

Abstract

Unfair treatment can occur in many forms in the workplace, such as unequal wages for similarly productive workers or a co-worker free-riding and taking credit for another worker's efforts. A body of research has shown that unfair treatment can prompt individuals to deliberately take costly actions to punish unfair actor or restore fairness, such as reducing effort or lowering quality (Krueger and Mas, 2004; Cohn et al., 2015).

This project considers another channel through which unfair treatment can reduce productivity: involuntary reductions in focus. Using an online experiment, I show that unfair treatment lowers attention scores by **7% to 16%**, depending on condition, with especially pronounced effects when unfairness is attributed to discrimination.

Research Questions

- How does unfair treatment affect attentional performance on workplace tasks?
- How do in-group and out-group unfairness differ in their impact on attention?

Theoretical Framework

Worker chooses an attention level τ that maximizes expected utility net of information-processing costs. Unfair treatment enters this model as a parameter μ that increases effective cost of attention:

$$\max_{\tau \geq 0} \gamma \tau - \frac{1}{2} \lambda(\mu) \tau^2 \quad (1)$$

where

$$\lambda(\mu) = \lambda_0(1 + \alpha\mu), \quad \lambda_0 > 0, \alpha > 0 \quad (2)$$

As μ increases, optimal τ will decrease because attention is more costly. λ_0 represents baseline cost of attention and α measures how sensitive that cost is to unfair treatment. $\gamma > 0$ represents productivity of attention. Differentiating first-order condition yields:

$$\frac{d\tau^*}{d\mu} = -\frac{\gamma\alpha}{\lambda_0(1 + \alpha\mu)^2} < 0 \quad (4)$$

which yields two testable predictions:

- Unfair treatment should reduce attention relative to a baseline group that is not unfairly treated.
- Fair treatment should not reduce performance relative to a baseline group.

Experimental Design

3,364 participants recruited on Prolific in 2024-2025 randomly assigned to being fairly or unfairly treated by coworker.

Stage 1: Participants complete real-effort task to earn a financial bonus. Paired with a coworker of opposite gender and political affiliation who decided either to:

- Complete task and earn bonus (**Fair-OutGroup**)
- Skip task and take bonus (**Unfair-OutGroup**)

Stage 2: Participants complete two novel workplace-related performance tasks

Treatment Conditions

- Control (Neutral Information):** Participants observe payoff-neutral information
- Fair-OutGroup:** Coworker (opposite gender and political affiliation) does not take bonus
- Unfair-OutGroup:** Coworker (opposite gender and political affiliation) takes bonus
- Unfair-InGroup:** Coworker of same gender and political identity takes bonus

Outcomes & Measurement

Primary outcome is composite score (0–2) across:

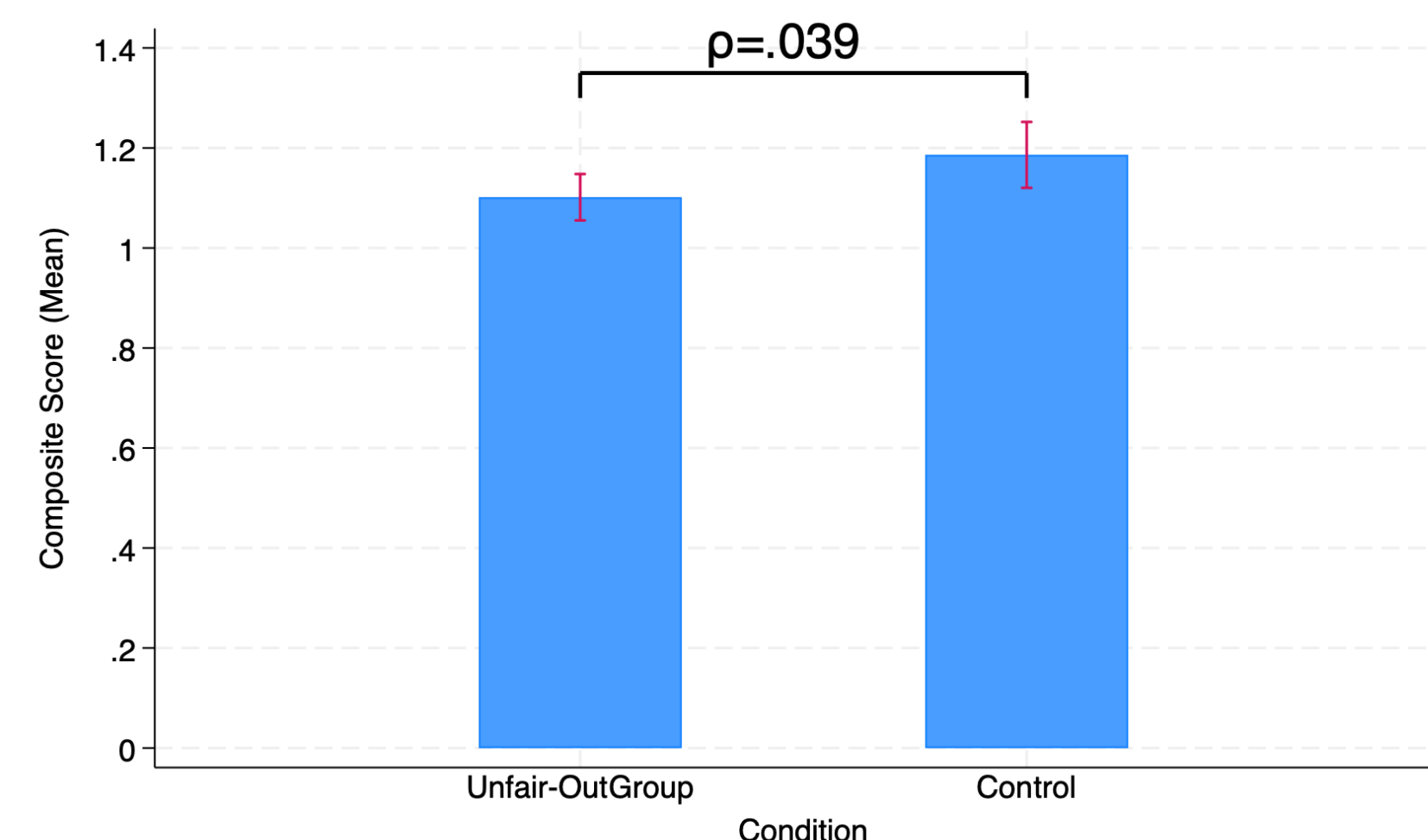
- Email Task:** read a complicated email chain with an inaccurate initial summary; choose correct response from three options.
- Financial Contract Task:** compare two contracts (e.g., credit card offers) and choose one with lowest total cost. Each task is scored 1 if correct and 0 otherwise.

Secondary cognitive outcomes:

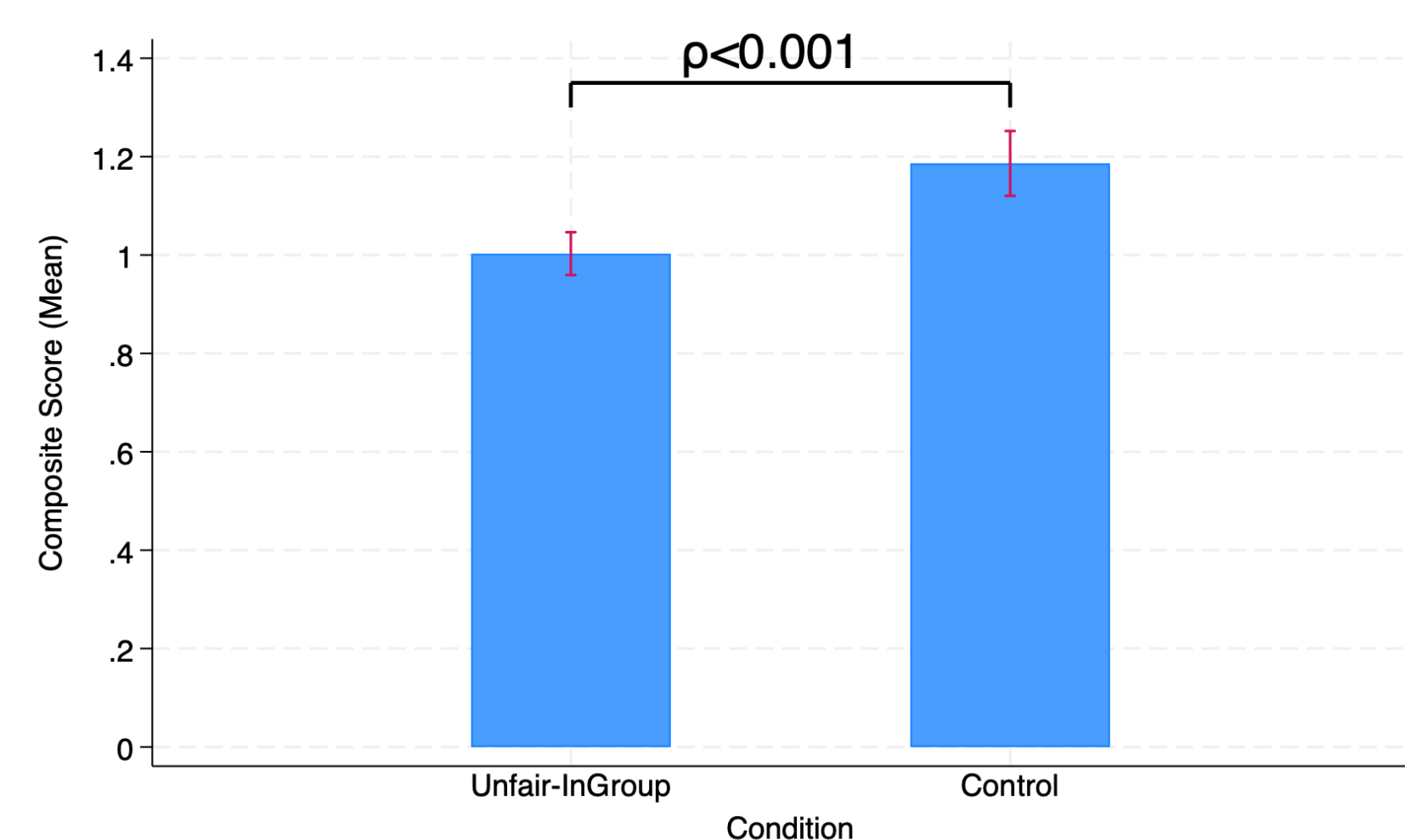
- Raven's Test:** abstract reasoning measure
- Cognitive Reflection Test:** ability to override intuitive but incorrect responses

Results

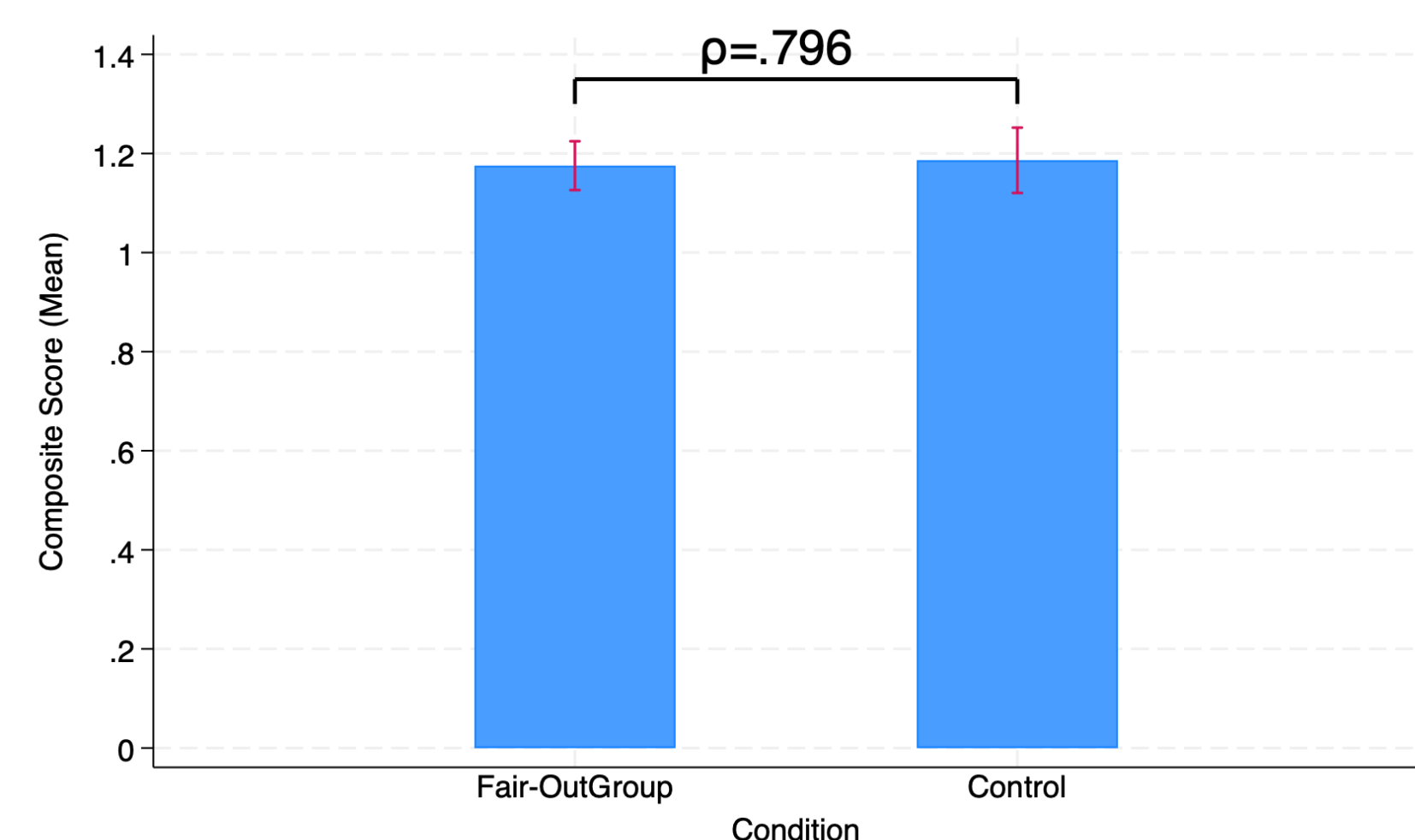
- Unfair treatment significantly reduces attention
- In-group unfair condition: -16% score
- Out-group unfair condition: -7% score
- No change in performance when fairly treated
- Significant 7% reduction in Raven's performance



(a) Unfair-OutGroup vs. Control



(b) Unfair-InGroup vs. Control



(c) Fair-OutGroup vs. Control

Figure 1. Composite Attention Score Across Treatments

Results (Continued)

	(1)	(2)
Intercept	1.19*** (0.03)	1.19*** (0.07)
Unfair-OutGroup	-0.10** (0.04)	-0.08** (0.04)
Unfair-InGroup	-0.18*** (0.04)	-0.19*** (0.04)
Fair-OutGroup	0.01 (0.04)	0.01 (0.04)
Demographic Controls	NO	YES
Estimation Method	OLS	OLS
Participants	3364	3364

Table 1. Composite Attention Score as Function of Treatments

	(1)	(2)
Intercept	2.46*** (0.06)	2.56*** (0.11)
Unfair-OutGroup	-0.20*** (0.07)	-0.16** (0.07)
Unfair-InGroup	-0.31*** (0.07)	-0.33*** (0.07)
Fair-OutGroup	0.02 (0.07)	0.00 (0.07)
Demographic Controls	NO	YES
Estimation Method	OLS	OLS
Participants	3364	3364

Table 2. Raven's Progressive Matrices Score as Function of Treatments

Contribution

- Bridges economic models of fairness preferences with psychological models of attention regulation
- Fairness violations can harm performance even when retaliation is impossible
- Reducing unfair treatment an economic imperative;** not just a moral and ethical one

References

Cohn, A., Fehr, E., and Goette, L. (2015). Fair wages and effort provision: Combining evidence from a choice experiment and a field experiment. *Management Science*, 61(8):1777–1794.
Krueger, A. B. and Mas, A. (2004). Strikes, scabs, and tread separations: Labor strife and the production of defective bridgestone/-firestone tires. *Journal of Political Economy*, 112(2):253–289.

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