Study preregistration
2021-12-08

Working Title: *Social distance and preference for visual and verbal mediums in interpersonal communication: A conceptual replication of Amit et al. (2013, Experiment 2).*

Description

The present study aims to conduct a conceptual replication of Amit, Wakslak and Trope's (2013, Experiment 2) study, which explored the effect of social (psychological) distance on peoples' medium preferences for interpersonal communication. The results showed that participants preferred mediums dominated by pictures for socially 'close' targets and mediums dominated by words for socially 'distant' targets. These findings support construal level theory (Trope & Liberman, 2010) which propose that people use more abstract representations when mentalizing targets that are more psychologically distant. Amit et al.'s (2013) findings extended this to interpersonal communication. The current study will conduct a conceptual replication of Amit, Wakslak and Trope (2013, Experiment 2) to assess the robustness of the original conclusions by using a set of new pretested experimental materials.

Hypotheses

The present study will test the same hypothesis as stated in Amit et al., (2013, Experiment 2).

H1: *People's preference for using words and pictures will be influenced by the communication target's social distance. Specifically, when communicating with distant*

others, people will increasingly prefer to use words; when communicating with close others, people will increasingly prefer to use pictures.

Stimuli and procedure

Participants will be asked to imagine that they will have different guests staying in their apartment when they are traveling. As a part of the fictitious scenario, participants will give each guest a set of instructions that explain how to use different devices in their home. Participants will be randomly assigned to see *one* out of three devices (i.e., a dishwasher, a Bluetooth speaker, or an induction cooktop). For each device, participants will be presented with two types of instructions displayed next to each other: (1) a picture version, in which instructions are presented as three steps shown in pictures and (2) a text version, in which instructions are presented as three steps described in words (included in the OSF project files).

The stimuli were pretested (see osf.io/th9ug/) prior to the current study to assess potential differences in perceived informativeness and usefulness as well as overall preference (dichotomous choice) for the pictorial and verbal stimuli. We strived to achieve a fairly equal balance in pretest participants' dichotomous choices (i.e., as close to a 50/50 distribution of preferences for the picture and text versions as possible). The pretest data were collected in batches of 100 participants, and adjustments were made to the stimuli after each batch, until a satisfactory distribution was achieved after four batches.

Underneath the two types of instructions (picture, text) for each device, participants will be presented with a list of 14 people (i.e., guests) that vary in social distance ranging from close (e.g., "My best friend") to distant (e.g., "A person I met at a party"). Participants will be asked to choose which guest would get which type of instructions (picture version or text version).

The guest list was obtained from Amit et al. 's (2013, Experiment 2) original study material, which was provided to us by one of the authors. For the present study, three targets from

the original material were revised as they were specifically aimed at a student sample. For example, the target “A fellow student, who is not a personal friend of mine” was revised to “A fellow volunteer worker, who is not a personal friend of mine”. Social distance ratings for each person on the guest list were collected in a pretest (see osf.io/th9ug/), in which participants rated how socially close they considered each person to be to themselves, on a scale ranging from 1 (very close) to 7 (very far away). The mean social distance rating for each guest informed the selection of six critical targets in the current study (i.e., the three closest targets and the three most distant targets) for use in the supplemental analyses (see Data Analysis).

The present study uses a within-subject design where the outcome variable is participants’ choice of either picture or text instructions for each of the 14 targets (i.e., guests). The predictor variable is participants' rating of how socially close/distance each target is to themselves.

Data collection

Data will be obtained through electronic questionnaires via the Qualtrics online survey tool.

Instruments

The questionnaire (included in the OSF project files) includes the list of 14 guests and will measure participants’ preferred choice of instructions (picture or text) for one of the three devices, to be given to each guest (14 in total). Participants will report their choice of instructions for each guest by entering a ‘P’ for picture or ‘T’ for text in a designated text box positioned next to each guest on the list.

The questionnaire also includes a question that will ask participants to write down next to each guest on the list, how socially close they consider each guest to be to themselves. The response scale ranges from 1 to 7, where 1 is labeled ‘*very close*’ and 7 is labeled ‘*very far away*’, corresponding to the pretest used in Amit et al. (2013, Experiment, 2).

To explore participants' reasoning behind the choice of instructions, participants will be asked: *"Please tell us how you decided which instructions to give to which person".* Participants will write their answers in a designated textbox.

An attention-check will ask participants to report what device the instructions were for. Participants select one of four options: (1) a dishwasher, (2) a Bluetooth speaker, (3) an induction cooktop or (4) a burglar alarm.

Demographic information about participants' gender, age, occupation, and ethnicity will be obtained through the survey panel Prolific for descriptive purposes.

Sample recruitment and power analysis

Participants will be recruited from the survey panel Prolific and be paid £0.63 for completing the study. Study completion time is estimated at 5 minutes, corresponding to an hourly wage of £7.56.

Inclusion criteria:

Completion of at least 50 studies on Prolific, approval rate of at least 95% on all completed submissions. Only participants who are native English speakers and are completing the study on a laptop or desktop computer, will be eligible for participation.

Exclusion criteria:

Participants who completed Study 1 will be excluded from participating in the main study through a pre-screening tool on Prolific.

Sample size aim:

1300 participants will be recruited from Prolific. A sample size of 1300 was concluded satisfactory considering power needed to detect effects of interest and resource

constraints. A sample of 1300 provides us with approximately .95 power to detect d = 0.100 with a paired t-test, as well as approximately .80 power to detect an effect of d = 0.078.

Data collection will terminate once 1300 completed responses have been collected.

Data analysis

A significance level of $p < .05$ will be considered for all data analyses.

Main analysis

The hypothesis will be tested by conducting a mixed effects logistic regression. We will fit a mixed effects logistic regression model predicting the selection of text instructions (vs. picture instructions) for each target person with that target's social distance rating (as a fixed effect), with random intercepts for each participant, each target, and for each task (dishwasher, cooktop, and speaker).

H1 will be supported if this model indicates that rated social distance predicts instruction choice, such that targets rated as socially distant are more likely to receive text instructions.

As an additional exploratory analysis, we will fit a model that adds random slopes for the effect of social distance for participants and tasks.

Supplemental analysis

Data will also be analysed using a mixed ANOVA, corresponding to the original analysis in Amit et al. (2013, Experiment 2), with the number of text instructions (0-3) chosen for the six critical targets as the dependent variable, social distance (close, distant) as a within-subject factor, and task (dishwasher, cooktop, and speaker) as a between-subjects factor. The six critical targets have been determined by identifying the three targets rated as most socially distant and most socially close on average, in the pretest. The critical distant targets are as follows: person you met on vacation, person you met at a party, worker at your favorite cafe. The critical close targets are as follows: a close friend, your best friend, a first

degree family member.

H1 will be supported if the mixed ANOVA shows a significant effect of social distance on participants' preferences for using text instructions for socially distant targets – that is, if participants choose the verbal instructions more for 'distant' targets than for 'close' targets.

We will conduct this analysis as a supplemental test of the hypothesis because it is analogous to the analysis conducted in the study we are conceptually replicating, but we believe there are serious limitations with this statistical approach. For example, several test assumptions are likely to be violated, since the distributions of the dependent variable are highly likely to be non-normal. The results of this analysis should be interpreted with caution.

Data exclusion criteria

1. Data from participants who have not completed the entire survey will be excluded.
2. Data from participants who have failed to respond correctly to the attention check will be excluded.

References

Amit, E., Wakslak, C., & Trope, Y. (2013). The Use of Visual and Verbal Means of Communication Across Psychological Distance. *Personality & Social Psychology Bulletin, 39*(1), 43-56.

Trope, Y., Liberman, N. (2010). Construal level theory of psychological distance. Psychological Review, 117, 440-463.