

Gender Imbalance Online¹

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Abstract

We report results of a natural field experiment conducted XXXX.

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1 Introduction

Though the proportion of Internet users is nearly the same across the genders, researchers have found significant gender imbalances in online behavior:

- Only 13 percent of Wikipedia contributors are women (Hill and Shaw, 2013);
- Wikipedia articles on women are more likely to be missing than are articles on men relative to Britannica (Reagle and Rhue, 2011);
- Less than 5 percent of StackOverflow users answering technical questions are women (Vasilescu et al., 2012);
- Women make a small fraction of people going to hackathons or taking part in online competitions on crowdsourcing platforms (Innocentive, TopCoder, Kaggle).

The reasons behind this gender gap are not fully understood. It is clear that it is not due to discriminatory rules put in place on these platforms. Rather the culprit seems to be a mix of psychological motivations and institutional characteristics of the platforms that might have inadvertently promoted an imbalance.

We conjecture that an important mechanism of imbalance could be the combination of

1. Gamification & incentives
2. Differences in preferences between the genders

Online platforms use elements of game play to engage their members (rankings, game points, competition with others, etc.) and stimulate higher levels of user activity. If men and women have different inclinations towards these incentives, they might inadvertently stimulate an imbalanced participation.

2 Experimental design

2.1 Profiles selection

1. Recruitment profiles...
2. Consent profiles...
3. Profile survey...

Evaluation at CLER

1. Recruitment...
2. Consent for CLER...

2.2 Preliminary/final survey

1. Recruit survey...
2. Survey questions...

2.3 Treatment

1. solicitation...
2. debriefing...

AER Registration

2.4 Power simulations

2.5 Context

We designed two interventions in collaboration with HeroX.com, a crowdsourcing platform. We view HeroX as an example of a competitive (platform users make submissions solving a given problem and the top submissions are awarded a cash prize) and collaborative environment, respectively.

2.6 Data

References

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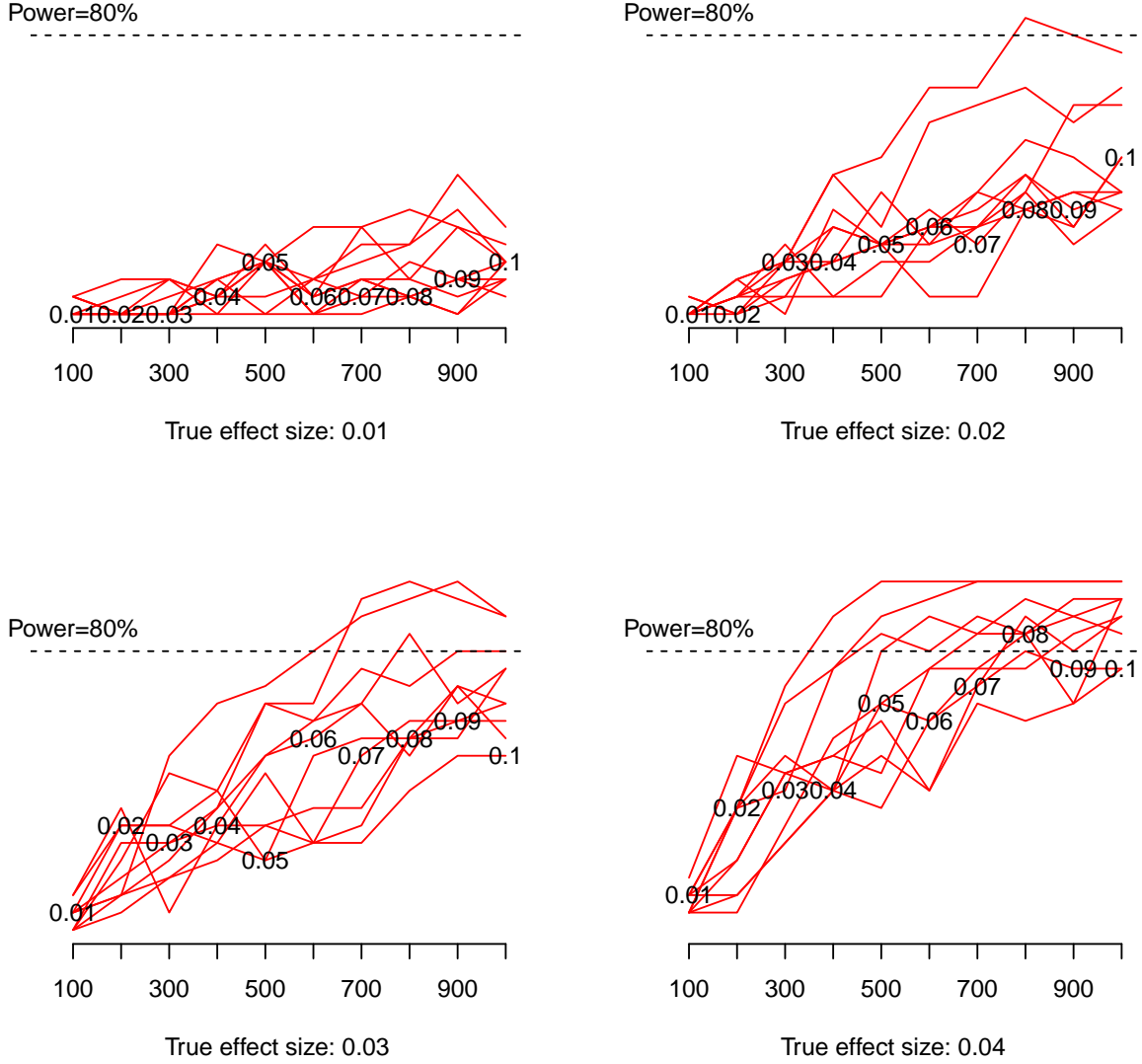


Figure 1: Power simulations. Relationship between simulated statistical power (y-axis) and group size (x-axis). Data are simulated from a binomial model with varying probability of success for subjects in treatment and control groups; Effect size is the difference in probability of success between control and treatment groups which is reported at the bottom of each picture; Next to each curve we have reported the corresponding probability of success in the control group. Significance computed using Chi-square test statistics with $\alpha = 0.05$. We used 20 simulations for each instance.