Journal of Economic Behavior & Organization 116 (2015) 331–345

Contents lists available at ScienceDirect

Journal of Economic Behavior & Organization

journal homepage: www.elsevier.com/locate/jebo

Now you see it, now you don't: The vanishing beauty premium☆

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ARTICLE INFO

Article history:
Received 16 August 2013
Received in revised form 1 May 2015
Accepted 11 May 2015
Available online 18 May 2015

JEL classification:
C91
J31
J71

Keywords:
Beauty premium
Discrimination
Economic experiments
Labor markets

ABSTRACT

We design a laboratory experiment to test the extent to which the often-observed "beauty premium" – a positive relationship between attractiveness and wages – is context-specific. Using three realistic worker tasks, we find that the existence of the "beauty premium" indeed depends on the task: while relatively more attractive workers receive higher wage bids in a bargaining task, there is no such premium in either an analytical task or a data entry task. Our analysis shows that the premium in bargaining is driven by statistical discrimination based on biased beliefs about worker performance. We also find that there is substantial learning after worker-specific performance information is revealed, highlighting the importance of accounting for longer-run interactions in studies of discrimination.

1. Introduction

Labor market discrimination based on gender, age, race, and national origin is illegal. Appearance-based discrimination, while not currently unlawful, has been the subject of several lawsuits in recent years.[1] Supporting the notion that appearance-based discrimination exists, numerous observational studies have found that people who are relatively more attractive are paid more, even when the situation does not appear to warrant it. This phenomenon has been termed the "beauty premium." It appears to be pervasive: versions of the beauty premium have been found in labor markets (e.g., Hamermesh and Biddle, 1994; Biddle and Hamermesh, 1998), college classrooms (Hamermesh and Parker, 2005; Sen et al., 2010; Ponzo and Scoppa, 2012), credit markets (Ravina, 2012), sex markets (Arunachalam and Shah, 2012), professional sports (Berri et al., 2011), and elections (Hamermesh, 2006; Leigh and Susilo, 2009; Berggren et al., 2010).

☆ We are grateful to Kristin Butcher, Phillip Levine, Robin McKnight, Julian Reif, Casey Rothschild, Gauri Kartini Shastri, Akila Weerapana and participants in the Wellesley Economics Department work-in-progress seminar and the University of Illinois at Urbana-Champaign Finance seminar for valuable comments and discussion. In addition, we would like to acknowledge the generous research support we received from the Harvard Decision Science Laboratory to organize and run our experiment. Shurchkov would like to acknowledge a Harvard Kennedy School's Women and Public Policy Program fellowship for providing the resources that made this research possible. Lizi Chen, Divya Gopinath, Mehrnoush Shahhosseini, and Sizhe Zhang provided excellent research assistance. All remaining errors are our own.

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[1] See for example Yanowitz v. L'Oreal USA, Inc. (2005) and Brice v. Resch and Krueger Int'l, Inc. (Corbett, 2011).

http://dx.doi.org/10.1016/j.jebo.2015.05.007
0167-2681/

One potential explanation for the beauty premium in naturally occurring data is that appearance may in fact be positively correlated with skills that are important for job performance but are not easily observed, such as the ability to be persuasive ("statistical discrimination"). Another is that employers may have biased beliefs, overestimating the skills of relatively attractive people. Finally, employers may have unbiased beliefs about performance but prefer hiring more attractive people ("taste-based discrimination").

We use a novel approach to separate taste-based discrimination from statistical discrimination and biased beliefs in a laboratory labor market. First, we directly elicit beliefs about each worker's performance, which allows us to determine what share of the beauty premium, as measured by employers' wage bids on workers, is statistical discrimination. Then, by controlling for performance predictions, we are able to estimate the portion of the wage bid that is *not* driven by performance expectations and test whether it is correlated with the worker's attractiveness. Finally, because we observe workers' actual performance, we can also estimate the correlation between performance and worker appearance. Together with the relationship between employer performance predictions and worker appearance, this allows us to identify any biased beliefs about the skills of relatively attractive people.

Another innovation of our study is to estimate the size of the beauty premium across three different labor-market relevant tasks: a data entry task, an analytical task, and a bargaining task in which workers see pictures of their bargaining opponents. Our study is the first to explicitly test whether the beauty premium varies with the types of skills involved in completing a task and, if so, to determine why.

To our knowledge, we are also the first to examine learning in the context of the beauty premium in a labor market.[2] It is possible that attractiveness is used as a proxy for ability when job-specific information about a worker's performance is scarce. We model such scarcity in our experimental setting with the first round, where employers only observe resumes and photos. However, attractiveness could become increasingly irrelevant as employers learn about actual worker performance. To test for the existence of this type of learning, we reveal workers' first-round performance to all employers. We then repeat the prediction, bidding, and task performance stages, allowing employers to update their bids and expectations. We then estimate what portion of the beauty premium disappears once performance measures for each worker are available.

Our analysis yields three key findings. First, there is a significant beauty premium in bargaining but not in data analysis or data entry. In particular, a one-standard-deviation increase in worker attractiveness is associated with a 26.5 percent increase in the employer's wage offer when the workers engage in a bargaining task, even after including extensive controls. By dividing attractiveness ratings into quintiles, we show that the most attractive subjects command the highest beauty premium in bargaining. On the other hand, the most attractive workers suffer a beauty penalty in data entry.[3] Our conclusion that the beauty premium is highly context-specific is consistent with some non-experimental literature, which finds substantial beauty-based sorting into different occupations (Hamermesh and Biddle, 1994; Biddle and Hamermesh, 1998; Mocan and Tekin, 2010; von Bose, 2013; Deryugina and Shurchkov, 2015).

Second, we find that the beauty premium is completely explained by statistical discrimination: employers believe that more attractive workers will perform better in bargaining, where workers can see one another's picture, but not in data entry or data analysis. This belief turns out to be incorrect: there is no significant relationship between a worker's attractiveness and performance in any of the tasks.

Finally, we find that the beauty premium in bargaining completely vanishes in the second round of bidding when the task is repeated, which suggests that employers learn quickly that performance is uncorrelated with attractiveness. Past performance is also a significant determinant of wages in the second round because it affects employer beliefs about future worker performance. Both these facts suggest that there is substantial updating by employers and that biased beliefs correct themselves quickly when objective information about performance is available. Our results are consistent with previous evidence that discrimination based on individual characteristics is more likely to occur in the absence of information. For example, Castillo and Petrie (2010) study group formation in a public goods game experiment and find that information about behavior causes people to disregard personal characteristics such as race and appearance. In another study, Berggren et al. (2010) use data on outcomes in Finnish parliamentary elections and find that the beauty premium exists only for non-incumbents, which implies that availability of performance data for the incumbents eliminates the effect of attractiveness.

Our laboratory study complements existing literature that uses observational data to study the beauty premium in labor markets (e.g., Hamermesh and Biddle, 1994; Biddle and Hamermesh, 1998; Harper, 2000; Fletcher, 2009; Hamermesh, 2011; Borland and Leigh, 2014; and Scholz and Sicinski, 2015). Although most studies find a positive effect of beauty on earnings, Harper (2000) finds that the earnings advantage of attractive individuals disappears once academic ability and sociability are controlled for. However, the earnings penalty of relatively unattractive people persists. While Pope and Sydnor (2011) do not find an effect of looks in an online credit market, Ravina (2012) uses a finer measure of attractiveness in the same setting and finds a significant beauty premium. The advantage of an experimental setting is that we can vary the environment to determine the conditions that would lead to the existence of the beauty premium.

[2] See Wilson and Eckel (2006) for beauty and learning in a trust game and Andreoni and Petrie (2008) and Castillo et al. (2012a) for beauty and learning in a public goods game, among others.

[3] Dermer and Thiel (1975) document that certain socially undesirable characteristics, such as egotism and materialism, are ascribed to relatively attractive females. Ruffle and Shtudiner (2014) find a beauty penalty for attractive female job applicants. Wilson and Eckel (2006) find evidence of a beauty penalty in trust games.