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The Influence the Anchoring Effect and Decoy Effect Have on Gender Discrimination in the Hiring Process

Introduction

Gender discrimination has always been a prominent issue within the United States. From the early roots of bureaucracy to modernity, the notion that females are far less superior than men has always been present. Even though we have come a long way from the blatant discrimination that used to be normalized, that in itself introduces a new dilemma. Gender discrimination is not as blatant as it used to be, especially in professional settings, however, this discrimination is still very persistent within our society. Instead of being able to see acts of gender discrimination, it has instead become an unseen virus that plagues the environment around us. Women are still fighting for equal rights, not just in the United States, but all around the world. Females face many barriers within the workplace such as unequal pay, uneven job positions, neglect, and often many of their ideas are disregarded for the sole purpose of their gender. For this study, I wanted to delve into the impacts that heuristic effects have on human decision-making in the workplace. Two prominent heuristic effects that strongly influence the human mind are the anchoring effect and the decoy effect. Both of these cognitive biases have been studied in lab experiments and real-life settings to explore how they can potentially alter the

minds of the decision maker's in regards to gender. I'm already aware of the impacts these effects have on the human mind and I wanted to explore which of the heuristic effects would have a bigger impact on decision making. Many managers and employers are unaware of these cognitive biases. In addition, many struggle to recognize the inequalities that occur each day in the workplace. With this experimental study, I could learn more about the degree to which these effects have an impact, which system within the workplace is more affected by the anchoring effect or decoy effect, and most importantly, find solutions to mitigate these biases. Gender discrimination has gone ignored for far too long and finding other essential factors, such as these cognitive biases, that affect the way individuals think could help women win this fight for equality.

Literature Review

Decoy effect

The decoy effect serves as one of the most famous heuristic effects that strongly influences the subconscious human mind in decision making (Maurits C K., Robin Van E., Davide L., 2016). From large bodies of research, generally, it is proven that the presence of a third inferior decoy option alters decision makers' preferences between the other two superior options. In regards to gender bias, it is found that an asymmetrical decoy option heavily influences hiring decisions between female and male applicants who may be symmetrically qualified for the job. For instance, imagine the scenario where there are two symmetrically qualified applicants, one male, and one female, applying for a stereotypically male-dominated job. Each candidate is stronger in one dimension than the other but overall have equal qualifications. The male applicant may be stronger in academics but have less experience in labor, meanwhile, the female applicant is quite the opposite and has a greater work experience, but is weaker in the field of academics. Now imagine a third applicant were to enter the choice set. This applicant is inferior to one of the two applicants on all dimensions causing one of the other two applicants to appear more favorable than the other. If the third decoy option is surpassed by the male applicant on all dimensions then the male applicant is more likely to be chosen for the job. One would assume that the same is true for the female applicant, however, studies show that this decoy creates a bias against women. This heuristic effect was proven to create strong odds that male applicants have a higher probability of getting selected in a stereotypically male position (Steffen K., Wenjie T., 2019). This study addresses the gender bias

that is present through the hiring process. I wonder if an addition of a second variable such as another qualification would be able to overcome the gender bias that the decoy effect displays.

A specific example of gender discrimination is demonstrated when attractive women apply to masculine jobs. Gender bias can also be demonstrated with the “beauty is beastly effect”. Beauty is often associated with all the beneficial aspects, however, many fail to recognize the detrimental effects that can also occur with beauty. For example, attractive women who apply for masculine jobs are often perceived as incapable of doing the job because of the already inferred femininity which elicits the “beauty is beastly” bias against women. With the presence of the decoy, it was found that the decoy can help mitigate this bias against women because it sets up a new norm. For instance, if say an attractive applicant and an unattractive applicant were applying for a masculine job, the unattractive applicant is more likely to be chosen over the attractive applicant because of the norm that is already established within that job. However, the addition of the decoy option can alter that norm. The inclusion of another attractive decoy can mitigate the “beauty is beastly” effect due to the new norm that was set by the decoy. It was also discovered that attractiveness in men either is more beneficial or does not have any effect when applying to jobs. Attractiveness for women very often has some sort of positive or negative outcome, however, greater attractiveness in men almost always has a positive or neutral effect. In this itself, discrimination is already blatant as more factors are subconsciously considered when hiring women (Stefanie K. J., Elsa C., 2019).

Previous experiments have been documented considering selecting job applicants that have the same qualifications and seeing how the decoy affects the hiring process. However, this study tests the situation in which the candidates enter on uneven ground and how the first round of assessments affect which candidate is hired. It is shown that the decoy effect is likely to be

stronger when additional information favors the target, and the decoy effect is likely to be weaker when additional information favors the non-targeted candidate. The decoy effect is still influential in the presence of different manipulations that are designed to weaken the effects of asymmetrical dominance. However, the level of influence the decoy effect emits is varied based on what manipulation is present (Jerel E. S., 2007). This study addresses how influential the decoy effect can still be with the presence of other assets that make the two applicants enter the finalist pool on uneven ground. This makes me question if a female applicant were to enter the applicant pool on a higher ground than the male applicant, would the presence of a decoy option that is surpassed by the dimensions of the male applicant still make the male applicant look more favorable than the female applicant.

Anchoring effect

The anchoring effect is another heuristic effect that describes the phenomenon in which decision-makers subconsciously heavily rely on one piece of information and set that as the anchor (Isaac C., Ryan W., Alireza K., Sashank S., Samira S., Wenwen D., 2017). Decision-makers tend to make their judgments biased toward this anchor. This cognitive bias is not rational and can be defined as the human tendency to make systematic errors in certain circumstances based on cognitive factors rather than evidence (Andrea C., 2014). The anchoring effect includes a temporal component in which we are observing how changes over time are influenced by each other. In the hiring process, the anchoring effect could influence bias if there is an anchor of some kind involved with the decision-making. For instance, if a job was previously occupied by a male employee and that's the first piece of information that is obtained by the decision-maker, the male applicant is more likely to be chosen over the female applicant

because of the anchor. The idea is that the qualifications of the female applicant may be considered, however, the decision-maker adjusts his opinions based on the initial anchor, causing an unfair bias.

Though this bias subconsciously influences individuals, there are ways to mitigate the extent of this effect. Overall, providing the decision-makers with some predictions from an external source increases the accuracy of human judgment (Siwen S., Dr. Nathan R., 2018). In addition to this, it was discovered that an individual's susceptibility to the anchor can vary upon individual differences. With the anchoring effect, many other factors such as gender, education, and personality, can significantly affect the extent to which individuals are susceptible to the anchor. Female subjects were found to be less affected by the anchoring bias than male subjects. Education also had a significant impact on people's susceptibility. In Caputo's study, he tested how five personality factors, which included extraversion, agreeableness, conscientiousness, emotional stability, and openness to experience, impacted people's sensitivity to the anchor. Subjects whose personalities matched agreeableness and openness to experience were found to reduce susceptibility to the anchoring effect (Andrea C., 2014). This study addresses personality and how it affects susceptibility to the anchoring effect, but how would adding another factor to this study, such as gender affect their susceptibility. This corresponds with different levels of analysis because I want to apply an extra variable, which is gender, into the experiment and sees how different genders with the same personality react with the anchoring effect.

One prominent example that involves anchoring biases is the labor market and its wage-setting processes. The extent of how much the anchoring effect influences an individual depends on individual differences. For example, a study conducted in 2017 examined gender wage inequality and how it is nourished by anchoring biases. This study demonstrates how other

factors such as work experience and education can overcome the effect of gender itself. It was discovered that education and experience mitigate the effects of the anchor. Individuals with higher cognitive skills and more experience in the labor market may receive higher wages since they are less affected by the anchoring in the wage negotiation process. The logic is that women are more likely to interrupt their employment to take care of responsibilities, such as longer maternity leave. This causes women to have less labor market experience than men, which ultimately puts women in a less favorable cognitive situation when they are negotiating their re-entry wages (Miriam B., Denis B., Eva M., 2017). The emphasis on this paper is that each individual's experience and education also make a huge impact regarding their sensitivity to the anchor.

Comparison between heuristic effects

Both these heuristic effects can be helpful as they help our brains make quick decisions. However, they can lead to systematic biases which can be very detrimental to our society as they have the potential to influence gender discrimination. The decoy effect compares options in a moment and is semi-rational, meanwhile, the anchoring effect is rather about time and is not rational. The anchoring effect and the decoy effect both have a very big influence on decision making, however, they influence different parts of decision making in the workplace. To minimize the number of variables and experiments in this paper, I will be focusing on the hiring process.

Hypothesis 1: The decoy effect has a bigger influence than the anchoring effect in regards to the hiring process.

I think that the decoy effect will have a bigger influence than the anchoring effect due to the fact that the decoy effect was found to have a significant impact on the majority of the decision-makers of the time a decoy option was presented. The studies showed that the decoy option almost always directed the decision maker's to choose the option that the decoy option demonstrated to be "more favorable". The anchoring effect can have a big influence on human minds, but each individual's susceptibility to the anchor varies from many different factors. With the anchoring effect, personality, gender, education, and experience all come into play when considering the anchor. When hiring a person for a job, I would assume the employers would think rationally about their decision if they are hiring for one of the top positions, thus causing the decoy effect to be more influential.

Feminist organizations such as #MeToo also observed some workplaces and the biases against women that are present within that workplace. New studies have shown that the majority of men and some women are reluctant to hire women for occupations that require interpersonal interaction with men, such as business travel jobs. Organizations are now forcing their employees to examine the presence of the anchoring effect since they are now aware that many others may be "unconsciously biased in favor of men for these jobs" (forbes.com). However, it was also discovered that the presence of more women in the workplace could be very beneficial in decreasing discrimination towards females. This would be a real-life example of how the anchoring and decoy effect can affect the workplace.

Method

I.Study Design:

To observe whether the anchoring effect or the decoy effect has a bigger influence on gender discrimination in the workplace, I decided to conduct a study in which both heuristic effects are present. I would examine a job setting in which I could apply both the anchoring and decoy effect. For example, I would find a company that is looking to hire for the top leadership position, which may be stereotypically male. In this case, I would possibly find a scenario where a school is looking to hire a new principal. I could apply both heuristic effects to this experiment. There will be two opposite-gender applicants applying for this principal position. These applicants will be symmetrically qualified for the job and the only significant difference that will affect if they will get the job will be biased towards their gender. As I mentioned, this job will be stereotypically male-dominant meaning many of their previous principals were male. This fact will mirror the anchoring effect since the previous male principals act as an anchor for the decision-maker. This acts as the anchoring effect because the anchor may influence the decision-maker to make decisions based on this specific anchor. However, there will be a majority of female employees that work in the middle ground, such as teachers, secretaries, nurses, principal assistants, etc. This will mirror the decoy effect as this presents a third variable in which there are also many female employees in the surrounding environment. This decoy option may alter the decision-maker to think that the norm is women since so many women occupy the jobs surrounding the top position. My logic is that if the results show that more women were selected for the principal position, then the decoy effect overrules the anchoring effect in this area. If decision-makers choose majority males for this position, then the anchoring effect is more influential.

I would also do this study on 10 different schools to ensure that my results are consistent and accurate. The schools would have to be rather diverse, eliminating any race biases that the decision makers may gravitate towards. All of the schools we are comparing only offer schooling from grade 9th to grade 12th. We would also have to consider the area in which the school is located and its culture. Different cultures and the area in which the school is located may affect the employer's decision significantly. To help reduce the number of outside factors that may influence the employers, I would have to find schools that all relatively have the same culture. I presume that the schools I choose would have to all have a solid history of hiring a variety of genders, and individuals with different ethnic backgrounds to ensure that our observation of how the heuristic effects influence the school is accurate. Before I execute my study design, I would survey all the schools that I am studying. The survey questions would consist of the ratio of male to women principles, the ratio of women to male employees, their diversity statistics, and what area they are located in. Once I am able to start my study, if I observe that the results are relatively the same among the multiple schools I studied with, then I can presume that the data collected is accurate.

II. Subjects:

To start the study design, we would need to make sure that the employers enter our experiment with little to no other biases that could potentially skewer our outcome. Multiple factors would need to be considered to appropriately execute our experiment so we get accurate data. First, we would need to make sure that our subjects are well educated on the job that they are hiring for. If I am using the same principle concept as I mentioned earlier, the subjects would have to also be principals or retired principals who have a certain amount of experience to participate. In this study, 7 or more years of principal experience would be required. This

requirement will help ensure that all the employers we choose have a good amount of experience. Second, we would need to survey all our potential subjects to make sure there are no other biases that could affect our study. It will be hard to eliminate all other biases but we can try our best to minimize them. Our survey would include the potential subject's name, age, ethnicity, education, and gender. We want to make our subjects diverse in all aspects so it's fair. We would survey about 200 potential subjects. Once we get all the surveys back, we would choose 100 subjects that would be a good fit for our study. 50 of these employers would be male and 50 would be female. This way we have a large sample size and our subjects are more randomized. We also need a large sample size because it's hard to eliminate all other biases. Larger sample size can help minimize outliers and reduce bias within the whole group. Third, we will keep the school that they are hiring for anonymous in case some subjects have a set bias towards that school. This is all to ensure that the amount of other outside factors that can influence our study is minimized. Fourth, once we have our set subjects, we will give them a layout of the school. We will make them aware of the usual staff members (who will consist of majority women) and who the previous principals were (who will consist of majority males). By doing so, our goal is to present decoy and anchoring heuristics to them subconsciously and observe how this information affects their decisions. We will also record the amount of time it takes each employer to decide which applicant they will choose in case the number of employers that chose females and the number of employers that chose males are the same or very similar. The time element may become useful if we observe any patterns between the time of those who chose the female applicant vs. the time of those who chose the male applicant. We would measure the amount of time in weeks. We would also allow the interviewers to take as many weeks as they need to ensure that they don't feel pressured and the data will come out as accurately as it can be.

We will, then, measure the data based on the sum of weeks it took all the interviewers to make their decision. If it took the employers fewer weeks overall to choose the female applicant then we can infer that the decoy heuristic has a bigger effect. The opposite is true for the anchoring effect.

III. Experiment:

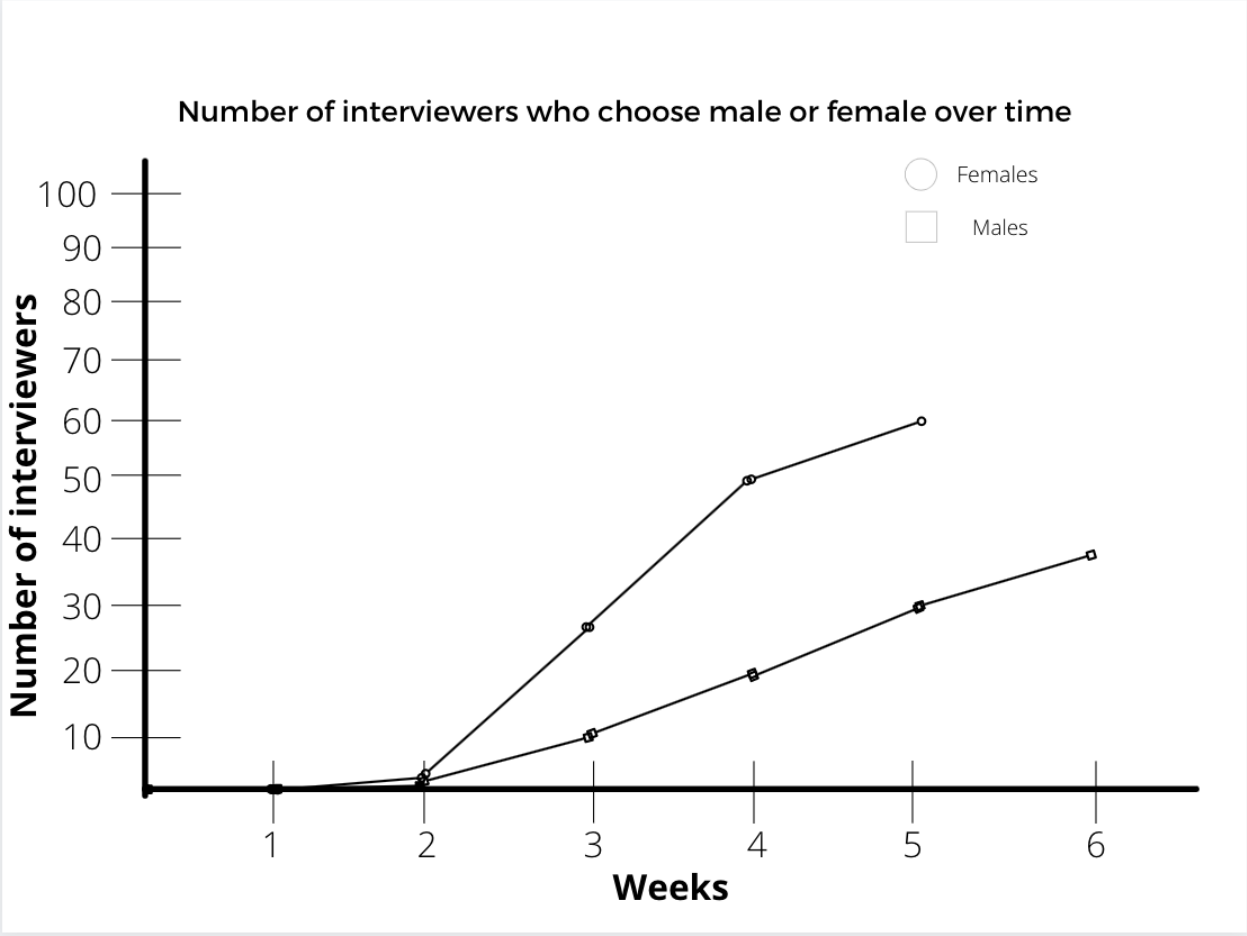
Independent Variables - heuristic effects (anchoring vs. decoy)

Dependent Variables- number of interviewers that chose females and number of interviewers that chose males, time

Controlled Variables - heuristic effects and applicants

Weeks	**Number of interviewers who chose the female applicant**	**Number of interviewers who choose the male applicant**
1		
2		
3		
4		
5		

After we gather all the data and put it into these tables, we will be able to graph the results.



Discussion

Above, I have made a hypothetical graph that represents a possible outcome of the results. The results show that the rate of interviewers who chose the female applicant increased faster and by a higher value than the number of interviewers who chose the male applicant. By these results, we would infer that the decoy effect had a bigger influence on the decision-makers since 1) more interviewers chose the female and 2) the decoy option had such a big influence on the employers that it caused them to make a solid decision at a faster rate. The time value is only significantly helpful in differentiating the results if the two numbers are very similar to each

other, however, it can also help us understand how powerful each of the heuristic effects is. For instance, if the graph shows a spike of interviewers who chose males (30) in week one, then we could infer that the anchoring effect works faster on individuals. Even if the decoy effect overall has a bigger impact, our studies could also examine which effect works faster than the other. Once we find what heuristic effects work stronger and faster in which areas of the workplace, we can use this information to help find a solution. For instance, if the decoy effect does have a bigger influence on the hiring process, we could find a way to also use the decoy effect to mitigate the gender biases that are present. In the future, I would like to further my studies by executing the study and finding actual data that support my theories.

Conclusion

Far too many companies and individuals have conformed to the notion that women are less superior than men. As individuals who strive to make a change in our future, it is essential that we do not conform to societal pressures. Some cultures have already ingrained negative stereotypes into many individual's minds that many are unaware of the biases that are actively functioning when making decisions concerning gender, race, and wealth. This paper on heuristic effects aims to make others aware of how the subconscious mind can encourage gender discrimination. However, there is still a lot to study on heuristic effects and how they affect the human mind. For future directions, once I get all the data, I will be able to see which heuristic effect is more prominent within the hiring process. I can, then, extend my research and set up study designs for other parts of the workplace. For example, I would study which heuristic effect is more prominent within the promotion process, and other parts of the workplace. I would be able to use my data and find ways to mitigate these effects. I hope to continue experimenting with heuristic effects and their influence on gender discrimination in further studies.

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