# CONFIDENTIAL - FOR PEER-REVIEW ONLY

## Physical Pragmatics – Observer (Replication) (#89156)

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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 Experiment 4 in preprint: https://psyarxiv.com/mnf4y/; v1, retrieved on February 20, 2022), we showed that a computational model matched people's inferences (communicative inferences from objects). This study consists of a pre-registered replication suggested by a reviewer. All methods are therefore identical to the original study.

**3) Describe the key dependent variable(s) specifying how they will be measured.**
As in the original study, the key dependent variable(s) will depend on the condition participants are assigned to. For participants assigned to the agentive condition, they will rate the farmer's belief about the hiker's pomegranate preference (using continuous sliders ranging from "not at all" to "very much") and the farmer's belief about the hiker's cooperativeness (using continuous sliders ranging from "not at all" to "very much"). For participants assigned to the non-agentive condition, they will only rate the farmer's belief about the hiker's pomegranate preference (using continuous sliders ranging from "not at all" to "very much").

**4) How many and which conditions will participants be assigned to?**
Participants will be randomly assigned to one of two conditions: an agentive condition and a non-agentive condition (see preprint for details, under the previous condition names communicative and non-communicative, respectively). All participants will see the same 27 trials, presented in random order.

**5) Specify exactly which analyses you will conduct to examine the main question/hypothesis.**
While the original experiment included other analyses, our primary interest is in replicating our main effect. Therefore, our analysis will only consist of applying min-max scaling over our model predictions and participants judgments, followed by computing a Pearson correlation between them (with 95% bootstrapped confidence intervals).

**6) Describe exactly how outliers will be defined and handled, and your precise rule(s) for excluding observations.**
This procedure is identical to our original study. After reading the task instructions, participants will complete a brief, six-question quiz. Participants that fail the quiz once will be redirected to the beginning of the instructions and asked to read them again. Participants who fail the quiz twice will not be included in the study. The quiz questions are listed below, with the correct answers marked by an 'X':
1. Do the farmers prefer that hikers take pears or pomegranates?
[X] Pears [] Pomegranates [] Not sure
2. What is the minimum number of boulders each farmer can place?
[X] 0 [] 1 [] 2 [] 3 [] Not sure
3. What is the maximum number of boulders each farmer can place?
[] 0 [] 1 [] 2 [X] 3 [] Not sure
4. Do the hikers ever realize that a farmer placed the boulder(s), if any?
[X]* Yes [X]+ No [] Not sure
*Correct answer in the agentive condition
+Correct answer in the non-agentive condition
5. What are the two features that make it harder for hikers to get to a fruit grove?
[] Weather [X] Distance from the grove [] Time of day [X] Boulders [] Not sure

**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 consist of be 80 participants (40 per condition), not counting participants who fail the quiz more than once and are thus not eligible to participate. This sample size is identical to the sample size of our original experiment.

**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, stimuli, and model predictions:
https://osf.io/57n4g/?view_only=1f4115aa1a8f474dabc39fe63130769e