**Preregistration Template from AsPredicted.org**

**Registration Metadata**

This metadata applies only to the registration you are creating, and will not be applied to your project.

**Title \***

Incidental VAAST online replication

**Description \***

This project contains the preregistration, materials, analysis scripts, and data related to the online replication of incidental VAAST.

**Contributors**

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**License \***

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**Subjects \***

Psychology, Social and Behavioral Sciences, Social Psychology

**Tags**

incidental vaast

**Preregistration**

**Data collection**

Have any data been collected for this study already? Note: 'Yes' is a discouraged answer for this preregistration form.

[ ] Yes, we already collected the data.

[x] 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.

**Hypothesis**

What's the main question being asked or hypothesis being tested in this study?

In this experiment, participants are primed by a positive or negative word and then have to approach or to avoid a target (i.e., a square or a diamond).

We expect a compatibility effect between prime and prime’s valence. More precisely, we predict that participants will be faster to approach squares and diamonds when they are primed by a positive word and to avoid squares and diamonds when they are primed by a negative word compared to the opposite, that is to approach squares and diamond when they are primed by a negative word and to avoid squares and diamond when they are primed by a positive word.

**Dependent variable**

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

The dependent variable will be the participants' response time to approach or avoid in the measure phase (starting from the target stimuli appearance).

The response time will be measured with participants’ keyboard and the JsPsych library.

**Conditions**

How many and which conditions will participants be assigned to?

The design will be a 2 (movement: Approach vs. Avoidance) by 2 (prime: Positive word vs. Negative word) with the two predictors being within-participants.

**Analyses**

Specify exactly which analyses you will conduct to examine the main question/hypothesis.

The transformed response time will be analyzed through a mixed model with two within-participants factors:

* Movement (Approach vs. Avoidance)
* Prime (Positive word vs. Negative word)

These two predictors will be contrast-coded in the mixed-model. The predicted effect is an interaction between movement and Prime.

The model will be specified the following way (lme4 formula syntax):  
transformed\_rt ~ 1 + Movement \* Prime +   
(1 + Movement \* Prime | Participant) +   
(1 + Movement \* Prime | Stimulus)

We will simplify the model following Bates et al. (2015)'s recommendations.

**Outliers and Exclusions**

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

Participants inclusion conditions of the study:

* Native English speaker
* Prolific acceptance rate superior or equal to 95%
* Participants must run the experiment on a computer

Participant exclusion conditions of the study:

* Any participant who does not finish the study.
* Any participant who has less than 70% of correct responses.
* Any participant with more or less than 3 standard deviations from the mean over the response time.
* Any participant who has an English level lower than “Very well”.

Trial exclusion conditions in the analysis:

* All the training responses.
* Trials with a too short or too long response time. The cutoff will be chosen as function of the best normal RT distribution.
* All the incorrect responses.

**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.

In a previous laboratory experiment conducted with 85 French undergraduate Psychology students, we observed a compatibility effect of dz = 0.77, CI 95% [0.54; 1.01].

Because this experiment will be conducted with a different population in a different language (i.e., English instead of French) and because we wanted a better approximation of the effect size, we decided to recruit approximately twice as much participants.

We thus plan to collect data of 200 participants from Prolific. A sensitivity analysis conducted with G\*Power 3.1 (Faul et al., 2007) indicates that with 200 participants, we have 90% power to detect an effect size of dz = 0.23.

**Other**

Anything else you would like to pre-register? (e.g., secondary analyses, variables collected for exploratory purposes, unusual analyses planned?)

Data-transformations:

* Transformations will be applied to the response time. The applied transformation will be chosen as a function of the best normal RT distribution.

Other collected variables:

* The age, sex, and reported English level of each participant will be collected.

**Name**

Give a title for this AsPredicted pre-registration. Suggestion: use the name of the project, followed by study description.

Incidental VAAST online replication

**Finally**

For record keeping purposes, please tell us the type of study you are pre-registering.

[ ] Class project or assignment

[x] Experiment

[ ] Survey

[ ] Observational/archival study

[ ] Other (describe below)

**Other**

If 'other' was selected above, describe the type of study you're registering.