

Spontaneous Ideological Inferences

Embargoed registration

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Contributors

Carsten Sander and Juliane Degner

Description

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Registration type

Pre-Registration in Social Psychology (van 't Veer & Giner-Sorolla, 2016): Pre-Registration

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osf.io/xgp2j

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osf.io/cpy5z

A. Hypotheses - Essential elements

Description of essential elements

Describe the (numbered) hypotheses in terms of directional relationships between your (manipulated or measured) variables.

1. We expect reaction times of correct classifications of implied probes (i.e., ideological probe words implied by but not included in the sentence) to be slower than of probes that were not implied in the sentence (but rather in another sentence of the task).

For interaction effects, describe the expected shape of the interactions.

No interaction effects are expected.

If you are manipulating a variable, make predictions for successful check variables or explain why no manipulation check is included.

We are manipulating whether the probe word was implied in the sentence or not. Because the effect of this manipulation does not hinge on the participants' interpretation of the experimental conditions, no manipulation check is needed.

Recommended elements

Recommended elements

A figure or table may be helpful to describe complex interactions; this facilitates correct specification of the ordering of all group means.

No files selected

For original research, add rationales or theoretical frameworks for why a certain hypothesis is tested.

No response

If multiple predictions can be made for the same IV-DV combination, describe what outcome would be predicted by which theory.

No response

B. Methods - Essential elements

Description of essential elements

Design

List, based on your hypotheses from section A:

Independent variables with all their levels

- a. whether they are within- or between-participant
- b. the relationship between them (e.g., orthogonal, nested).

Probe type: implied vs. implied-other (within-participant factor)

List dependent variables, or variables in a correlational design

Mean response latency of correct responses (additionally, error rates are used as DV in exploratory analyses)

Third variables acting as covariates or moderators.

No covariates or moderators are included

Planned Sample

If applicable, describe pre-selection rules.

The sample will include people Prolific users, a. whose nationality is German b. whose first language is German c. who currently reside in Germany e. who have not participated in any of this study's pre-tests or studies from our group using the same experimental paradigm

Indicate where, from whom and how the data will be collected.

Participants will be recruited via the online-platform Prolific.co according to the pre-selection rules. Demographic data will be collected via Qualtrics whereas the Probe Recognition Paradigm is programmed in PsychoJS and will be hosted on Pavlovia.org.

Justify planned sample size

Because the newly developed stimulus material has not yet been tested, we target a small effect of $d = .20$ using a t-test. To attain a test-power of $1 - \beta = .80$ at a significance level of $\alpha = .05$, we aim at collecting valid data of $N = 156$ participants. Given an expected exclusion rate of 5-10% (e.g., Kruse & Degner, 2019), we will collect data of $N = 170$ participants.

If applicable, you can upload a file related to your power analysis here (e.g., a protocol of power analyses from G*Power, a script, a screenshot, etc.).

- power analysis.png

Describe data collection termination rule.

Data collection will be terminated when the planned sample size is reached. There are no further termination rules.

Exclusion Criteria

Describe anticipated specific data exclusion criteria. For example:

- a) missing, erroneous, or overly consistent responses;
- b) failing check-tests or suspicion probes;
- c) demographic exclusions;
- d) data-based outlier criteria;
- e) method-based outlier criteria (e.g. too short or long response times).

We will exclude data of participants, a. who did not complete the probe recognition task, b. who withdraw their consent to data analysis after full debriefing, c. who self-report not being fluent in German, d. whose recognition performance is < 60% in the probe recognition task e. whose average response times are slower than two standard deviations of the sample mean f. who self-report not having followed the instructions conscientiously (5 or lower on a scale from 1 to 10) or rate their own data to be unfit for analyses

Procedure

Describe all manipulations, measures, materials and procedures including the order of presentation and the method of randomization and blinding (e.g., single or double blind), as in a published Methods section.

Procedure
We employ a Probe Recognition Paradigm (e.g., Todd et al., 2011). Participants are told that they are participating in a study on text comprehension and instructed to read and memorize a series of short statements. They are presented 48 statements (24 targets, 24 filler, see stimuli.xlsx) in a randomized order. The statements are presented in the center of the computer screen. The duration of presentation is based on statement length, with an assumed reading rate of 200 words per minute, resulting in a range from 2.7 to 12.3 seconds. Each statement is followed by a blank-screen for 250 ms, a fixation cross for 500 ms, and a randomized sequence of four probe words, each of which is presented until a response is made (with a post response pause of 100ms). Participants are instructed to indicate whether the probe word appeared in the statement or not by pressing [J] or [F], respectively (see instructions.xlsx). They are told that they should respond as quickly as possible and that it is very important that they make few mistakes. When participants make a mistake, an error message appears (red letter "X" presented for 1000 ms). After presentation of all four probe words and an inter-trial interval of 500ms, the next statement is presented.

Participants perform a practice block containing 5 statements. After the practice block, they receive individualized feedback on their error rate. If their error rate is higher than 5%, they are told to try and make less mistakes even if they take more time to respond. If their error rate is at 5% or lower, they are told to carry on as before. The test block is split into two parts of equal length, giving the participants the opportunity to pause. After completion of the test blocks, participants again receive feedback on their error rate.

They then rate each label with regards to its valence on a five-point scale ranging from very negative to very positive, with regards to how much they identify with it on a five-point scale ranging from not at all to very strongly, and with regards to how often they use it on a five-point scale ranging from never to very often (see ratings.xlsx). The order of the three ratings is counterbalanced across participants.

Next, they are asked to state their political attitudes using the one-item Left-Right Self-Placement scale (Breyer, 2015), their interest in politics using a one-item scale (Zentralarchiv für empirische Sozialforschung (ZA) & Zentrum für Umfragen, Methoden und Analysen (ZUMA) e.V., 2014), their satisfaction with Germany's political system using the German Satisfaction with the Political System Short Scale (SPS; Dentler, Blumke, & Gabriel, 2020), their gender, and age. They are asked to rate on a 10-point scale how diligently they followed the instructions, whether they think their data is fit for analyses (yes or no), and whether they had any assumptions about the exact purpose of the experiment. Ultimately, they are debriefed about the purpose of the study and asked for their informed consent for data storage and analysis. The whole study takes approximately 25 minutes.

Materials

Target items.
As target statements we selected 24 label-implying behavior descriptions from a larger set of 150 pretested behavior descriptions. Pretests have shown these behavior descriptions to be associated with ideological labels: In an open-ended questionnaire the percentage of identical or synonymous ideological labels generated in response to the behavior descriptions ranged from 30 to 95%. On a rating scale ranging from -2 (very badly) to 2 (very well) a different sample rated the labels as being able to explain the described behaviors mostly well or very well, with average values ranging from 0.69 to 1.94. The target statements were chosen to minimize semantic overlap between the different ideological labels. Labels are either adjectives or nouns.

Probe words.

We provide 4 probe words for every target statement, namely (1) the implied label (implied condition), (2) a non-synonymous label implied by another target statement (implied-other condition), (3 and 4) two filler words that either occur in the target statement or in another target-statement. Thus, across the entire experiment, every label appears twice in the probes of the target statements. We chose the implied-other probes such that their word length was similar to the respective implied probe.

Filler items.

The target statements do not contain ideological labels. They do therefore exclusively warrant negative responses to label probes. To prevent strategic responding, we included 24 additional filler statements. Each filler statement and its respective probes explicitly include at least one ideological label. This assures that the number of affirmative and negative responses is balanced across all label probes across the experiment. Every label appears two times in the probes of the filler statements and consequently four times across all the probes. Moreover, the number of affirmative and negative responses is balanced across different word types (nouns, adjectives, verbs, names). Therefore, neither word type nor the property of being an ideological label or not can be used to infer the correct response.

Because ideological labels appearing in the statements almost always reappear as probes, participants could theoretically learn to encode whether ideological labels appeared in the statement. Every time they encode that a statement does not include ideological labels, they could categorically reject the implied or implied-other probes solely on grounds of them being ideological labels, without relying on a semantic representation of the statement. This could potentially decrease the observed effect size. However, because we do not expect the concept of ideological labels to be spontaneously employed by participants, we deem this rather unlikely.

Additionally, because for each statement the ideological label probes warrant either only affirmative or only negative responses, participants could theoretically learn to repeat their last label response for upcoming label probes of the same statement, provided that they are confident in their response. This again could potentially decrease the observed effect size. However, this too would only occur if participants spontaneously employed the concept of ideological labels, which we deem rather unlikely.

Recommended elements

Recommended elements

Procedure

Set fail-safe levels of exclusion at which the whole study needs to be stopped, altered, and restarted. You may pre-determine what proportion of excluded participants will cause the study to be stopped and restarted.

No response

If applicable, you can upload any files related to your methods and procedure here (e.g., a paper describing a scale you are using, experimenter instructions, etc.)

- stimuli.xlsx
- instructions.xlsx
- ratings.xlsx

C. Analysis plan - Essential elements

Confirmatory Analyses

Describe the analyses that will test the first main prediction from the hypotheses section. Include:

the relevant variables and how they are calculated;

The mean response latency of correct responses serves as the dependent variable. For each combination of experimental condition (implied vs. implied-other) and participant (for by-participant analyses) or item (for by-item analyses), we will compute mean response latencies of the correct responses. We will use an individual cut-off of $M+2*SD$ for slow responses and the log-transformation in our main analysis. Because there are no conventions regarding outlier correction and transformations, we follow a recommendation by Krieglmeier & Deutsch (2010) and employ a multiverse analysis using different cut-off criteria: (no cut-off; 2500 ms; 2000 ms; and 1500 ms) and transformations (no transformation, a log-transformation, and an inverse transformation) and report each combination's effects on the results in the supplement of any publication.

the statistical technique;

We will test the hypothesis using a one-tailed dependent samples t-test.

each variable's role in the technique (e.g., IV, DV, moderator, mediator, covariate);

Probe type: IV
Mean response latency: DV

rationale for each covariate used, if any;

No covariates will be used.

if using techniques other than null hypothesis testing (for example, Bayesian statistics), describe your criteria and inputs toward making an evidential conclusion, including prior values or distributions.

No other techniques are used.

Second Prediction

Describe the analyses that will test the second main prediction from the hypotheses section. Include:

the relevant variables and how they are calculated;

No response

the statistical technique;

No response

each variable's role in the technique (e.g., IV, DV, moderator, mediator, covariate);

No response

rationale for each covariate used, if any;

No response

if using techniques other than null hypothesis testing (for example, Bayesian statistics), describe your criteria and inputs toward making an evidential conclusion, including prior values or distributions.

No response

Third Prediction

Describe the analyses that will test the third main prediction from the hypotheses section. Include:

the relevant variables and how they are calculated;

No response

the statistical technique;

No response

each variable's role in the technique (e.g., IV, DV, moderator, mediator, covariate);

No response

rationale for each covariate used, if any;

No response

if using techniques other than null hypothesis testing (for example, Bayesian statistics), describe your criteria and inputs toward making an evidential conclusion, including prior values or distributions.

No response

Further Predictions

Describe the analyses that will test any further (main) predictions from the hypotheses section. Include:

the relevant variables and how they are calculated;

No response

the statistical technique;

No response

each variable's role in the technique (e.g., IV, DV, moderator, mediator, covariate);

No response

rationale for each covariate used, if any;

No response

if using techniques other than null hypothesis testing (for example, Bayesian statistics), describe your criteria and inputs toward making an evidential conclusion, including prior values or distributions.

No response

Recommended elements

Recommended Elements

Specify contingencies and assumptions, such as:

Method of correction for multiple tests.

No response

The method of missing data handling (e.g., pairwise or listwise deletion, imputation, interpolation).

No response

Reliability criteria for item inclusion in scale.

No response

Anticipated data transformations.

No response

Assumptions of analyses, and plans for alternative/corrected analyses if each assumption is violated.

If upon visual inspection the differences of mean correct response latencies between the two probe types appear severely non-normal, a Wilcoxon signed-rank test will be performed instead of the dependent sample t-test.

Optionally, upload any files here that are related to your analyses (e.g., syntaxes, scripts, etc.).

No files selected

Final questions

Has data collection begun for this project?

No, data collection has not begun

If data collection has begun, have you looked at the data?

No

The (estimated) start and end dates for this project are

start: 22.02.2022
end: 25.02.2022

Any additional comments before I pre-register this project

No response

