**1) Data collection.** Have any data been collected for this study already?

* Yes, we already collected the data.
* No, no data have been collected for this study yet.
* It's complicated. We have already collected some data but explain in Question 8 why readers may consider this a valid pre-registration nevertheless.

(Note: "Yes" is not an accepted answer.)

**2) Hypothesis**. What's the main question being asked or hypothesis being tested in this study?

In this study, participants will be presented with two identical doors and told that another agent placed an object near one of the them (the “modified” door). Participants will then be presented with a door with nothing near it (the “unmodified” door) and will have to decide if they should or should not walk through the modified door using a 2AFC paradigm.

Participants will undergo two trials of this type. In one of the trials (the “object” trial), participants will see a physical object (e.g., a potted plant or a stack of books) near one of the doors. In the other trial (the “symbol” trial), participants will see a picture of the same physical object (e.g., a picture of a potted plant or a picture of a stack of books) near one of the doors.

We predict that when participants undergo the object trial first (and see it as costly; see Q6) and the symbol trial second, they will infer that they should walk through the unmodified door in the symbol trial. In contrast, we predict that when participants undergo the symbol trial first and the object trial second, they will show a weaker preference for the unmodified door in the symbol trial, but we do not have expectations about whether they will systematically favor the modified door, perform at chance, or have a weak preference for the unmodified door.

**3) Dependent variable**. Describe the key dependent variable(s) specifying how they will be measured.

The key dependent variable will be: do participants that infer that they should walk through the unmodified door in the object trial also infer that they should walk through the unmodified door in the symbol trial? In both trials, participants will be asked to decide if they should or should not walk through the modified door using a 2AFC paradigm.

**4) Conditions.** How many and which conditions will participants be assigned to?

We will have two conditions that vary the order of our trials. In the first condition, participants will undergo the object trial first and the symbol trial second. In the second condition, participants will undergo the symbol trial first and the object trial second. After the test trials, participants will be asked which door is more difficult to walk through in the same order (see Q6).

The stimuli will consist of eight trials in each condition (all tested across participants). The objects we have chosen for our stimuli are: a plant, a chair, a stack of books, an unstacked pile of cinderblocks, tape across the door/opening of the door, a collection of three rulers taped to the top of the door frame, a hat, and a string tacked to the top of the door frame and tied to a fishbowl.

**5) Analyses.** Specify exactly which analyses you will conduct to examine the main question/hypothesis.

Our analysis consists of a Fisher’s exact test of participant responses on the symbol trial (the dependent variable) and the trial order (the independent variable). Failure to find significance in this analysis may imply that our hypothesis is wrong.

To supplement these analyses, we will also compute 95% bootstrapped confidence intervals for (1) the percentage endorsement of the unmodified door in both trials as a function of the trial order and (2) percentage endorsement of the unmodified door in both trials as a function of each object type. These confidence intervals will not constitute hypothesis tests and are meant to only help readers in interpreting the data.

**6) Outliers and Exclusions.** Describe exactly how outliers will be defined and handled, and your precise rule(s) for excluding observations.

After the test trials, we will also elicit an auxiliary variable (one for each trial and in the same order as the test trials) where we ask participants which door they think takes more effort to walk through (with three options: the modified door, the unmodified door, or equal).

For our hypothesis, we are only interested in participant responses when they see the object trial as costly. Participants who answer “unmodified door” or “equal” for the auxiliary variable will be excluded from the study (note that this implies that although the auxiliary variable has three levels, it will become a binary variable for the analyses).

**7) Sample Size.** How many observations will be collected or what will determine sample size? No need to justify decision, but be precise about exactly how the number will be determined.

We will test 10 participants in each of our eight modified doors across our two conditions, adding up to a total of 160 participants. We verified that this sample size is overpowered for our critical analysis (p=0.913) by running a Monte Carlo power analysis using pilot data (n=3 participants per condition). Participants that are excluded (see Q6) will be replaced so that the final sample size is 160 participants.

**8) Other.** Anything else you would like to pre-register?

(e.g., secondary analyses, variables collected for exploratory purposes, unusual analyses planned?)

N/A

**9) Name.** Give a title for this AsPredicted pre-registration

Suggestion: use the name of the project, followed by study description.

Symbols