

Motivation and Incentives: An Evidence-Based Approach to Community Management

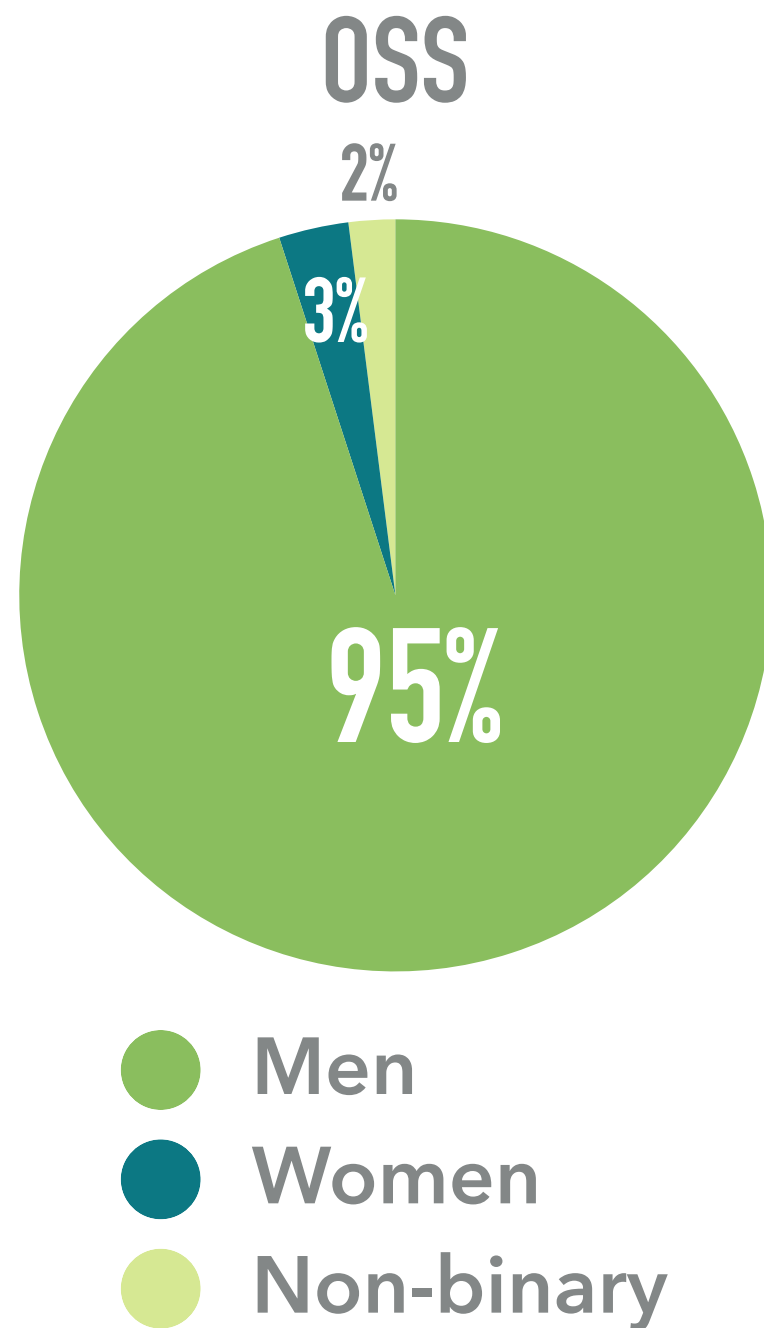
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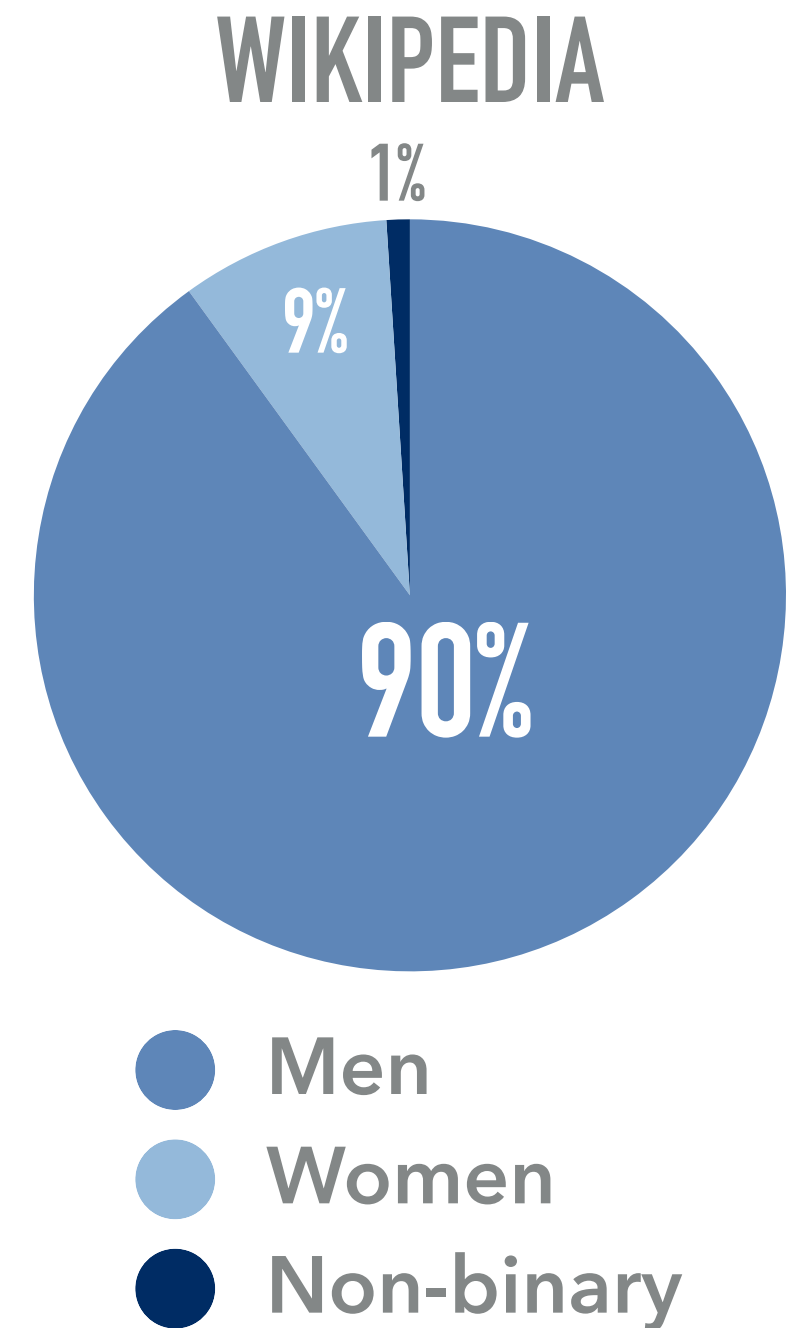
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COMMUNITY MANAGEMENT — TWO COMMON CHALLENGES

CHALLENGE 1: DIVERSITY & INCLUSION



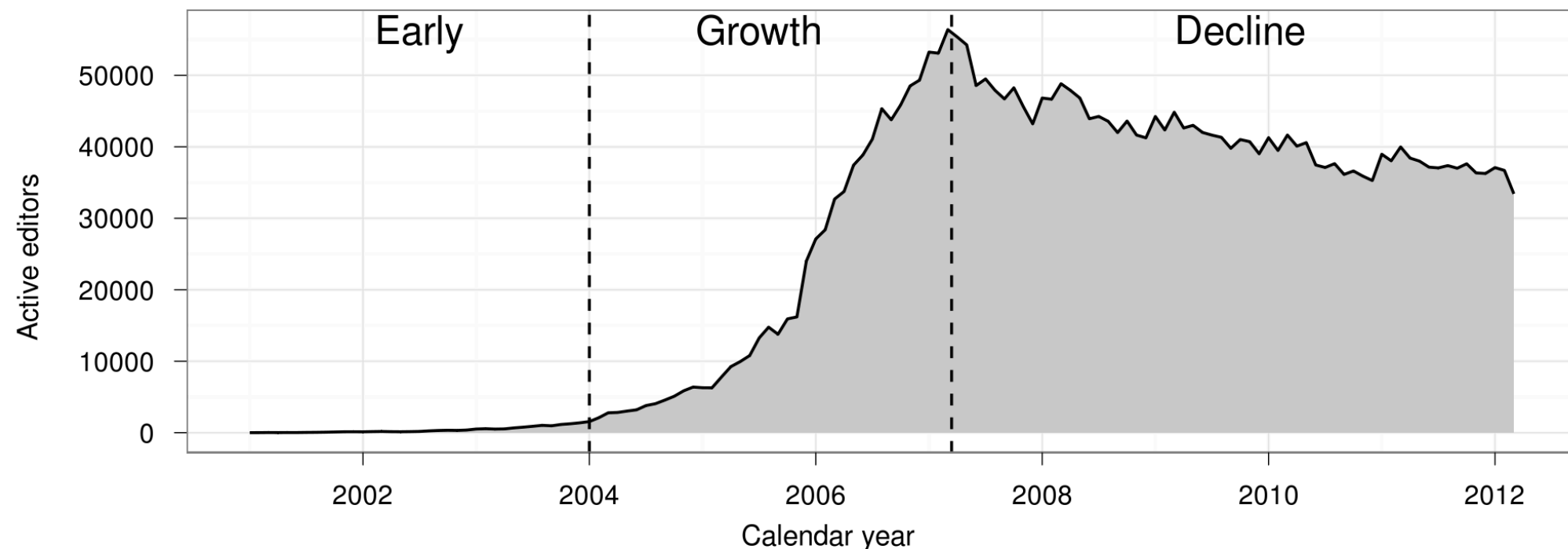
GitHub Open Source Survey 2017



Wikimedia Foundation Survey 2018

CHALLENGE 2: SUPPORTING PEOPLE'S MOTIVATIONS

Example: Wikipedia's editor retention problem



Notes: "Active editors" are those with ≥ 5 edits/month. English language version only.

Halfaker et al. (2013). The rise and decline of an open collaboration system. *American Behavioral Scientist* 57.

Community management challenges

Standard economic incentives & contracts of limited use

- Motivation crowding-out (intrinsic & image motivation)
- Tasks cannot be contracted (creative, complex, prosocial)
- Budget constraint

→ **Alternatives?**

Recognition



UK



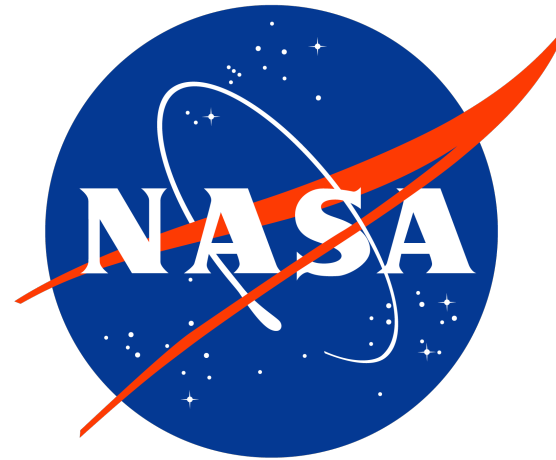
US



Blood Donor's Medal



Nobel Peace Prize



WHAT WORKS?

A DATA-DRIVEN APPROACH TO COMMUNITY MANAGEMENT USING FIELD EXPERIMENTS



Public sector



Traditional firms



Platforms

1) SUPPORTING PEOPLE'S MOTIVATIONS

Can symbolic awards help retain newcomers on Wikipedia?

Award on newcomer's personal discussion page

An Edelweiss for You

Hello [User Name], out of more than 4,000 new authors in the month of [May] you belong to those who have already enriched Wikipedia through their participation. As a small thank-you for your contributions to the German language Wikipedia we hereby present you with an Edelweiss from Switzerland. With best regards -- [The Project Edelweiss-Award](#) in the [Portal Switzerland](#),
12 [June 2015]

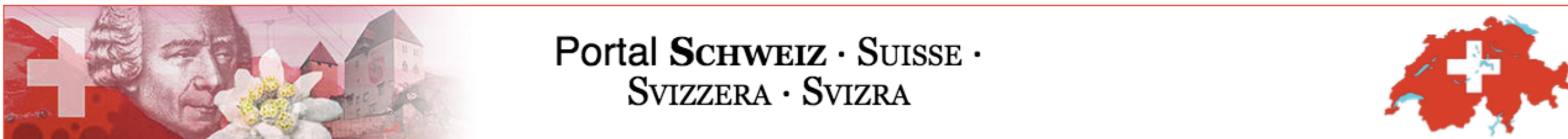


Gallus (2017). Fostering public good contributions with symbolic awards: A large-scale natural field experiment at Wikipedia. *Management Science* 63: 3999-4015 (Open Access).

@janagallus

Can symbolic awards help retain newcomers on Wikipedia?

The award page



The **Award „Edelweiss with Star“** honors on a monthly basis a selection of those users who have made their first contributions to the German-language Wikipedia in the previous month.

Awardees who continue their engagement can receive two further awards besides the original award: "Edelweiss with two Stars" and "Edelweiss with three Stars".

The award recipients shall be considered as representative for all those new users who have constructively contributed to our common project. Welcome!

Idea and Realization

With the Edelweiss-Award, a group of authors of the [Portal Switzerland](#) wishes to honor new users and their valuable contributions to the German-language Wikipedia. They deserve our gratitude and our recognition.

The idea for such an award emerged from the [Wikipedia roundtable in Zurich](#). After that, the award "Edelweiss" was for the first time bestowed in July 2012. The suggestions that were made after the first round of bestowals were intensively discussed and carefully integrated into the present award concept on consecutive roundtable meetings.

In case of questions, suggestions or criticism, please feel free to directly contact one of the users present at the roundtable meetings (for instance, [7 user names]). We are eager to preserve the positive spirit of this award and to abstain from dragging new users directly into discussions.

Edelweiss with Star

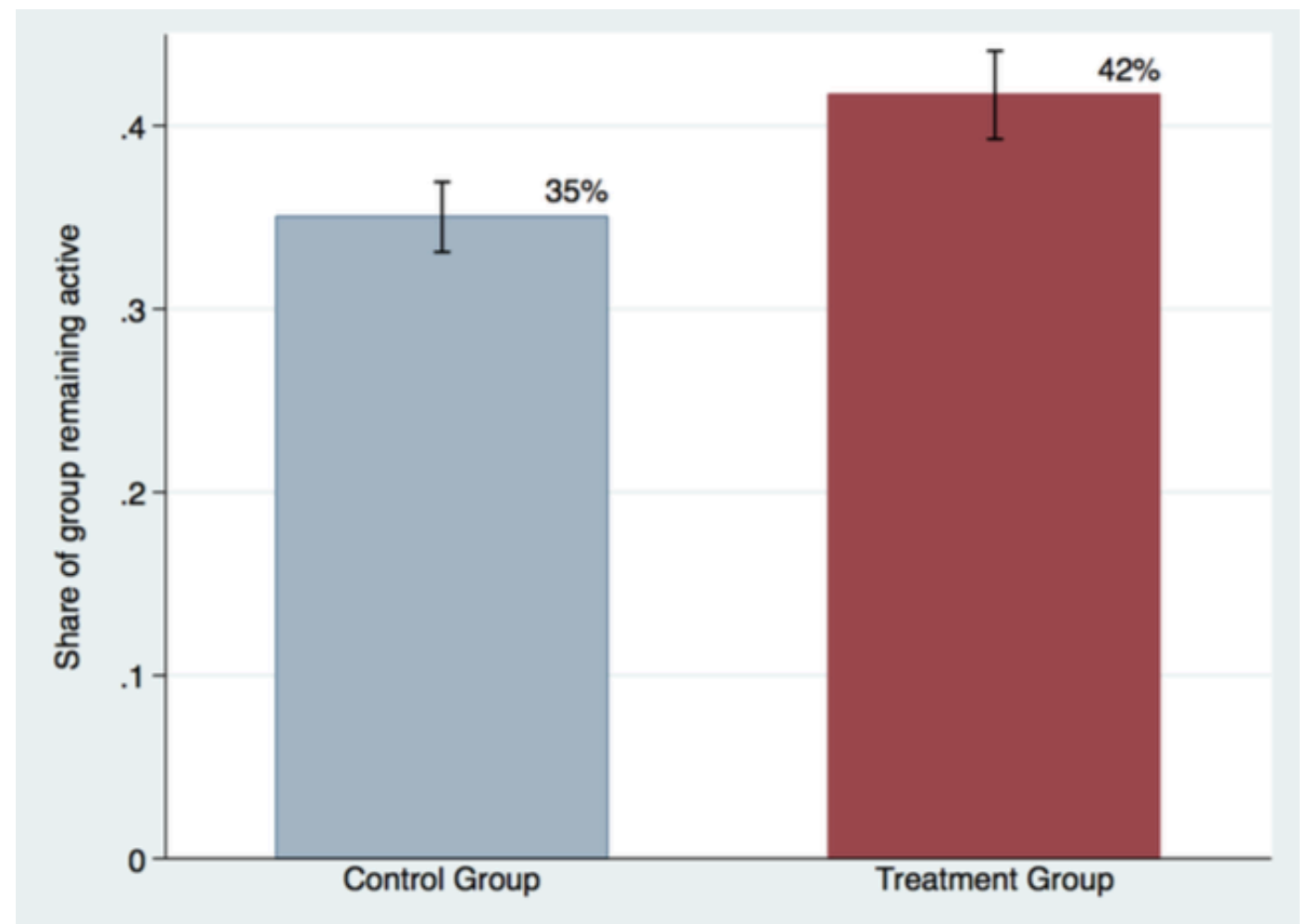
Out of more than 4,000 candidates who were for the first time active in the German-language Wikipedia in May 2015, we have awarded the following users in early June.

XYZ	XYZ	XYZ	XYZ
XYZ	XYZ	XYZ	XYZ
XYZ	XYZ	XYZ	XYZ
XYZ	XYZ	XYZ	XYZ
XYZ	XYZ	XYZ	XYZ



Main findings from field experiment

The purely symbolic awards increase the share of newcomers remaining active in the month following the award bestowal **by 20 percent** ($p = 0.000$).



Note: error bars indicate 95% confidence intervals. Data from 11 cohorts.

Treatment effect persistence

	Treatment (1)	Control (2)	Difference (3)
<i>A. General activity</i>			
Quarter 1	0.52	0.47	0.05** (0.002)
Quarter 2	0.34	0.31	0.03* (0.032)
Quarter 3	0.27	0.24	0.03* (0.031)
Quarter 4	0.26	0.23	0.03* (0.037)
Quarter 5	0.21	0.20	0.02 (0.221)
N	1617	2390	4007

Notes: Average values rounded to 2 decimal places. p -values from Chi-square tests in parentheses. The two higher-level awards, which are not randomly bestowed, fall into quarters 1 and 2; they could be received after months 2 and 5 after the initial award whose effects are being tested. The scheme includes no further awards thereafter.

Adjustments for multiple comparisons do not change the significance of any of the tests.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Implications

Symbolic awards can be used to **sustainably motivate** contributors

- Effect on willingness to do tedious **maintenance tasks**
- Awards foster **confidence & identification** with community

“Dear Edelweiß-Team, as an absolute newcomer I am very delighted about this award! I initially only wanted to make a few corrections every now and then, but this form of welcoming has highly motivated me! I am now working on my first article... Many heartfelt thanks in retrospect!”

(emphasis in original)

2) DIVERSITY & INCLUSION

Teams miss out on high-quality contributions

One important reason: **Self-stereotyping**, which is rooted in beliefs

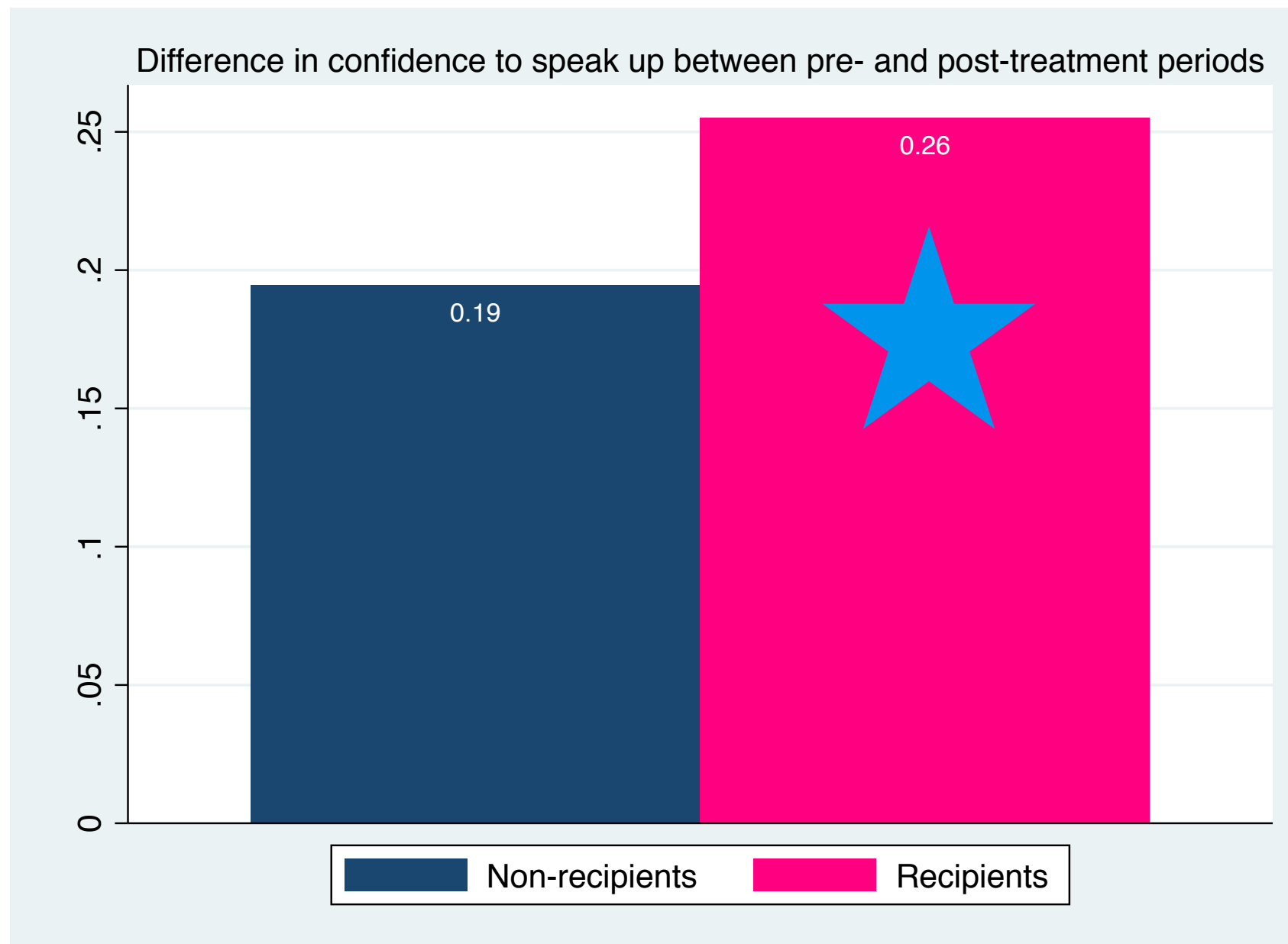
- Not about motivation (requiring incentives)
- Not about lacking the knowledge (training, screening)
- Not about discrimination – though that may come on top
- Not (only) about under-confidence

Can recognition correct beliefs?

Which form works best?

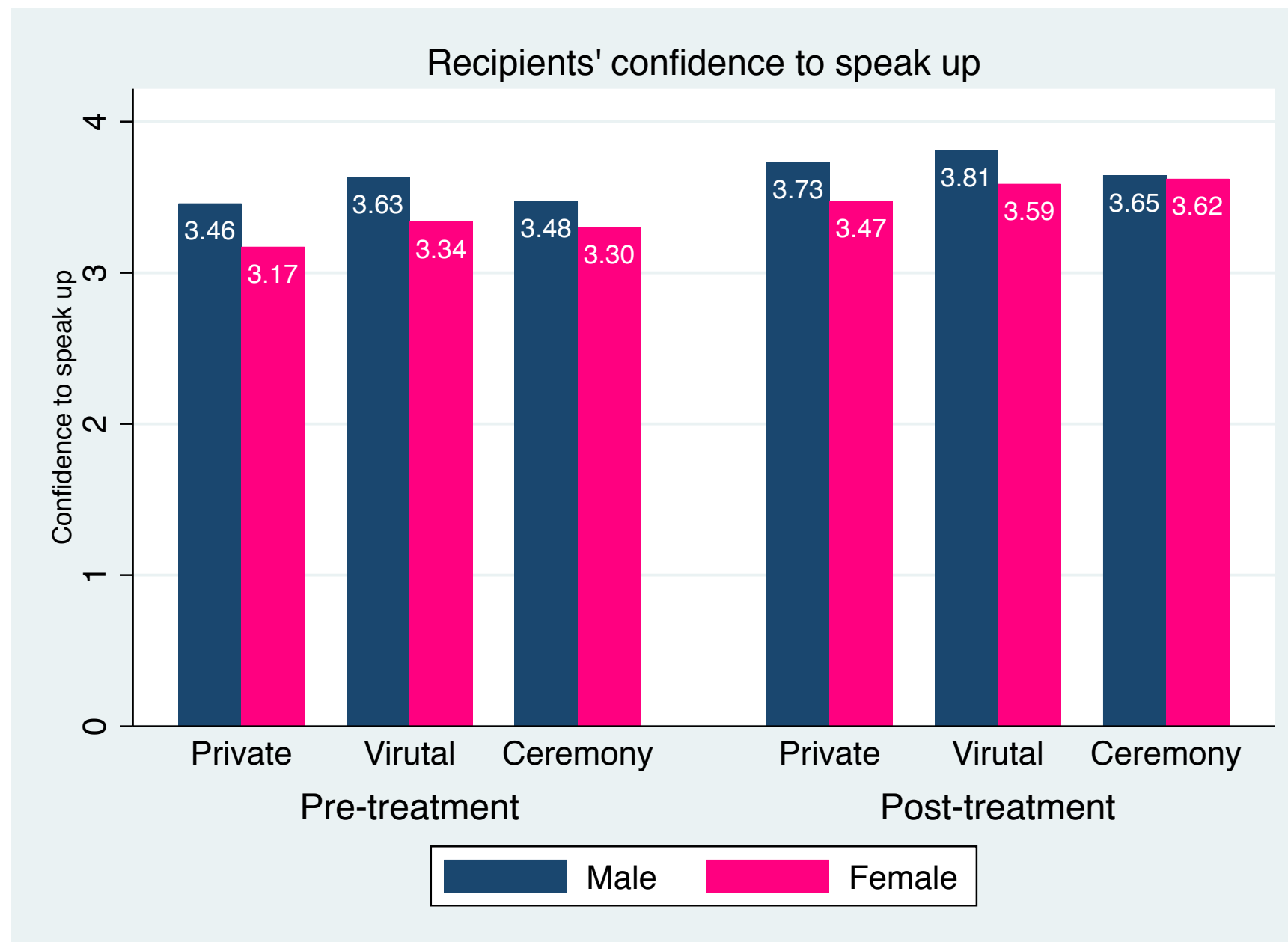
- Experimentally vary publicness:
 - Private feedback vs.
 - Virtual award vs.
 - Face-to-face ceremony
- Focusing on collaborative, computer-mediated work on math tasks in the lab

Recognition makes recipients more confident to speak up



Note: Results hold when controlling for ability.

The form of recognition matters



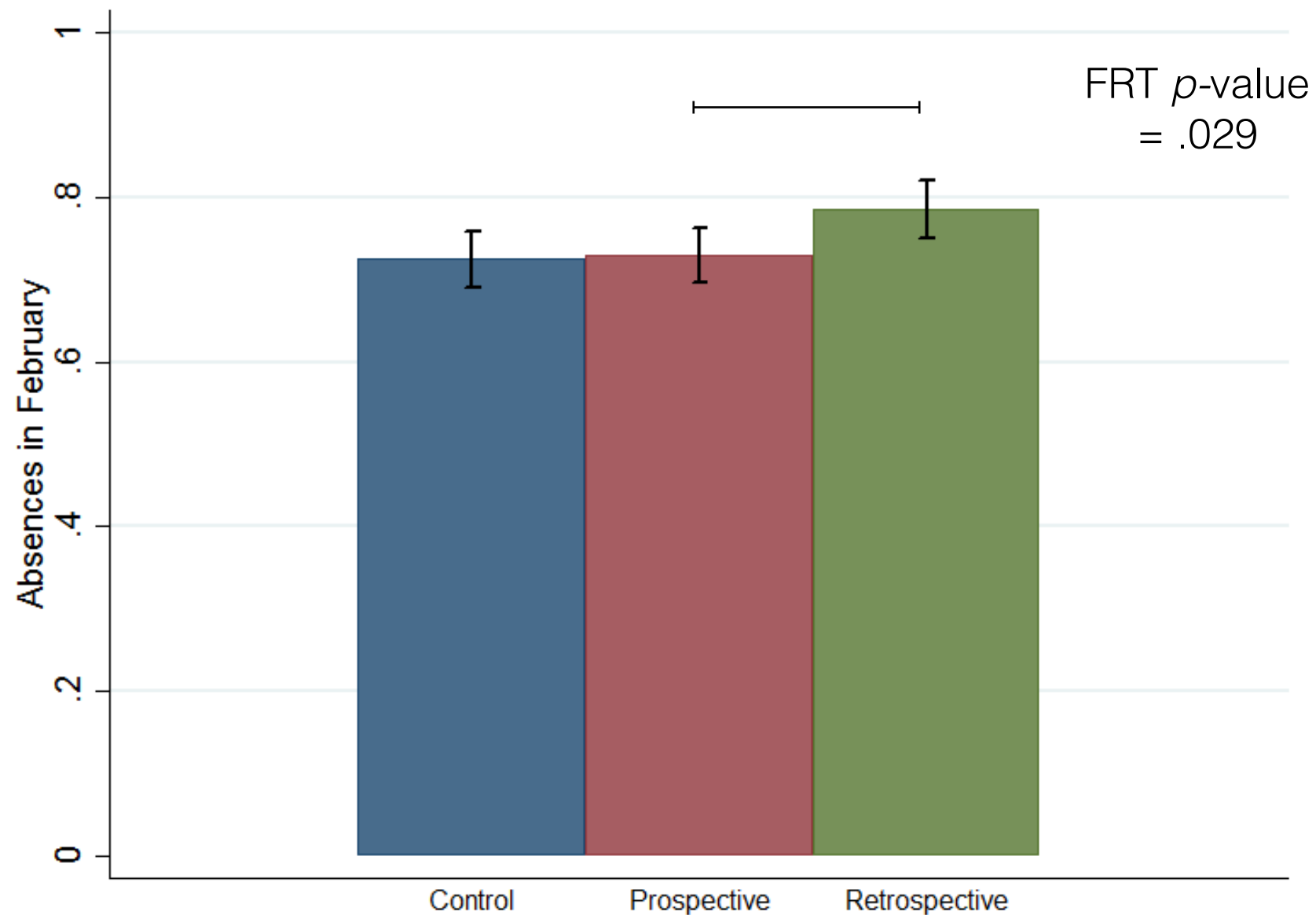
The gender gap across conditions

Implications

- **Self-stereotyping** among high-ability women produces gender gap in contributions when working on male-typed tasks in the lab
- **Recognition** increases confidence to contribute
(No effect on non-recipients)
- **The form of recognition matters**: Face-to-face ceremony closes gender gap
 - Public award seems to increase legitimacy & trust in award signal

LIMITATIONS OF RECOGNITION & THE IMPORTANCE OF RIGOROUS EVALUATION

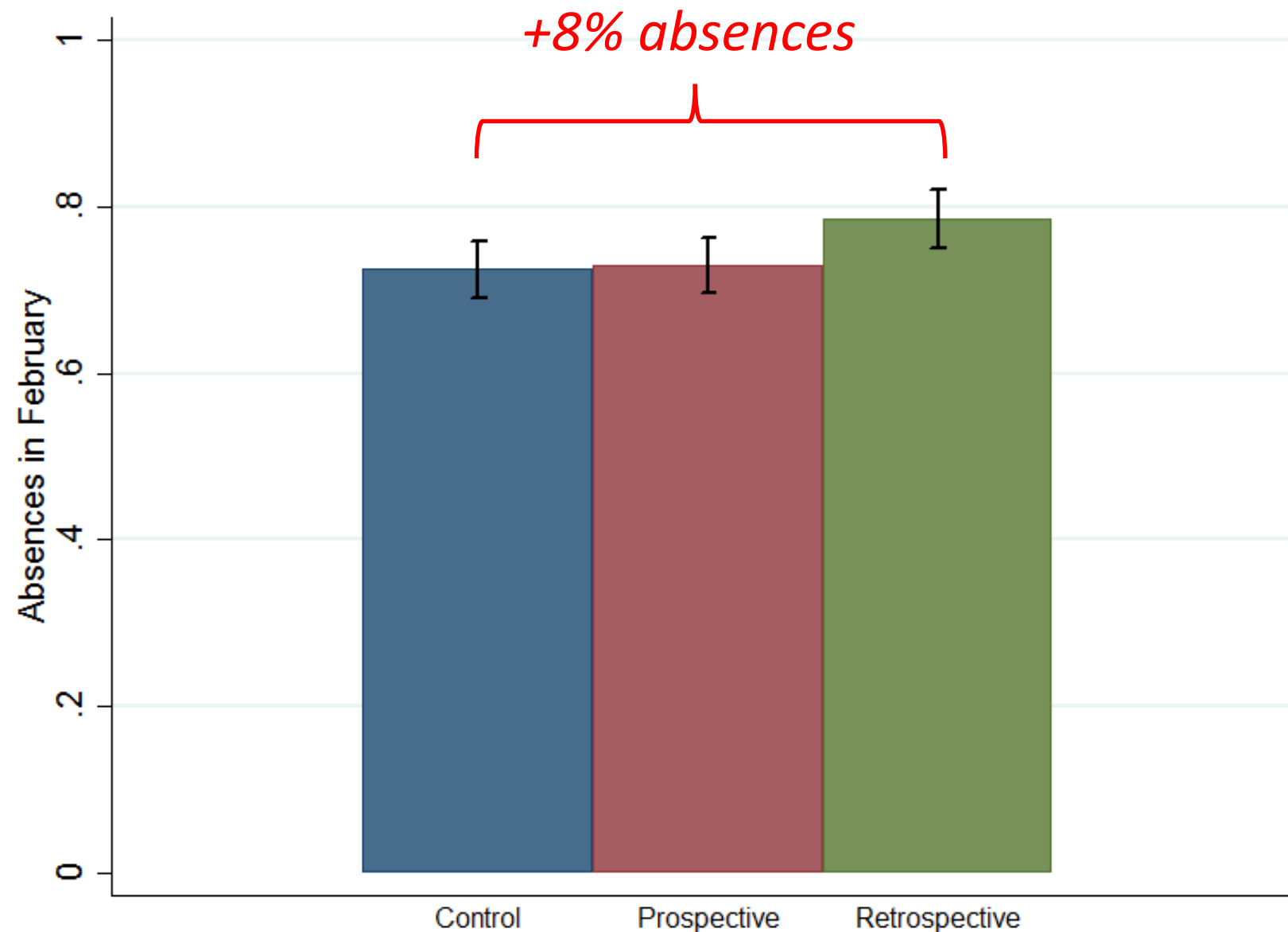
Field experiment on two widely used award types



Note: Error bars show 95% confidence intervals. Sample: 15,329 students in grades 6-12

Robinson, Gallus, Lee & Rogers (2019). The demotivating effect (and unintended message) of awards. *Organizational Behavior and Human Decision Processes*, in press.

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Recognition is intuitively appealing

... but it can **backfire**!

- Crowding-out of motivation
 - Strategic gaming, multi-tasking
 - Hubris
 - Envy
- ➔ Needs to be designed carefully. Don't forget:
- Tasks that are less visible
 - People who have already made an effort

Take-aways

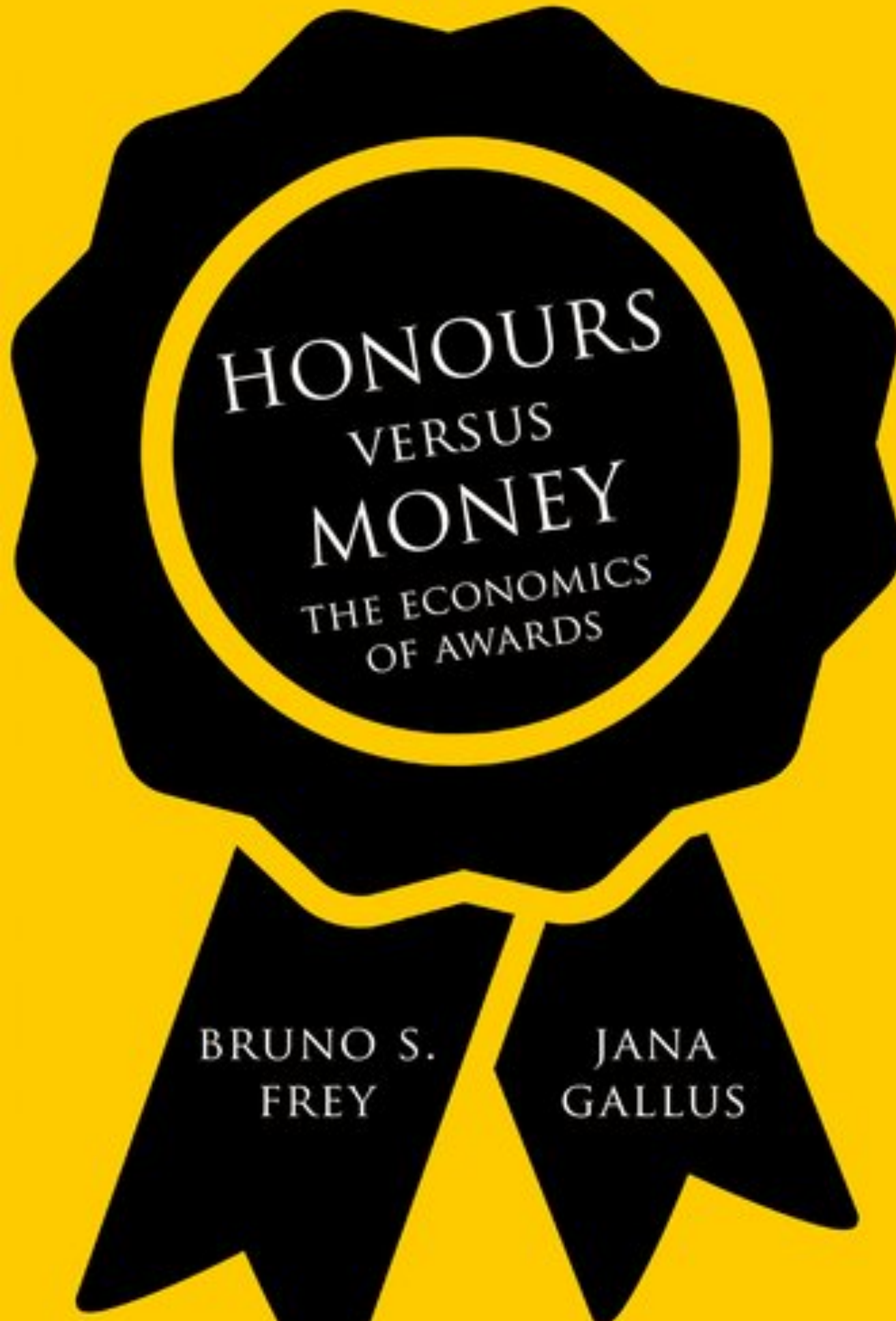
Recognition can be used to **sustainably motivate** contributors.

It can make atypical users more **confident** to contribute.

Not one-size fits all – the form matters (and there are many).

Beware **unintended effects**!

Institutionalize recognition,
design wisely,
and **test**



Please reach out if interested in evaluating community management practices:

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[@janagallus](https://twitter.com/janagallus)