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Gender Differences in the Allocation of Low-Promotability Tasks: The Role of Backlash†

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This paper contributes to the recent literature examining gender differences in the allocation of low-promotability tasks at work. A low-promotability task is one that benefits the organization but is given relatively little weight in performance evaluations and promotion decisions, such as service tasks in a research-oriented university. Field evidence on task allocation indicates that, relative to men, women spend more time on low-promotability tasks and less time on high-promotability tasks (Ohlott, Ruderman, and McCauley 1994; Benschop and Doorewaard 1998; Porter 2007; De Pater, Van Vianen, and Bechtoldt 2010; Misra, Lundquist, and Templer 2012; Mitchell and Hesli 2013; Babcock et al. 2017). Experimental evidence shows that decision makers are more likely to ask women than men to perform these low-promotability tasks (a demand-side factor) and that women are more likely than men to accept such requests (a supply-side factor) (Babcock et al. 2017).

The net result of women being asked more and accepting requests more than men is an inequity in the allocation of low-promotability tasks. If time spent on low-promotability tasks comes at the expense of tasks that are high in promotability, then this inequity can lead to gender differences in the rate of advancement in organizations.

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While previous research has improved our understanding of the factors that lead to gender differences in the allocation of low-promotability tasks, there are important features of the environment that remain unexplored. Our study examines whether the prospect of being penalized for saying "no" to a request to do a low-promotability task exacerbates gender differences in the allocation. One might expect that penalties for failure to help another person would be harsher on women than men as helping behavior is more normative for women than for men (Eagly and Steffen 1984; Williams and Best 1990; Lueptow, Garovich, and Lueptow 1995) and a large body of research in social psychology finds that individuals are penalized when they deviate from normative gender stereotypes. For example, research has shown that women who behave in a dominant manner (Eagly, Makhijani, and Klonsky 1992; Bowles, Babcock, and Lai 2007; Rudman and Glick 2001) or say "no" to a request to help another person (Heilman and Chen 2005) are judged more negatively than men.

I. Experiment: How Does the Risk of Penalty Affect the Demand and Supply of Low-Promotability Tasks?

We conduct an experiment to explore how the possibility of imposing a penalty for non-compliance affects who is asked to perform low-promotability tasks (demand), who agrees to perform low-promotability tasks (supply), and in particular whether gender influences these decisions. We also explore the penalty decisions and whether these are influenced by gender. We adopt an experimental design used in our previous research, which mirrors the incentives faced by a decision maker who needs to find a volunteer to perform a low-promotability task.

A. *Design*

Using a slightly modified version of the experimental setup of Babcock et al. (2017) as a baseline, we add a treatment where participants can be punished for their response to the request to perform the task.[1] Participants are randomly and anonymously assigned to groups of four and shown the "profiles" of the three individuals they are paired with. These profiles contain demographic information about each person's age, gender, whether he or she was born in the United States, year in school, and major (business, social science, or other major). They are informed that one person will be designated the role of "red" player and the other three will be designated the role of "green" players. The three green players are given two minutes to make an investment (volunteering) decision. If no one invests during the two minutes, then all green players and the red player each earn $1. If one green player invests, then that person earns $1.25 and the other two green players and the red player each earn $2. The round ends when the two minutes are up or when someone invests. The red player cannot invest, and is charged with making a request to one of the green players to make the investment (which the green player can refuse by not investing). Before it is learned who in the group will be the red player, all players decide who they will ask to invest should they be assigned the role of the red player. It is then announced to the group which group member is the red player and which green player the red player asked to invest. After roles are assigned and requests are announced, green players participate in the two-minute investment decision, where every green player has the option of being the one who invests. Participants are randomly assigned to new groups and roles in each of the ten rounds.

We have two experimental conditions: a control treatment as described above and a backlash treatment in which the red player can penalize the green player who is asked to invest. For each of the three possible scenarios (no one invests, a green player different from the player who was asked invests, and the green player who was asked invests) the red player can decrease the earnings of the asked green player. The cost of punishment to the red player is $0.01 to decrease the earnings of the asked green player by $0.03, and the amount deducted is restricted to be between $0.00 and $0.75.

B. *Participants and Procedures*

This experiment used a computerized interface (z-Tree, Fischbacher 2007) and was conducted at the Pittsburgh Experimental Economics Laboratory (PEEL) at the University of Pittsburgh. We conducted a total of eight sessions (four of each treatment), with 20 participants per session. Participants were recruited from introductory classes in economics. Between 45 percent and 55 percent of participants in each session were female. Participants were on average 18.7 years old, 71 percent were Caucasian, 90 percent were born in the United States, and 91 percent were either freshmen or sophomores.[2]

C. *Results*

Group Decisions.—The distribution of investment time within the two-minute interval is bimodal (see Table B1 in the online Appendix). Many investments occur in the last two seconds of the round (45.1 percent in the control treatment and 39.6 percent in the backlash treatment) and a significant proportion of investment occurs in the first ten seconds (19.2 percent in the control treatment and 26.2 percent in the backlash treatment). As seen in previous research, the vast majority of groups are successful in making the investment (96.5 percent in the control treatment and 93.5 percent in the backlash treatment).

Requests (*Demand-Side Response*).—As seen in Figure 1, red players make more strategy-method requests of female green players than

[1] Specifically, we use the setup of Experiment 3 of Babcock et al. (2017) and adapt it to use profiles with demographic information rather than photos. We chose not to use photos because in the penalty condition, photographs could expose participants to the potential risk of retaliation after the study. This more anonymous design may modify the response and expected response from the person who is asked to perform the task.

[2] There are some significant differences in the demographic characteristics of the participants across gender and experimental treatments. We therefore include demographic controls when possible in our analyses.

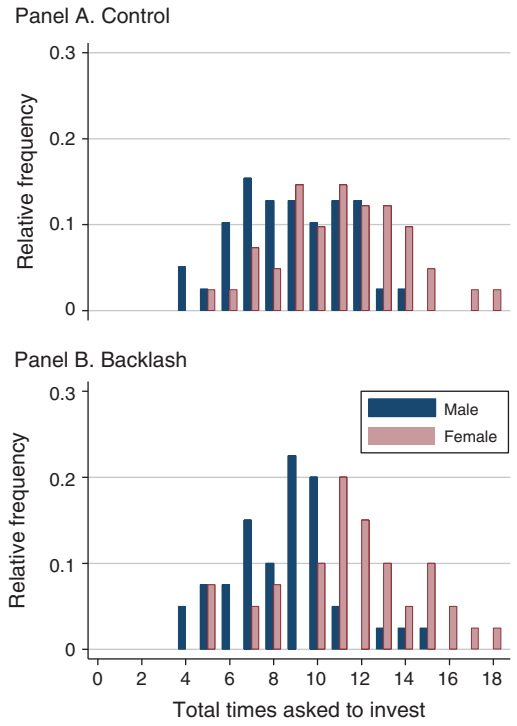

FIGURE 1. NUMBER OF REQUESTS RECEIVED IN A SESSION (*Strategy Method*) BY GENDER

of male green players in each treatment (in the control treatment 8.87 requests are directed to males and 11.07 requests to females, $p < 0.001$; in the backlash treatment 8.50 requests are directed to males and 11.50 requests to females, $p < 0.001$),[3] replicating prior findings. However, unlike previous research, this gender difference in requests results only from male red players: Male red players make more requests of female compared to male green players ($p < 0.001$ in control, and $p < 0.001$ in backlash) while female red players do not discriminate between male and female green players ($p = 0.304$ in control, and $p = 0.322$ in backlash).[4] Although we replicate the gender gap in aggregate requests, contrary to our expectations we do not find that the backlash treatment increases gender differences in the number of strategy method requests (see online Appendix Table B2).[5]

Response to Requests (Supply-Side Response).—How do green players respond to being asked to invest? Relative to not being asked, getting a request to volunteer significantly increases the probability of making the investment (it increases from 21.0 percent to 54.5 percent in the control treatment, $p < 0.001$; and from 13.0 percent to 67.5 percent in the backlash treatment, $p < 0.001$). There is a 6.2 percentage point difference between the likelihood that female green players versus male green players agree to the request in the control treatment (57.3 percent for female versus 51.1 percent for male green players), and the difference is 17.6 percentage points in the backlash treatment (76.2 percent for female versus 58.6 percent for male green players). In a probit analysis of the probability of investing (Table 1), we see in columns 1 and 2 that the increase in volunteering when asked is greater for women than it is for men (though the difference is only marginally significant). We see in column 3 that in the backlash treatment, asking is more effective in ensuring that the asked green player invests than in the control treatment, while the gender difference in the response to being asked is no larger with the potential for backlash than without it.

The findings that women receive more requests to volunteer and that they have a greater likelihood of agreeing to requests than men imply differences in volunteering. If a representative sample of strategy method requests was drawn, the combined effect of the two channels of increased "demand" and increased "supply" would lead women to volunteer 40 percent more than men in the control treatment and 76 percent more than men in the backlash treatment.

Who Penalizes and Who is Penalized for Saying "No" to a Request to Volunteer?—In the backlash treatment we examine whether

[3] Unless otherwise noted all tests reported are two-sided subject-level *t*-tests.

[4] These are two-sided, one-sample, subject-level *t*-tests of the null hypothesis that the likelihood of asking a female to invest in mixed gender groups is equal to the share of females in the group.

[5] Pooling over both treatments, in a regression of the number of strategy method requests received in a session that controls for the other demographic information on the profiles and uses wild bootstrapped standards errors clustered at the session level, the coefficient on female is 1.638 ($p = 0.015$) and does not differ by treatment (coeff. $= 0.193$, $p = 0.841$); see online Appendix Table B2.

Table 1—Probability of Investing (*Probit*): All Green Players

	Control (1)	Backlash (2)	Both (3)
Asked to invest	0.283	0.522	0.459
	(0.061)	(0.055)	(0.029)
Female	−0.041	0.102	0.063
	(0.053)	(0.059)	(0.031)
Female × asked to invest	0.128	0.131	0.121
	(0.080)	(0.080)	(0.056)
Round	−0.000	0.003	0.001
	(0.007)	(0.007)	(0.005)
Backlash			−0.030
			(0.029)
Backlash × asked to invest			0.227
			(0.056)
Backlash × female			0.169
			(0.058)
Backlash × female × asked			0.003
			(0.110)
Observations	600	600	1,200

Notes: Dependent variable: Individual investment decision (1-invest, 0-don't invest). Marginal effects presented in the table. Standard errors clustered on the individual shown in parentheses. The coefficient and standard error of the interaction terms is corrected to account for the nonlinear nature of the estimation. Demographic variables and incentivized measures of risk-seeking and altruism are included as controls in all columns. One hundred and sixty participants.

there are gender differences in the red players' decisions to penalize the green player who was asked to invest. When the group fails to make an investment, there is no gender difference in the probability of imposing a penalty (45.5 percent for male red players, and 46.0 percent for female red players, $p = 0.953$). However, there is a difference in the size of the penalty. When the group fails to make an investment, male red players impose significantly higher penalties on the green player who was asked to invest than do female red players (18.9 cents on average by male red players, and 6.4 cents on average by female red players, $p = 0.003$; see online Appendix Table B3). Importantly, the earnings deductions do not differ by the gender of the green player who was asked to invest (average male red player penalties: 18.10 cents to male green players and 19.33 cents to female green players, $p = 0.139$; average female red player penalties: 7.02 cents to male green players and 5.82 cents to female green players, $p = 0.190$).

II. Conclusion

Previous research has found that women spend more time than men on low-promotability tasks, which are tasks that benefit all group members but that each group member prefers someone else completes. This paper builds on prior studies and explores the effect backlash may have on these gender differences. We examine whether gender differences in who is asked and who agrees to requests to perform these tasks are exacerbated by the prospect of penalties for declining to do the task. We replicate previous findings (Babcock et al. 2017) that women receive more requests than men to do low-promotability tasks. However, this gender difference is unaffected by the prospect of a penalty for non-compliance. We also replicate the finding that women respond more favorably than men to a request, although again this gender difference is not influenced by the prospect of a penalty.

The fact that the prospect of penalties failed to affect requests or compliance with requests may be driven by the fact that both the frequency and magnitude of observed penalties were small. The total frequency of positive penalties observed by subjects when the asked person did not invest was 37 percent and "meaningful" penalties (in excess of 5 cents) were only seen in 63 percent of these cases. Penalties may thus not have been particularly salient to participants. It may be of interest to examine the role of penalties in environments where it is costly to invest and where the group's rate of success is lower.

Interestingly we find gender differences in the size of penalties imposed for failing to agree to do the task, with men imposing larger penalties than women. This result is intriguing because when men themselves were asked to volunteer, and faced the prospect of a penalty for failing to do so, they were less likely than women to agree to the volunteer request.

Together with Babcock et al. (2017), this research suggests that, as a result of both demand and supply, women perform more low-promotability tasks than men and that interventions may be required to eliminate them. For example, pointing out the inequities generated by these gender differences may change the behavior of requestors and respondents, or imposing minimum targets of participation in these types of tasks might help level the playing field for women.

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