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WOMEN AS HIDDEN FIGURES IN MALE HEGEMONY: GENDER AND RACIAL IDEOLOGIES IN *HIDDEN FIGURES*

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Abstract

This study intended to use the film Hidden Figures as a case study to examine how Black women were discriminated against in multiple ways: in terms of racism and sexism, and even classism. To further analyze how Black women, here Mary Jackson, Dorothy Vaughan, and Katherine Johnson, had limited access to employment and received lower wages as well, the study used the film Hidden Figures as a case study to consider how Black women allowed themselves to be treated subordinately and tolerated unequal treatment in the workplace in order maintain their job for the sake of their family. To complete this goal, after conducting a thorough literature review on racial discrimination, gender discrimination, Black feminism, and intersectional hierarchy, the study used a descriptive qualitative analysis and a latent-content analysis of Hidden Figures to examine how, in the 1960s and 1970s, Black women were disciplined and deprived of the opportunity to seek higher education or demonstrate their leadership skills. Moreover, this study demonstrated that, although they had been the object of personal or institutional discrimination, these Black women managed to survive in a multifaceted discriminatory hierarchal society. Finally, by resisting, they found success in their workplace.

***Keywords**: Racism, Sexism, Multiple Discrimination, Intersectional Discriminations.*

INTRODUCTION

Discrimination is defined as a behavior that denies equal treatment to persons on the basis of their membership in a group (Herbst, 1997). Discrimination can take place in many respects in society, such as age, race, caste, gender, race, or ethnicity. Racism refers to the notion that other races or ethnic groups are inferior one's own race in terms of social, cultural, and/or intellectual values (Andersen and Taylor, 2013). During 1960s and 1970s, the United States was a patriarchal society with male-centered white supremacy, whereby White men held the dominating power in households, workplaces, and political practices over the White and non-White, specifically, Black African Americans. Hence, during that time, Black people were "members" of a racist society, with no right to vote and with physical and/or verbal abuse inflicted upon them (Collins, 2009).

African-American women were discriminated against based on not only their race, but also their gender; hence, they were victims of a sexist and racist society (Walker, 1984). As hooks (1982) pointed out, because of sexual racism, these women were degraded and devalued by the patriarchal society. Black women were even discriminated against by Black men because of gender discrimination. Indeed, they had been regarded as lower-class citizens since their arrival in the United States (Rigueur and Beshlian, 2019). In addition, they faced discrimination in employment, which was associated with a form of institutional discrimination based on sex and race. The multiple forms of discrimination in terms of racism and sexism, as well as classism, also led to White men dominating the highest level of the social hierarchy system, with White women ranked second, followed by Black men, ranked third; Black women were ranked last, filling the bottom, subordinate positions in the system (hooks, 1982; King, 1988). Because of this institutional discrimination, Black women experienced difficulties while seeking employment.

To further analyze how Black women had limited access to employment and received lower wages as well, this study used the film Hidden Figures as a case study to consider how Black women allowed themselves to be subordinate and tolerated unequal treatment in the workplace in order to maintain their job for the sake of their family.

RESEARCH METHODOLOGY

In order to determine how Black women experienced multifaceted discrimination in terms of gender, racial, and class perspectives, this study used the film Hidden Figures as a case study to consider how three Black women, Mary Jackson, Dorothy Vaughan, and Katherine Johnson, although quite brilliant, were exploited and discriminated against in a racist and sexist society. To achieve this goal, after conducting a thorough literature review on racial discrimination, gender discrimination, Black feminism, and intersectional hierarchy, the study used a descriptive qualitative analysis and a latent-content analysis of Hidden Figures to identity multiple forms of discrimination in the source data, in terms of gender, racial, and class perspectives, and to examine how these exploited African-American women managed to survive in a multifaceted discriminatory hierarchal society.

FINDINGS AND DISCUSSION

Space War and NASA

In October of 1957, the Soviet Union successfully launched the first human-made aircraft, Sputnik 1, and completed a full Earth orbit; later in November, the Soviet Union launched another satellite, Sputnik 2, to send a dog into space. These space shuttle launches immediately caused shock and panic in all walks of life in the United States because they implied that the Soviet Union, a leading communist country, had surpassed the United States, a leading democratic country, in space technology. Moreover, if a communist country with a powerful military owned more advanced space technology, it might imply that communism could become popular worldwide again. Indeed, the United States was most afraid of their world dominance being taken away by the Soviet Union (Bessonova, 2010).

The space war between the Soviet Union and the United States also caused a dramatic change in the latter's space program and science education policies. The film Hidden Figures was based on such a time and space context, set in in the Langley Research Center in Hampton, Virginia, in the United States. Although there was no slavery in 1961, racism and racial segregation were still occurring at that time.

The film Hidden Figures was directed by Melfi (2006), and the script, written by Melfi and Schroeder (2005), was adapted from Shetterly's book Hidden Figures: The American Dream and the Untold Story of the Black Women Who Helped Win the Space Race (2016), based on a real event that occurred at NASA (National Aeronautics and Space Administration) in the United States in the 1960s, during the U.S.–Soviet Union Cold War period. The plots were mainly based on real-life stories about three outstanding Black female scientists working at NASA during the Cold War: Mary Jackson, Dorothy Vaughan, and Katherine Johnson. These three brilliant Black women worked as human computers at NASA, a mainly White, male-dominated organization that only offered Black women the temporary positions of human computers, secretaries, or janitors. Hidden Figures tells the stories not only of three outstanding Black women, but also the achievements of the great space plan during the U.S.–Soviet Union Cold War period. Behind this great plan, many outstanding Black women had been working silently with only temporary positions at NASA and had been invisible in space history as a result of racial and gender discrimination during this period of American segregation. These African-American women were hidden from space history.

Jim Crow Laws

It would always make some people uncomfortable when seeing the "the colored people" signs on the bathrooms, canteens, or water fountains; however, in the time of white supremacy, many White people thought that they were superior to non-White people, especially Blacks. Under the mask of the "separate but equal" policy, public facilities, such as bathrooms, canteens, buses, schools, water fountains, and even coffee pots, should be separated according to skin color. For instance, as shown in Hidden Figures, when pouring a cup of coffee from a coffee pot at the office of the East Group Building of NASA, Katherine receives an abhorrent glance from her White colleagues, because they dislike using the same facilities as Blacks. The next day, following the "separate but equal" policy, they provide Katherine with an exclusive coffee pot; however, no coffee is provided.

All citizens in a country should share equal rights and should receive equal protection by the law, regardless of their race, color, or social class. Ironically, however, immediately after the American Civil War, certain southern states began to place restrictions on African Americans or non-White Americans in their daily lives to intentionally regulate the social, economic, and political relationships between dominant Whites and African Americans, mainly to force Black people into a subordinate group. Hence, to show their white supremacy, the Whites segregated Blacks by using "White Only" and "Colored" signs in public places, such as schools, restaurants, hotels, churches, or even hospitals. This system of laws and practices used to enforce the segregation of African Americans from White Americans in public places is called the Jim Crow laws or practices, in reference to a song "Jump Jim Crow" (Lhamon, 2003). The Jim Crow laws or practices operated between 1877 and the mid-1960s, and they represented the belief that Whites were superior to non-Whites, who were regarded as second-class citizens. Hence, Blacks and Whites could not eat together; if there was no choice but to eat together, a partition was placed between them, and the Whites would be served first. In 1935, Blacks and Whites in Oklahoma were not even allowed to sail together because doing so signified social equality (Kennedy, 1990). The implementation of segregation policies was also intended to prevent a Black-and-White interracial relationship, so as not to lead to a mixed race in reference to a song from the minstrel show (Kennedy, 1990).

In order to maintain social stability, if any Black dared to challenge the segregation polices or violate the Jim Crow norms or etiquette, Whites were allowed to use threats, violence, or even lynching, without fear of punishment, further emphasizing the dominance of one group and the inferiority of the other group (Rose, 1997). The African Americans, Black people, had almost no chance for appeal against the threats and violence imposed on them because the police officials, judges, and prison officers were Whites.

The story of Hidden Figures was set in an era of serious racial discrimination. The protagonists in the film are three wise and mathematically gifted women, Mary Jackson, Dorothy Vaughan, and Katherine Johnson, who work at NASA, yet, despite their clear intelligence and ability, experience racial and gender discrimination and are bullied by their White colleagues because of their skin color. Ironically, at the beginning of the film, these three Black female scientists are very proud to let a White police officer escort them to NASA, driving "a million miles an hour." Mary screams, "I'll tell you where to begin: three 'colored' women are chasing a White police officer down the highway in Hampton, Virginia, 1961. Ladies, that there is a God ordained miracle!" (Schroeder and Melfi, 2015, p. 9). After hearing that, Dorothy and Katherine can't help "bursting out laughing" (p. 9). This sarcastic dialogue implies the existence of racism and racial segregation at that time.

Racism in 1960s

Although in the 1960s, there was more slavery, the United States was still a society replete with patriarchy and white supremacy. Racial segregation practices were still present in the southern US and at NASA, which still enforced racism, using the "separate but equal" policy to legalize segregation between White and Black employees. According to hook (1982), the word "racism" is synonymous with discrimination or bias toward Blacks by Whites. As portrayed in Hidden Figures, the White human computers stayed at the East Group Building

of the Space Task Group building, with the office wider, brighter, and more spacious, while the colored human computers were segregated at the West Group Building in the West Wing of NASA, which was tiny, darker, and crowded. Working at NASA, a mainly White, male-dominated organization, Black women, even those with professional competencies, had no chance to obtain higher positions as engineers or scientists. Hence, as human computers at NASA, a place adopting a "separate but equal" policy, Mary, Dorothy, Katherine, and other colored human computers are segregated from the White female human computers; specifically, they are a half mile away from the main building of the Space Task Group. Although they are intelligent enough to understand analytic geometry, since they are Black women, they cannot have permanent jobs at NASA. Vivian, a White female supervisor of the East Computing Group division, states that "Everything's temporary" (Schroeder and Melfi, 2015, p. 16). Because their jobs are temporary, once the IBM (International Business Machines), a calculating machine, can do their work, they will lose their jobs at NASA.

Not only were Black women forbidden from holding a permanent position, but they also had no chance of receiving a promotion, especially a supervisory one. For instance, Dorothy has been a substitute supervisor as the head of colored human computers at NASA for almost one year. She has strived to receive the official title of supervisor and the pay she deserves: "What's not fair is having the responsibility of a supervisor, but not the title or the money" (p. 31). In order to address this unfair treatment, she reminds Vivian of her situation; however, Vivian's tone is cold and taunting as she explains that Dorothy's application was declined because all colored people are employed in temporary positions.

Dorothy: Mrs. Mitchell...if I could-… My application for supervisor, ma'am. Was wondering if they're still considering me for that position.

Vivian: Yes. Well, the official word is: no. They're not assignin' a permanent supervisor to the Colored Group.

Dorothy: I see. May I ask why?

Vivian: I don't know "why." I didn't ask "why."

Dorothy: We need a Supervisor, ma'am. Haven't had one since Ms. Jansen got sick. Been almost a year.

Vivian: Things are workin' just fine as is, Dorothy.

Dorothy: I do the work of a Supervisor. I'm in charge of the Group, like a Supervisor. (p. 17)

The only reason that NASA rejected her application as a supervisor is because she is an African-American woman. Vivian, a White female supervisor, has no patience with Dorothy's plight.

In addition, Vivian demonstrates discrimination toward Katherine. Although NASA was segregated by race, Mr. Harrison, the director of the Space Task Group, asked Vivian to find someone—even a Black person—with a strong understanding of analytic geometry and to invite him or her to join the team in order to keep up with Russia in the space technology. Thus, she enters the West Computing Group division, a workplace for Black human computers, but greatly resents the task. While leading Katherine, now the first Black geometry analyst, to the Space Task Group division, she warns her that "Skirts must be worn past the knee. Sweaters are preferred to

blouses. No jewelry. A simple pearl necklace is the exception.…They've never had a colored in here before, Katherine. Don't embarrass me" (pp. 20-21). Clearly, Vivian's attitude and demeanor are merely based on her racial bias and discrimination.

Crenshaw (1989), a defender of American civil rights, argued that Black women had been victims of both gender and racial discrimination, as well as classism. She also coined the term "intersectionality" to indicate that Black women were positioned at the intersection of the subordination systems: racism, sexism, and classism (Crenshaw, 1989 and 1991). As Feagin (2001) mentioned, Black women were inherently faced with the twofold burden of being Black and being women, which engenders intersectional subordination and discrimination against Black women. In Hidden Figures, these Black human computers suffer from racial discrimination not only at their place of employment, but also in the area of education. Dorothy's friend Mary, also a human computer, faces discriminatory situations and unequal treatment based on her race and gender. Because of her ability, Mary is transferred to the test team of the aerospace spacecraft "Mercury 7" to test a prototype. Her boss, Zielinski, who is the head of engineers at NASA, asks for her professional opinion regarding the failure of the wind testing of the spacecraft, and Mary easily identifies the design flaw. Impressed with her response, Zielinski, a Polish Jew, encourages her to take a training program to be an engineer. However, Mary smiles and says that she is a Black woman, which makes it impossible for her to become an engineer. Although Mary is in the top engineering department, only one step away from becoming an engineer, her likelihood of becoming an engineer at NASA, like Zielinski, was nonexistent because to get a real engineering license, she would need to finish an engineer training program by either taking "advanced extension courses through the University of Virginia" (p. 52) or courses that "are available at Hampton High School" (p. 53). However, these two academic organizations only accepted White male students; colored or female students, like Mary, were not admitted. In a conversation with Zielinski, Mary notes that her race and gender are hindering her from further study.

> Zielinski: There's another opening in the Engineer Training Program.… Mary...a person with an engineer's mind should be an engineer. You can't be a Computer the rest of your life. That would be a tragic waste of your ability.
>
> Mary: Mr. Zielinski, I'm a Negro woman. I'm not going to entertain the impossible.
>
> Zielinski: And I'm a polish Jew whose parents died in a Nazi prison camp. Now I'm standing beneath a space ship that's going to carry an astronaut to the stars. I think we can say, we're living the impossible. Let me ask...if you were a white male, would you wish to be an engineer?
>
> Mary: I wouldn't have to. I'd already be one. (p. 20)

The above dialogue revealed that Mary does not refuse to take the engineer training program; she simply isn't allowed to do so because she is Black and a woman. Nevertheless, Zielinski encourages Mary, observing that even he, a Polish and Jewish man whose parents died in a Nazi prisoner-of-war camp, could be a space engineer working at NASA. However, it seems that Zielinski does not understand that, although he is a Polish Jew and not an American, he is a man with white skin; hence, he belongs to the highest level of the intersectional hierarchy system. Zielinski, ironically, is unaware of the difference between him and Mary, but Mary is quite aware that

she, a Black woman, belongs to the bottom level of the intersectional hierarchy system. She can never be the same as Zielinski.

However, with the encouragement of her boss, Zielinski, in order to achieve something (p. 37) and "get ahead" (p. 52), Mary decides to try to apply for the program. However, as shown in the film, Vivian, her supervisor, attempts to stop her from applying for the engineer program and becomes extremely irritated upon learning that Mary is in the process of applying.

Vivian: NASA doesn't commission females for the Engineer Trainin' Program.

Mary: That position is open to any qualified applicant.

Vivian: Right. 'Cept you don't have the educational requirements.

Mary: I have a Bachelors Degree in Mathematics and Physical Sciences. Same degree as most engineers 'round here.

Vivian: We now require advanced extension courses through the University of Virginia. It's in the Employee Handbook. An addendum. 'Case you haven't read it.

Mary: Every time we have a chance to get ahead, ya'll move the finish line.

Vivian: I just follow the rules around here. And I expect those who work for me to follow 'em as well. There are no special circumstances for anyone. Ya'll should be thankful you have jobs at all. (p. 52)

Because of her white supremacist mindset, Vivian cannot tolerate her rules being challenged by a Black person—in this case, Mary. She sarcastically and scornfully responds to Mary, saying, "Ya'll should be thankful you have jobs at all" (p. 52).

Separate but Equal

Segregation establishes barriers between one group and another, implying that normal social interactions between these groups would not be acceptable or appropriate (Rose, 1997). In the 1960s in Virginia, the segregation system's state and local laws enforced bullying and brutality. Although it was claimed that the segregation rules or "separate but equal" policies were intended to provide "equal" treatment, such was not the case; the policies were, in fact, a system of degradation for non-White people (Ware, 2013). Under the "separate but equal" policy, people in Virginia divided themselves according to their race, White or colored. For instance, the state segregated schools, theaters, restaurants, hospitals, public bathrooms, public transport, and any other public facilities for Whites and colored.

As with the Jim Crow practices, acts of segregation were also found in Hidden Figures. For instance, to submit a petition for equality at the courthouse, Mary has to use the "colored entrance" and is asked to sit "at the back of the courtroom" (Schroeder and Melfi, 2015, p. 62) to segregate the White and Black people; also, when getting on the bus, Dorothy and her children have to walk all the way to the rear of the bus because, based on the "separate but equal" policy, Black people were required to sit at the rear of the bus, while the White people sat at the front of the

bus. Also, schools were racially separated; Whites and Blacks attended different schools, and the schools for Whites received more public funding (Kennedy, 1990). Segregation was even maintained in libraries; the books were divided for Whites and Blacks, and the entrances were labeled "Colored Entrance" and "White Entrance."

In the film, Dorothy becomes anxious when the IBM machine arrives because she knows her job will be threatened. In order to keep her position, she decides to sharpen her computer skills and learn the FORTRAN language by herself. Thus, she goes to the Hampton public library to borrow reference books to learn how to operate the IBM's FORTRAN program. However, Dorothy is racially discriminated against at the Hampton public library; she and her children have to "climb the stone stairs of the 'Colored Entrance'" (Schroeder and Melfi, 2015, p. 55). Moreover, because of the limited book collection in the colored section, Dorothy cannot find any IBM-related reference books; hence, she leaves the noncolored section to search for the reference books elsewhere. After finding the book Fortran, The New Language of Computers and taking it off the shelf, she finds a White librarian standing nearby, staring back at her:

White Librarian: We don't want any trouble in here.

Dorothy: I'm not here for any trouble.

White Librarian: What are you here for?

Dorothy: A book.

White Librarian: You have books in the colored section.

Dorothy: It doesn't have what I'm looking for.

White Librarian: That's just the way it is. (p. 55)

Soon, a guard arrives and grabs her boys' shoulders to push them out of the library. After being expelled from the library, while getting on the bus, Dorothy pulls a book from her bag and justifies her behavior to her two sons: "Son, I pay taxes. And taxes pay for everything in that library. You can't steal what you already paid for" (p. 57). Undeniably, taking a book from a city library can be regarded as theft; however, this wasn't act of random theft: her job was being threatened, and she could have been dismissed at any time. In order to keep her job, all Dorothy could do was learn the FORTRAN language to make herself valuable to NASA. Her actions were a protest against the injustice of rules based on racism; as a citizen paying taxes to the United States, she had the right to read any book in the library.

Gender Discrimination

Gender inequality was also carried out by the institutions in Hidden Figures. NASA, as a US government institution, inevitably engaged in sexism. As mentioned, Vivian, a supervisor, tells Mary that she cannot enroll in the engineering training program because NASA's regulations prevent women from participating in it. Clearly, in the film, NASA was highlighted as a work environment dominated by men and White people; their astronauts, scientists, and engineers were all White men. The film showcased rampant discrimination against women, allowing

only men to occupy the highest and most important positions, while women occupied subordinate positions at the patriarchal NASA institution. Moreover, Black women experienced multiple forms of discrimination in terms of gender, ethnicity, and so forth, compared with White women.

In Hidden Figures, being an African American woman, Mary has to endure institutional racial discrimination and sexual discrimination in the workplace; then, when she goes home, she also suffers from gender discrimination from her husband Levi. Upon learning of Mary's decision to apply for the engineer training program, Levi criticizes her plan and doubts her ability to be a qualified engineer. Moreover, in an outdoor potluck dinner after the church service, Levi complains that she is not home often enough to take care of the children: "Kid needs to eat vegetables. You would know that, if you were home" (p. 38).

Besides Mary, Katherine also suffers from gender discrimination. While at church, Johnson, an African-American lieutenant colonel, questions women's mathematical abilities. When Katherine explains what is involved in being a NASA human computer, Johnson seems skeptical, wondering why an institution like NASA would employ women to carry out such difficult tasks. Indeed, he is amazed that NASA would allow women to calculate for important projects and unintentionally offends Katherine.

Johnson: Pastor mentioned you're a "Computer" at NASA. What's that entail?

Katherine: We calculate the mathematics necessary to enable launch and landing for the Space Program.

Johnson: Aeronautics. Pretty heady stuff. They let women handle that kind of-

Well. That's not what I mean.

Katherine: What do you mean?

Johnson: was just surprised something so...taxing-

Katherine: Mr. Johnson, it may be best if you quit talking right now.

Johnson: I'm not meaning any disrespect-

Katherine: I'll have you know, I was the first Negro female student at West Virginia University Graduate School. On any given day I analyze the manometer levels for air displacement, friction and velocity and compute over 10,000 calculations by cosine, square root and lately Analytic Geometry. By hand. There are 20 bright, highly capable Negro women in the West Computing Group. And we're proud to be doing our part for the country….So, yes...they let women do some things over at NASA, Mr. Johnson. But it's not because we wear skirts...it's because we wear glasses. (p. 40-41)

Although Johnson later apologizes for accidentally insulting Katherine, it cannot be denied that his personal sexism led him to doubt Katherine's professional ability and her qualifications to carry out difficult tasks at NASA. Being male, though black, Johnson certainly holds a bias that women are inferior to men, underscoring the Black woman's plunge to the bottom of the social hierarchy. Johnson's discourse complements Hall et al.'s observation that Black women were stereotyped as being "intellectually inferior" or unqualified for intellectual jobs (Hall, Everett, and Hamilton-Mason, 2011).

Colonel Johnson is not the only sexist character; Stafford, Katherine's supervisor at NASA, is also sexist toward her. When Katherine asks to attend the Pentagon meetings to be aware of the current data for Glenn's launch, Stafford refuses, declaring that the protocol does not allow women to participate in Pentagon briefings. In order to prevent her from attending the meeting, he even threatens to fire her.

Katherine: Sir. I if can attended these briefings, I would be more useful to the project.

Stafford: Pentagon briefings are closed door.

Katherine: Yes. But you know without the latest information, we can't keep up. I need the changes as they occur. As you said, it's a pin head.

Stafford: That's the job, Katherine. You asked for the assignment. Calculate with what you have. Or we'll find someone who can. (Schroeder and Melfi, 2015, p. 82)

Besides being forbidden from joining the meeting, Katherine, as a human computer, is prohibited from putting her name on her reports beside Stafford's name, although she worked so hard to create the report. Indeed, Stafford forces Katherine to remove her name from the reports, emphasizing that "computers don't author reports. Fix it" (p. 84). Consequently, only Stafford receives credit for her work.

Fighting against Intersectional Oppression and Discrimination of Black Women at NASA

In Hidden Figures, it is taken for granted that Mary, Dorothy, and Katherine will be segregated and use the "colored women's toilet," "colored coffee pot," "colored cafeteria," and "colored bus" because of their skin color. Even when the employees line up to welcome the astronauts to NASA, the first in line are the White male engineers, followed by White female human computers and secretaries, and lastly, Black female human computers. Although they are all women, Black and White human computers cannot stand together. Furthermore, although the White astronauts and the Mercury Team want to say hello and shake hands with the Black women, this is considered a waste of time by the White secretary, Ruth: "We have a fairly tight itinerary, Colonel" (Schroeder and Melfi, 2015, p. 43).

At one point, Harrison asks Katherine to check "Stafford's math as well as others on this floor from time to time" (p. 24). But Stafford has no intention of letting Katherine recheck his calculations: "I can work that out myself" (p. 24). When he cannot persuade Harrison to let his calculations go unchecked by Katherine, he blacks out the lines, thinking that she has no clearance to read the complete documents.

Stafford: Mr. Harrison wants you to confirm launch and landing for the Redstone Rocket test.

Katherine: I cannot work on what I cannot see, Mr. Stafford.

Katherine: It's illegible.

Stafford: The numbers have been confirmed by two Engineers in this department, and myself. It's more-or less a dummy check. (p. 45)

Indeed, filled with racism and gender bias, Stafford and Turner, an engineer, use the excuse of "classified" and

"top secret" information, thus the need for confidentiality, leading them to strike line after line so that Katherine cannot recheck their calculations. Furthermore, even when Harrison sarcastically asks Katherine whether she is a Russian spy to appease Stafford's concerns, the man still protests having Katherine recheck his calculations, saying, "Are we sure about this?" to Harrison (p. 50). Katherine is clearly regarded as an outsider, even within the NASA institution.

Scarborough (1989) indicated that American society generally believed that women were of lower value than men and that Blacks were of lower value than Whites. This belief placed Katherine at the bottom of the hierarchy system. As shown in the film, at NASA, all of the Black women's jobs are temporary, even though some Black female human computers (human calculators), such as Mary, Katherine, and Dorothy, are more skilled than the White human computers. However, since they are Black women, once they are no longer valuable to NASA, they will be dismissed.

Being prevented from becoming an engineer was not the only instance of intersectional oppression for Black women in terms of racism and sexism; they also had limited job choices, with basically no choice but to engage in low-status and low-income jobs (King, 1988). Indeed, despite being smart and capable, in order to survive, Katherine, Mary, and Dorothy have no choice but to accept mistreatment and low pay on the job because they are Black women. As Katherine remarks, even though she works like "a dog day and night," she cannot even afford a plain pearl necklace (Schroeder and Melfi, 2015, p. 65). In fact, unable to afford a car and desperate to reduce their budget, the women ride to work together, using Dorothy's car, which is always breaking down, so as not to "walk the sixteen miles" (p. 5) or "sit on the back of the bus" (p. 6).

NASA not only differentiated male and female workers for job positions, but the female human computers were also divided into two groups according to their race: the White female and the colored female human computers. As a government institution, NASA followed the segregation system to separate the White and Black human computers into two rooms of two different buildings, about one half mile away from each other. Although both did the same jobs as human computers, under intersectional oppression in terms of racism and sexism, Black female human computers' positions in the workplace were obviously lower than those of the White computers. Also, the White female human computers worked in the East Computing Office, an office in the main building of the Langley Research Center. Vivian, a White female supervisor of the East Computing Office, even feels disgusted with the notion of entering the other area. While leaving the West Computing office, she says, "Didn't think of comin' all the way down here" (p. 16). Her statement indicates a White female's intersectional discrimination toward Black women in terms of racism and sexism.

In addition to the Black women's and White women's offices being separated, so were their bathrooms. When Katherine is taken to the East Computing Office, a workplace for White human computers, she needs to use the ladies' restroom, so she asks Ruth for assistance. The woman, busy on a phone call, hastily responds, "Sorry, I have no idea where your bathroom is" (p. 26). In the end, Katherine's "colored" bathroom is a half mile away from her current workplace. Evidently, at NASA, Katherine, as well as other Black women, has been objectified as the "other" (Crawley, 2006), hence becoming ostracized at NASA. With no alternative, all she can do is run half a mile to the

East Building to use the washroom, even though it is pouring outside and she ends up being soaked "like a wet rat" (p. 64). As a final insult, Katherine is reprimanded by her boss, Harrison, in front of everybody because she has taken too much time using the washroom—and Katherine can no longer restrain herself.

Harrison: Where the hell have you been? Everywhere I look you're not where I need you to be. And it's not my imagination. Where the hell do you go everyday?

Katherine: The bathroom, sir.

Harrison: The bathroom! The damn bathroom!

Katherine: Yes, sir. The bathroom.

Harrison: For 40 minutes a day!? What do you do in there!? We are T-minus zero here. I put a lot of faith in you.

Katherine: There's no bathroom for me here.

Harrison: There's no bathroom? What do you mean there's no bathroom for you here?

Katherine: There's no bathroom here. There are no COLORED bathrooms in this building or ANY building outside the West Campus. Which is half a mile away! Did you know that? I have to walk to Timbuktu just to relieve myself! And I can't take one of the handy bikes. Picture that, with my uniform: skirt below the knees and my heels. And don't get me started about the "simple pearl necklace" I can't afford. Lord knows you don't pay "the coloreds enough for that. And I work like a dog day and night, living on coffee from a coffee pot half of you don't want me to touch! So excuse me if I have to go to the restroom a few times a day! (p. 64-65)

This refusal to share a coffee pot corresponds with Rose's theory (1997) regarding avoidance and segregation: avoidance involves avoiding interactions with those of different racial backgrounds, and segregation involves the intentional act of forming barriers to distance oneself from those with different racial backgrounds. Katherine's colleagues are obviously exhibiting avoidance toward her. Being White employees at NASA, either male or female, they, considering Blacks as "others," avoid touching anything that had been touched by Black people like Katherine. Being discriminated against in multiple ways, unable to hold back her grievances any longer, Katherine finally breaks the silence and fights against the mistreatment she has received at NASA.

Mary, another female African American, also recognizes the multiple or intersectional discrimination assailing her. As previously noted, Mary initially refuses to apply to the engineer training program because she knows that, as an African-American woman—a Black person and a woman—she is a victim of the interlocking systems of oppression. During the day, she faces institutional, racial, and gender discrimination at NASA, and when she goes home, she faces individual intersectional discrimination from her husband, Levi.

Levi: Now you want to be an engineer? A female engineer. We're Negro, baby. Ain't no such thing. Understand it.

Mary: It's not like that there, Levi.

Levi: The only real chance we're gonna have is when we fight back. You can't "apply" for freedom. Freedom is never granted to the oppressed. It's got to be demanded. Taken.

Mary: Levi, please. Stop quoting your slogans at me. I've heard them all. There's more than one way to achieve something. (Schroeder and Melfi, 2015, p. 37-38)

Levi definitely knows that the minority status of African Americans is an obstacle in a privileged White society, one that can never be overcome in a conventional American society rife with racism and white supremacy. Hence, he does not want his wife to be hurt. However, somehow, Levi's unsympathetic attitudes and criticism of Mary's dream of being an engineer are actually, though not totally, a form of racial discrimination, an intersectionally unjust and prejudicial treatment of Black women, in terms of race and gender. Without doubt, the intersectional discriminations of race and sex, coming from both her husband and NASA, place Mary in an awkward, oppressive situation, one that any Black woman would recognize but any White woman or man of color would be blind to (Lenhardt and Paul-Emile, 2018).

However, by resisting, Mary manages to conquer her difficulties. Although frustrated by Vivian's insolent attitude and her husband's doubts about her ability, with the encouragement of her boss, Zielinski, Mary finally makes up her mind to fulfill her dream of being an engineer, and she obtains permission to attend the engineer training program. While in the courtroom, she makes the following appeal to the judge:

And I, sir, plan on being an engineer at NASA. But I can't do that without taking those classes at that all-white high school. And I can't change the color of my skin. So...I have no choice but to be the first. Which I can't do without you" (Schroeder and Melfi, 2015, p. 75).

Racially and sexually discriminated against, Mary has no choice but to make a petition at the courthouse to claim her right to education. Ironically, while Mary is fighting for her equality, her right to an education, she must use the "Colored Entrance" to enter the courthouse and must sit "at the back of the courtroom" (p. 62) where the colored seats are located, as the court clerk reminds her. Sarcastically, Mary replies to the clerk, "Too happy to be offended" (p. 62). Because she fought against intersectional, racial, and gender discrimination, Mary finally earns a Master of Science in Engineering from the University of Virginia and becomes NASA's first woman of color to be an engineer.

For her part, Dorothy, who discovered that IBM was going to replace all the human computers at NASA, tries to learn and help other Black female human computers learn how to operate the IBM machine in order to keep their jobs. Because she fights against discrimination and works hard, Dorothy becomes the first African-American supervisor at NASA, overseeing the Electronic Computing Group at Langley Research Center.

As for Katherine, she assumed that, when the IBM machine began to operate, she would return to her former division in the West Computing Office. However, her bravery in insisting upon joining the Pentagon briefing, saying that "I feel like I'm the best person to present my calculations" (p. 85), paves her way toward demonstrating her brilliance. On the day the astronaut Glenn is supposed to fly, something concerning happens with the IBM because the landing coordinates fail to match. Trusting Katherine's professional talents, Glenn insists that he will not fly without Katherine's review of the calculations. Shortly thereafter, when Katherine insists yet again on placing her

name on another one of her reports, thereby recording her professional contribution to the space technology project, Stafford decides that she has proven her worth; he sheds his intersectional, racial, and gender discrimination against Katherine and accepts her as a coauthor on the report titled "Notes on Space Technology" (p. 121). Later, he even offers her a cup of coffee to express his acceptance.

In the end, Katherine receives the respect she deserves and becomes a permanent employee of the Space Task Group, taking over the calculations for other astronauts, such as Armstrong, Aldrin, and Collins. Moreover, her angry protest against the discrimination she encountered in the workplace prompts her boss, Harrison, to use a sledgehammer to knock down the "colored ladies' room" panel and abolish bathroom segregation at NASA. Harrison says, "There you have it! No more colored restrooms. No more white restrooms. Just plain old toilets…. At NASA, we all…pee the same color" (p. 66). Obviously, Mary, Dorothy, and Katherine had undergone intersectional discriminations. However, through their resistance, they are finally able to find success within a multi-faceted discriminatory hierarchical society.

CONCLUSIONS AND SUGGESTIONS

In Hidden Figures, the female characters Mary, Dorothy, and Katherine experience multiple or, actually, intersectional discrimination in terms of racism, sexism, and even classism. Although they experienced personal and institutional discrimination, in terms of race and gender, because they realized that they were being discriminated against in multiple ways, they were able to protest the unfair oppression and resist the intersectional domination of both Whites and males. Finally, through their resistance, they find success in their workplace.

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