man or someone of close social standing is most likely the designer's actual idea of the user.

Questioning the genderless and raceless nature of the user is a great example of the second methodology that was often mentioned in the articles: questioning normal, what it means, and if it is a valid conception of normal. This methodology, along with reflexive approaches to design, was emphasized. A reflexive approach includes genuinely consulting the populations the technology will affect throughout the entire design and cultivation process (D'Ignazio and Klein). Additionally, engaging with them as subject matter experts of their specific context is paramount to intersectional HCI and queering design practices. Lastly, another aspect that the articles encourage is self-criticality

within the HCI field. This includes always questioning if the methodologies and results of development are helpful, harmful, or both and how to always strive to be better.

HCI Research in Outsourcing Call Centers

In this section, I will analyze an HCI article about call centers through the queer research and intersectional lens in the previous section that I advocate for. This section can serve as an example of the type of critical thinking I argue can help further the aims of third-wave HCI. I decided to analyze an ACM Digital Library (a large repository of HCI research) article about call centers because they were an example I utilized throughout the first chapter to further explain critical theories of the concept of human and humanity in relation to technology.

The intersectional part of this lens nicely converges with transnational issues, specifically those in the East. The Combahee River Collective Statement, a document I have cited to define intersectional thinking further, states that the collective is "concerned with any situation that impinges upon the lives of women, Third World and working people" (Collective). Despite being a collective of largely African-American women whose experiences and intersecting identities drove their political and collective focus, they also explicitly support transnational issues. Additionally, one of the main reasons for the Collective's creation is how they were marginalized, and their identity was not centered in both feminist and black power movements. The Collective's Statement explains, "It was our experience and disillusionment within these liberation movements, as well as experience on the periphery of the white male left, that led to the need to develop a politics that was anti-racist, unlike those of white women, and anti-sexist, unlike those of Black and white men" (Collective). This experience is mirrored in transnational feminism when western feminists "fail to see the contexts of their theories and assume that their perspective has universal validity for all feminists" which results in western feminists "participat[ing] in the dominance that western culture has

exercised over nonwestern cultures" (Narayan). In other words, when non-Western or Eastern voices are not centered, their experience is invisibilized. This perpetuates racial and ethnic domination between different countries, even when groups fight for their identities' liberation. To avoid this, intersectional and queer thinking is paramount to truly including and respecting all perspectives within technology design. Now, I will utilize a paper about call centers to exemplify the application of this critical lens.

Babin et al.'s "Emerging Markets Corporate Social Responsibility and Global IT Outsourcing"

In the first chapter, I problematized the outsourcing, often the structure underlying call center relationships. To further analyze this phenomenon and give an example of queering HCI research with intersectional thinking, I have chosen a paper about outsourcing that advocates for Corporate Social Responsibility (CSR) to help rectify this inequity, "Emerging Markets Corporate Social Responsibility and Global IT Outsourcing" by Ron Babin, Steve Briggs and Brian Nicholson. Babin et al. describes "collaborative CSR" as when "the outsourcing buyer and provider work together to achieve shared societal goal and also strengthen their relationship, thus 'doing well by doing good'" (Babin et al.). In the case of call center Global IT Outsourcing (GITO) work, the company that pays the call center company for their services pairs with call center workers in service of a societal cause. Typically CSR activities consist of financially supporting schools in India or wherever the outsourcing provider is located (Babin et al.). The authors advocate for outsourcing companies to do this because they "create strong business value in the outsourcing relationship and create social value for the communities in which they operate" (Babin et al.). This means that Babin et al. argues that implementing CSR projects causes the workers within the outsourcing structure to have a stronger relationship with the company. Hence, they are more likely to work longer and harder because they see the company as benefitting them through CSR projects. Also, the company is viewed favorably because of its charitability. At the same time, the outsourcing provider's workers

benefit from extra funds being allocated to further their environment and society. Porter et al. argues that CSR is the "best chance to legitimize business again" because of companies' tenuous relationship with wider society (Porter and Kramer). This notion is unquestionably postured as a win-win and advocated for in all outsourcing relationships in these articles.

Before I dive into what I believe were some oversites within this piece, I would like to clarify that I do not argue that all CSR is bad or that any form of CSR is all bad – I am not arguing that companies should not donate to and develop schools. I propose that all CSR should not be considered unquestionably good, and some CSR is not as charitable or beneficial as some may assume from an outside perspective. I am simply arguing that implementing CSR should not be considered "the next evolution in capitalism" – as Kramer and Porter claim in *Creating Shared Value* – that can fix the exploitation that the outsourcing system and call center companies often perpetuate. Furthermore, advertising CSR activities improve a company's branding which is likely to benefit it financially (Porter and Kramer). Therefore, they receive the benefits of being seen as a charitable company that aims to heal structural issues when this is not always the case.

Increased Worker Efficacy

One characteristic of GIFOs engaging in CSR programs that Babin et al. listed as a benefit to companies is that workers that know their company engaged in CSR programming are more likely to work more efficiently, longer hours, and sometimes without pay. This furthers the exploitation of call center workers because it exacerbates the already underpaid nature of the job, the lack of work-life balance, and call center companies' tendency to overstep and encroach on their workers' personal lives – all phenomena that I detailed in the first chapter.[3] The article quoted an executive of

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[3] For an anthropological study about outsourcing call center work, consult Fabros, A. (2016). Outsourceable selves: An ethnography of call center work in a global economy of signs and selves. Ateneo de Manila University Press.

a company that purchased outsourcing work: "'These guys [call center workers] stay until midnight and beyond and all night if necessary....the school [CSR] thing…just builds that'" (Babin et al.). Another worker said that "'People stay longer, sometimes they're investing a lot of their time and it's not paid'" (Babin et al.). Clearly, CSR pays the company back dividends through their workers having a positive opinion of the company, its values, and the results of the company's actions. As I previously stated in the last chapter, outsourced work in call centers is often seen as one of few financially upwardly mobile careers in the Eastern countries where the majority of call center work takes place. Additionally, the main advantage to outsourcing labor is that it is often cheaper in the East, meaning that these companies are grossly underpaying workers to the point that Americans would not want the job for the pay or is illegally underpaid by United States standards. Additionally, the reason why these countries in the East are "less developed" is due to the history of colonization and extraction of natural resources by Western countries. Taking all of this into account, although any worker can feel free to make any decisions they want about donating their time to their company, call center workers that are already underpaid and have a poor work-life balance should not be strategically taken further advantage of by companies that seem to be helping their communities when this is not always the case. Furthermore, there are often locational and socioeconomic biases within the choices of where CSR funding is allocated.

CSR Location Trends

While it is almost always nice for companies to help fund schools and get more resources for them, the Babin et al. article failed to mention how CSR funding is allotted – it is often relegated to locations of an already higher socioeconomic stature, the places that need the least help. This is because to get a positive reaction to their charitability, companies often decide to pool CSR money in places that more directly impact their workers. Large company presence often correlates to more

developed sectors. Therefore, CSR money is given to schools that are more funded than most, while the schools that really need the financial support are withheld from.

Before considering CSR projects as unquestionably good, one must examine where this funding goes and if it is where funding is needed most. When trying to find the answer to this same question, Pareek et al. found that "areas which are already developed tend to receive more CSR funds, while some of the most under-developed districts lack CSR funding" because "companies prefer to invest in places where they have factories, or where other companies of the same industry sector are investing" (Pareek et al.). This means that the actual motivation behind CSR programming might not be as noble as advertised. Funding is funneled to locations that will more directly benefit the company and its workers while withholding funds from less developed schools that need more funding. While this decision might make more economic sense for the companies involved, companies that advertise their CSR programming as charitably helping schools that need funding, this might not always be the case. Because this funding often goes to the more developed schools that need less assistance, this charitable image could misrepresent the merit behind CSR's purpose.

In addition to pooling CSR funds in more developed sectors, funding is also typically funneled into locations that benefit the company politically and, therefore, financially. Pareek et al. found that "CSR is used as a mechanism for favours between companies and politicians" (Pareek et al.) wherein "more investments made in locations where the MPs [Members of Parliament in India] belong to the state/central ruling party, or where the MPs hold ministerial posts" (Pareek et al.). This benefits the companies engaging in CSR activities because "sharp increases in stock prices of companies occur when they form new political connections" (Pareek et al.). Therefore, while companies can espouse their charitability through CSR work, they can increase their stock prices by funneling funds into locations that benefit the politicians they are working with. A company

benefitting from charity or volunteer work is not inherently wrong, but it seems unfair that companies can advertise their CSR work as improving the lives of those who need it while the communities that are less developed or not backed by ruling or residing politicians are ignored. Therefore, companies get to be seen as very charitable, and their workers are more likely to perform more efficiently and work longer hours as a result. Additionally, they can further their economic gains by engaging in political CSR decisions while the places that need the most help (where one may assume this money is being given) are neglected.

Companies benefit from being seen as charitable, but this should only be the case if the places that need this funding actually receive it. Since they are motivated the most by benefiting themselves, even when claiming that this action is primarily charitable and for the greater community, this should not be considered a fix for the broken and exploitative outsourcing system in IT call centers. Once again, I do not wish to advise against that donating to schools. I would simply like to acknowledge that the system in which workers, outsourcing providers, and buyers are already inherently structurally unequal. Considering the unbalanced distribution of benefits between these parties is necessary to get a complete picture of CSR work and outcomes and should not be unquestionably promoted.

Conclusion

In this chapter, I have given a brief overview of the history of HCI in its three waves, analyzed the utilization of intersectionality in HCI, and examined an HCI article about outsourcing through a queer and intersectional lens. As displayed in the history section, HCI has come a long way in terms of its changing aims and overall effect on society at large. HCI researchers can sustain this trend by continuing the integration of critical theory in HCI and continuing the long history of the field's self-criticality present in both HCI and the humanities. I hope there will be further work

on complicating and expanding critical theories to advance HCI's goals of reducing harm and positively impacting society. Additionally, there should be further research on how to tangibly manifest this critical theory to apply to technology and its design processes.

Conclusion

To create technology that does not exacerbate structural oppression and even benefits marginalized people, technological designers must grapple with questions of who is considered human and how this manifests into technology. I argue that critical theory should be considered, embodied, and implemented into HCI to improve technological innovation. I execute this by connecting multiple theories of humanity and its relationship with technology in the humanities. Afterward, I display how this theory can intervene in HCI and technology design.

In the first chapter, I synthesize multiple critical theories of the human that can be utilized in HCI research. I put Sylvia Wynter's theories of the human in conversation with recent technological advancement. Next, I summarized Atanasoski and Vora's analysis of technology's future and its relationship to humans. In the following section, I use call centers to apply these theories to actual structures in the following section. Lastly, I examine how techno-Orientalism can be used to critique real-life situations, specifically the outsourcing structure of call centers and their technology. I hope there will be further research on how techno-Orientalism can be used to analyze not only science fiction portrayals of marginalized people but also real-life structures and environments.

In the second chapter, I exemplify how HCI can be integrated with critical theory. First, I establish a brief genealogy of the field of HCI and its ever-changing goals. I hope further research and archival work on the history of HCI, especially the humanities' effect on this history, is pursued. The second section is an analysis of work in intersectional HCI. In the final section, I critique research in call center work within HCI using a queer, intersectional framework. This chapter can serve as an example of integrating critical theory and HCI to benefit technological design and its effect on marginalized people.

Technology's impact on people has grown exponentially, in tandem with its limitless potential and integration into our everyday lives. Because of this influential power, it is important to slow down and examine how and why technology is made to make sure it does not further the structural oppression that minorities experience every day. As an intersectional black feminist scholar, I define feminism and critical theory as a politic that seeks to help people, especially marginalized people, lead more livable lives. This is pursued by examining structural power and how structures operate by centering the people that experience this oppression. While humanities scholars have been thinking through these concepts for centuries, it has become necessary for HCI scholars to examine these topics to make the types of technology that are now desired to the best of their ability. In applying critical theories of the human to HCI, I hope I have displayed how critical questioning who technology is made for, how, and why is essential to queer, intersectional, and liberatory technological design. Constant self-critique and pursuit of liberatory design will lead to the best technology developers can create. But at the end of the day, we're all only human, right?

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