

Conformity Under Uncertainty:  
Reliance on Gender Stereotypes in Online Hiring Decisions

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(Commentary on Bentley, O'Brien, and Brock,  
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## Abstract

We apply Bentley et al.'s theoretical framework to better understand gender discrimination in online labor markets. Although such settings are designed to encourage employer behavior in the northwest corner of *Homo Economicus*, actual online hiring decisions tend to drift southeast into a “confirmation bias plus weak feedback loops” pattern of discrimination based on inaccurate social stereotypes.

Bentley et al. provide a framework for understanding online behavior which predicts that in online settings people often do not independently and logically evaluate the available information, and instead conform to common cultural biases in their judgments. In the present commentary we apply the authors' framework to better understand gender discrimination in online labor markets (Bonet et al., 2013; Cappelli & Keller, in press). More so than traditional labor markets, online markets for temporary labor are meant to be closer to the economic ideal of a perfect market, with standardized presentation of candidates' profiles and high transparency of worker characteristics important to the job such scores on standardized tests of relevant skills, employment history, and job interests. This richness of information allows employers to assign jobs to workers with appropriate skills at market value, and for workers, such transparency should facilitate access to jobs based on merit with hiring decisions based solely on considerations of value for money (Horton, 2012; although see Bidwell et al., 2013). Hence, online labor markets are designed to encourage employer behavior in what Bentley et al. refer to as the northwest corner of *Homo Economicus*: independent decisions based on a rich source of transparent information.

However, our findings indicate that consistent with the theorizing of Bentley et al., actual online hiring decisions tend to drift southeast, into what the authors refer to as a "confirmation bias plus weak feedback loops" pattern (p. 14). The desire to reduce the amount of information processing required to evaluate numerous choice options along multifold criteria can lead individuals to conform to social conventions and heuristics (Christensen-Szalanski, 1978, 1980; Payne, 1982; Payne et al., 1988, 1993; Timmermans, 1993; Wright, 1975). One very commonly used type of heuristic is that of cultural stereotypes (Bodenhausen, 1988, 1990). In an online hiring market,

applicants for each job are numerous, and attracting more than one hundred applicants in the first hour after posting the job is not uncommon. Although detailed and relevant information for all applicants is available, employers may not make full use of such information. Faced with the overload of information associated with the number of applicants, employers appear to rely heavily on cultural stereotypes about men and women to reduce uncertainty and simplify their decisions. We find that controlling for the actual number of men and women interested in the job category, female workers are less likely than chance to be hired for stereotypically male jobs such as programming, and more likely than chance to be selected for stereotypically female jobs such as customer service (Silberzahn et al., 2013). Because of such discrimination in selection, the discrepancy between workers' aspirations in terms of pay and job status and the jobs they actually obtain is much larger for female than male workers. Thus, in online labor markets we find the same pattern of stereotype-based discrimination observed in other settings (Eagly & Karau, 2002).

We also find evidence of a much more subtle form of gender discrimination that emerges in temporary online labor markets. Past research indicate that social stereotypes foster uncertainty about the capabilities of counter-stereotypical individuals (Bodenhausen, 1988; Darley & Gross, 1983; Eagly & Karau, 2002; Heilman, 2001; Perry et al., 1994). Based on this research we theorized that stereotype-based uncertainty would be reflected in the kind of contract offered. Specifically, we hypothesized that temporary workers hired for jobs not stereotypically suited for their gender would be offered contracts that allow the employer to more easily terminate the relationship in case of a poor performance (Silberzahn et al., 2013). Consistent with this hypothesis, women actually hired for stereotypically male jobs are more often paid by the hour

rather than offered fixed contracts that span the entire length of the project, a risk-averse practice that suggests an uncertainty about their abilities on the part of employers. In contrast, for stereotypically female-typed jobs, female workers are comparatively more likely to receive fixed contracts. Supporting the idea that these effects are driven by uncertainty about the performance of counter-stereotypical individuals, the opposite pattern emerges for male workers, who are more likely to be paid by the hour for traditionally female jobs. Discrimination in the type of contract offered leaves workers in jobs not typical for their gender in more vulnerable and precarious employment arrangements from which they can easily be fired.

A confirmation bias appears to play a role in discrimination in selection and contract type, as employers conform to gender stereotypes in their decision making even though such stereotypes are wholly inaccurate. In fact, our data indicate that female workers interested in stereotypically male jobs have on average *higher* levels of skills in the relevant domain than their male counterparts. Further, temporary online labor markets may be characterized by what Bentley et al. describe as a weak feedback loop, in which expectations biased by social stereotypes rarely have a chance to be disconfirmed. The typical pattern that emerges is that an employer chooses men and women for jobs stereotypical of their gender, is satisfied with the workers' job performance, and proceeds to make further stereotypical hires. In contrast, it is far less common for employers to hire women for traditionally male work under a long-term contract, which drastically reduces their opportunities to unlearn their stereotypes through experience.

These findings provide empirical support for Bentley et al.'s argument that rather than necessarily encouraging rational information use and utility maximization, online contexts are

highly prone to human failings such as conformity to common social beliefs and confirmation bias. Employers systematically and repeatedly violate principles of economic rationality by passing on hiring highly qualified female workers. Moreover, rather than maximizing their job preferences and outcomes in online labor markets, female workers appear to be systematically underemployed relative to both their skills and job interests. Technological innovations such as online labor markets provide employers and workers worldwide with opportunities for efficient matching of skills and work. However, the advantages of online technology are not sufficient to overcome deeply entrenched biases in human decision making.

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