Missouri State Human Subjects Protection Application

**Title:** Separating Semantic and Associative Bias in Judgments

**Description:** Buchanan and Maki (*manuscript preparation*) have found that both associative and semantic judgments are biased, and participants are unable to discern the difference between lowly and highly related pairs. In an associative judgment task, participants are asked to guess how many people would list two words together (i.e. LOST-FOUND should be 75 people out of 100). Participants are asked to judge how much of the same meaning two words have in a semantic judgment task (i.e. CAT-DOG have a high overlap because they are both pets, have whiskers, paws, and ears). Associative judgment scores are only predicted by associative database information, while semantic judgment scores are predicted by both associative and semantic database scores (Maki, 2007). This discrepancy may be related to the associative boost or the mix of associative/semantic relationships in words (Hutchison, 2003). The current experiment will test semantic judgments with word pairs that have no associative relationships and test associative and semantic judgments with instructions to ignore opposite relationships. Both experiments will examine judgment ability and the influence of different types of word relatedness on our ability to use information from memory.

**Protocol:**

**Participants:** Participants will be recruited from the Psychology Undergraduate Pool by use of the SONA system. Generally, these participants will be undergraduates and over 18 years of age. Participants will be run in medium to large groups and approximately 100 to 200 participants will be recruited. The experiment will take 30 minutes to complete.

**Procedures:**

***Semantic Judgment condition.*** Participants are given instructions (attached) on how semantic memory and semantic information is formed. Participants will be run in groups, and they will continue each page together. After everyone is through reading the instructions, a set of practice feature ratings are given. To complete the experiment, participants will rate several word pairs in the same manner as their practice word pairs.

***Associative Judgment condition.*** Participants are given instructions (attached) on a free association task and how to judge the word frequency between two words. After these instructions, they are given practice words for judgments. As with the semantic judgments, participants will complete each page together. They will finish by rating word pairs in the same manner as practice word pairs.

In one experiment, participants will only get semantic packets. These word pairs will be either semantically and associatively related word pairs to judge or only semantically related word pairs. In the second experiment, participants will be randomly assigned to get either the semantic or associative judgment condition. They will be given instructions to ignore the opposing relationship in the experiment by comparing to a partner who has the other judgment type.

**Study Completion:** When the study is completed, the packets are entered into a spreadsheet for further analysis. After the experiment has been published, the original packets are shredded and recycled. Until this time, packets are stored in a locked filing cabinet. The information collected in this experiment will be used to understand memory judgments and bias. This study will be combined with some previous research on semantic and associative judgments, which will be sent for publication in a cognitive psychology journal.

**Benefits:** There are no direct benefits to participants in this study. However, the general knowledge can be applied to judgments of learning. When studying, students often believe they have enough memory of the material to do well on an exam. As previous research has shown, these judgments are biased toward a better understanding of the material (which is not always the case). This research looks at more basic memory to see if that bias can be reduced to aid in judgments.

**Risks:** There are minimal risks involved in this study, as it is similar to taking a classroom exam.

**Informed consent**: Attached. Participants will be asked to provide consent at the beginning of the study. No penalty is given for withdrawing from the study.

I hereby agree to conduct this study in accordance with the procedures set forth in my project description, to uphold the ethical guidelines as set forth in the Code of Federal Regulations 45 CFR 46, 45 CFR 160 and 164, and the Missouri State University HIPAA Policy, and to report to the IRB any outcomes or reactions to the experiment which were not anticipated in the risks description which might influence the IRBs decision to sustain approval of the project.

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Department Head

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Other Investigators

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Principal Investigator (Faculty)

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Other Investigators

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