CONFIDENTIAL - FOR PEER-REVIEW ONLY

Physical Pragmatics – Typicality (#91896)

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1) Have any data been collected for this study already?
No, no data have been collected for this study yet.

2) What's the main question being asked or hypothesis being tested in this study?
In a previous study (see pre-registration #9750), we showed that when participants were presented a door with an object in front of it, they would interpret this as a deterrent signal significantly more than when the object was placed beside the door. We hypothesized that this was due to the cost of the object, but an alternative explanation (as suggested by a reviewer) is that the object's typicality was the driving force behind participant inferences. In this experiment, we evaluate this alternative by collecting typicality ratings over our stimuli, and testing whether they explain participant judgments from pre-registration #9750.

3) Describe the key dependent variable(s) specifying how they will be measured.
The key dependent variable will be a continuous measure of typicality, which will be collected by tasking participants with answering the question, "How unusual do you think it would be for someone to leave this here?", using a continuous slider ranging from "not at all" to "very unusual".

4) How many and which conditions will participants be assigned to?
All participants will see two trials, each with a single door with an object near it. One trial contains a door with an object beside it (i.e., the no-cost trial) and the other contains a door with an object directly in front of it (i.e., the low-cost trial). Participants never see the same object twice across trials. The presentation order of the trials and the objects used are counterbalanced.

Our objects are identical to those used in pre-registration #9750: a chair, a hat, a string tacked to the door frame (also tied to a fishbowl in the low-cost trial), a stack of books, a plant, tape, a collection of three rulers, and an unstacked pile of cinderblocks.

5) Specify exactly which analyses you will conduct to examine the main question/hypothesis.
We plan to conduct two analyses.

Our primary analysis will consist of a logistic regression predicting individual participant choices from pre-registration #9750 as a function of condition (no-cost and low-cost; each individual participant choice had one of these two conditions) and mean participant ratings of typicality (averaged over condition and object type).

If both of these predictors are significant in our primary analysis (according to a significance level of α=0.05), we will run a second analysis to test whether or not condition can significantly predict the variance that typicality cannot explain, since our main interest is in testing whether or not cost is a driving force in explaining participant judgments from pre-registration #9750.

This second analysis will consist of two regressions. The first will be instrumental: a logistic regression predicting individual participant choices from pre-registration #9750 as a function of mean participant ratings of typicality (averaged over condition and object type). This regression will be used to extract the residuals, which represent variance that cannot be explained by typicality. The second regression is the main component of our second analysis: a linear regression predicting the residuals as a function of condition (no-cost and low-cost). Using this regression, we will evaluate whether or not condition is a significant predictor of the variance that typicality cannot explain.

6) Describe exactly how outliers will be defined and handled, and your precise rule(s) for excluding observations.
This experiment does not have any exclusion criteria.

7) 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.
Our sample will consist of 80 participants. With 80 participants, we will have 160 participant judgments (80 per cost condition and 10 per cost x object bin).

8) Anything else you would like to pre-register? (e.g., secondary analyses, variables collected for exploratory purposes, unusual analyses planned?)
OSF repository containing experiment procedure and stimuli:
https://osf.io/57n4g/?view_only=1f4115aa1a8f474dabc39fe63130769e