

Learning in the Household – Second Follow-up Experiment

John Conlon, Malavika Mani, Gautam Rao, Matthew Ridley, Frank Schilbach

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1 Motivation

Both our initial and our first follow-up experiment found evidence that people substantially underweight others' information relative to their own when updating beliefs (guessing about the contents of an urn). As part of a revision to the paper, we will conduct a further follow-up experiment online in order to answer the following questions:

1. Does our underweighting result replicate in an online, virtual version of the task in a sample of Americans?
2. Does our underweighting result persist if the other person's draws are made similarly vivid in this online setting?
3. Does our underweighting result persist when the difference between your own and other's draws is purely a matter of labeling?
4. Does our underweighting result persist when the other person is not using their draws to guess (so a preference for 'being right when they are wrong' cannot drive it)?

2 Design

Pairs of strangers on the Prolific online platform will take a survey in which they perform a virtual version of the same task as in our previous experiments. Participants guess the number of red balls in an urn (called 'marbles in a jar' in our script) based on virtually drawing balls at random from the urn and observing their color. Each person plays five rounds of the task and is partnered with another survey participant who does the task separately, but is drawing from the same urn/jar. Participants are randomized, across subjects, into one of four different treatments:

1. "Draw-sharing": in each round, the participant draws each of their balls from the urn one at a time by clicking on a button saying "Draw your [nth] marble". In addition, they are told a summary of their partner's draws ("your partner drew X red and Y blue marbles"). We randomize the order of drawing your own balls and learning your partner's draws.
2. "Watch Draws": in each round, as above the participant draws each of their balls from the urn one at a time by clicking on a button saying "Draw your [nth] marble". However, they learn about their partner's draws by seeing each of these balls appear one-by-one from the urn/jar (as if they were watching it happen in person). We randomize the order of drawing your own balls and seeing your partner's draws.
3. "Just Labels": the participant's and their partner's draws appear identically and differ only in how they are labeled. Specifically, the participant sees their own draws appear from the urn one by one, without having to click a button. These balls are labeled as "your [nth] marble". They

see their partner’s draws appear from the urn one by one in the same fashion, as in the “in-person” treatment above. We randomize the order of seeing your own balls and your partner’s balls.

4. “Non-guessing partner”: 50% of participants in this treatment condition do the task exactly as in the “draw-sharing” treatment above. However, unlike in that treatment their *partners* do not guess the number of balls in the urn. Instead these partners simply have to remember both sets of draws. Guessing participants know that their partner will not be guessing. We randomize the order of seeing your own balls and your partner’s balls.

In each of these treatments, participants make a guess after observing both their own and their partner’s draws (except of course for the non-guessing participants in treatment 4). Each participant plays the same treatment for all five rounds.

3 Analysis

Separately for each treatment, we will regress the participant’s guess on the ‘net red’ value (number of red balls drawn minus number of blue balls drawn) of the participant’s own draws and the net red value of the participant’s partner’s draws. We will then test the hypothesis that the coefficients on own and partner’s net red are the same.

By testing this hypothesis in the Draw-sharing treatment we aim to answer whether our main underweighting result replicates in this sample. Testing this hypothesis for the Watch Draws, Just Labels and Non-guessing partner treatments enables us to answer questions 2, 3 and 4 in the Motivation above.

4 Sample Size

We will recruit 4500 individuals who will be divided into the different treatments as follows:

1. 500 participants in the Draw-sharing treatment
2. 1500 participants in the Watch Draws treatment
3. 1500 participants in the Just Labels treatment
4. 1000 participants in the Non-guessing partner treatment: 500 who guess, each paired with a non-guessing partner