**Title:** SPAML: Semantic Priming Across Many Languages

**Abstract (388 words):**

Semantic priming has been studied for nearly fifty years across various experimental manipulations and theoretical frameworks. Semantic priming occurs when responses to a stimulus are facilitated (i.e., made faster, leading to decreased response latencies) when they are preceded by an earlier, related stimulus. For example, when shown <doctor>, people are faster to respond to the concept of <nurse> than to <tree> because of the semantic relatedness between <doctor> and <nurse>. These studies provide evidence of cognitive underpinnings of the structure and organization of the mental lexicon in both healthy and clinical populations.

In this registered report, we propose to create a large database of semantic priming values, alleviating the small sample size issues with previous studies. Semantic priming will be estimated using an online lexical decision task that allows participants from anywhere on the globe with an internet connection to join. In a lexical decision task, participants are asked to determine if a presented stimulus is a real word or non-word using their keyboard. Therefore, they will respond yes to <doctor> but would respond no to <werm>. They will complete approximately 600 trials (300 stimulus-pairs) with pilot testing to ensure this task stays under 30 minutes completion time. We will use an adaptive stimulus selection algorithm and accuracy in parameter estimation methods to collect data on 1000 stimulus pairs to maximize participant and experimenter time and effort. Using open-source linguistic databases, we have selected matched stimulus-pairs in 44 languages for potential data collection. This study has been approved by the IRB at the lead author’s institution.

This study will answer two research questions: 1) is semantic priming a non-zero effect? and 2) how does the potential priming effect vary across languages? To answer these questions, we will calculate the mean and confidence interval of the priming effect (i.e., unrelated stimulus pair conditions minus related stimulus pair conditions). Results will support semantic priming when the priming effect confidence interval is entirely positive above zero, indicating that response latencies for unrelated stimulus pairs are slower than related stimulus pairs. Differences in semantic priming across languages will be supported when priming effect confidence intervals do not overlap. The data will be born-open and accessible via our website designed for the study, and these will be archived at regular intervals on PsychArchives. This project is in partnership with the Psychological Science Accelerator.