Too Good to be True — Individual and Collective Decision-Making with Misleading Signals*

– Pre-Registration of additional Treatment –

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1 Overview

This document serves as a pre-registration of the design and hypothesis of an additional treatment in the study *Too Good to be True — Individual and Collective Decision-Making with Misleading Signals*. The main study has been registered at the AEA registry as AEARCTR-0006323 on August 23, 2020. This document will be uploaded as an add-on to this pre-registration prior to the additional data collection described below. For details on the design, please consult the main pre-registration document AEARCTR-0006323.

2 Experimental Design of additional treatment

We conduct an additional treatment in an online experiment. In each of the six rounds with partner matching, decision-makers must make a decision (*red* or *blue*) in groups of three. If the correct decision is made—i.e., if the decision matches the state of the world (*red* or *blue*)—each player receives a positive payoff. *A priori*, each state is equally likely, and signals (*red* or *blue*) are randomly drawn from an urn representing the state of the world. The experiment will be conducted online using LIONESS (Giamattei et al., 2020), and subjects will be recruited via the platform Prolific.

Each session consists of instructions, control questions, six rounds of the game (without feedback between rounds), a final feedback stage, and post-experimental tasks. These tasks include completing a socio-economic questionnaire, answering an open question about the strategies applied in the experimental task, completing a test of subjects' cognitive reflection capabilities, a question on risk-taking preferences, and questions related to the flexible thinking scale.

In addition to the treatments described in the main study's pre-registration, we now conduct a Group treatment without Bias, with Correlation, and with the opportunity for subjects to enter free-form communication that is visible to other group members prior to the voting decision. The novelty of this treatment is that all three signals in a group are public and visible to each group member, instead of each group member receiving one privately visible signal.

*We obtained IRB Approval (https://gfew.de/ethik/EpQIeM7D) for this study on December 9, 2024.

3 Hypothesis

We will compare the decision-making behavior of subjects in this treatment (free-form communication, public signals) with i) the treatment with free-form communication and private signals, and ii) the individual treatment without free-form communication. For the first comparison, where the communication protocol remains constant, we expect that improved information aggregation will increase optimal voting behavior. For the second comparison, where information aggregation remains constant, we also expect that additional communication will increase optimal voting behavior.

H1 The share of sub-optimal individual votes is lower in the group treatment with communication and public signals than in the group treatment with communication and private signals.

H2 The share of sub-optimal individual votes is lower in the group treatment with communication and public signals than in the individual treatment without communication.

4 Sample size and power

In line with the other treatments conducted, we will recruit 300 subjects to observe 100 different groups.

References

Giamattei, M., K. S. Yahosseini, S. Gächter, and L. Molleman (2020). LIONESS Lab: a free web-based platform for conducting interactive experiments online. *Journal of the Economic Science Association* (0123456789).

A Decision-Screens

In the following we show the decision-screen that differs from the decision-screens in the treatments conducted previously.

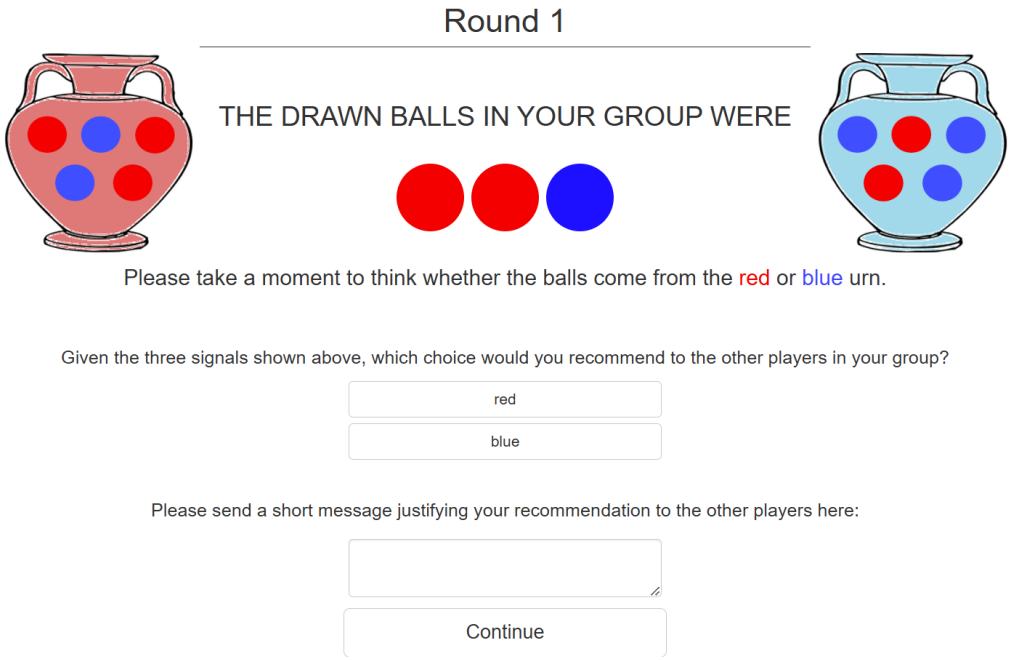

Figure 1: Decision screen of group-voting stage.