Like a Sore Thumb:
Von Restorff Effects in Source Monitoring

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Background

The Von Restorff effect, or isolation effect, describes the phenomenon where items that stand out against their background (i.e. they are isolated) are remembered better than other studied items. The typical way of demonstrating this is to sequentially show six words from one semantic category (e.g., animals). On the 7th trial, however, a word from a different category (e.g., furniture; DESK) is introduced. The new item is now semantically isolated from the rest of the list and is typically remembered better. Some authors (Hunt & Lamb, 2001) also believe that the additional processing of the isolated item sometimes affects subsequent processing of the word following the isolate, disrupting it so that memory for the word immediately after the isolate is often worse than memory for the word immediately before the isolate. This can be likened to an *attentional blink* effect whereby a person's attention is stuck on the previous, surprising, trial and subsequently 'blinks' through the presentation of the following word (c.f., Anderson, 2005).

To the best of our knowledge the isolation effect has never been studied using highly emotional, specifically taboo, words as isolates. Taboo words offer not only a semantic isolation (i.e., they typically do not fit in traditional semantic categories) but they also offer an emotional isolation (i.e., they are much more emotional than typical category exemplars). In addition, we are unaware of any use of the isolation effect to study source monitoring. Source monitoring refers to the processes one uses to identify the origin of retrieved memories. (Johnson, Hashtroudi, & Lindsay, 1993). Source (or context) details are thought to be bound to the original item in memory. As such, this binding process may be fragile and susceptible to the sort of attentional blink that has been seen in other isolation paradigms. In this series of studies we examined memory for a particular contextual attribute, gender of the speaker.

Goals and Predictions

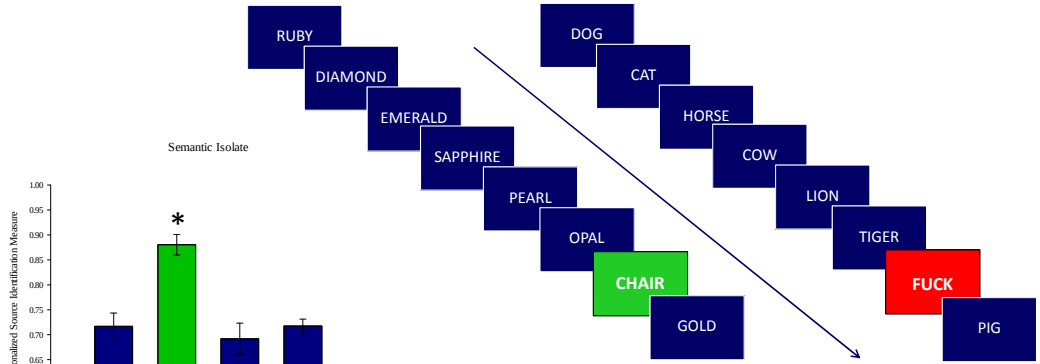
- Does presenting a semantic isolate affect participants ability to encode source for the isolated item?
- Would source memory for surrounding items (before and after the isolate) be affected by the presence of a semantic isolate (Hunt & Lamb, 2001)?

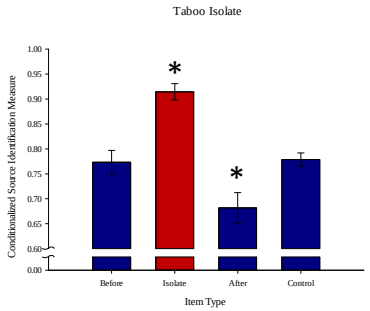
Materials

- 120 words from 15 semantic categories (e.g., furniture, animals, etc.) were chosen from Battig & Montague (1969). 10 categories were randomly chosen to serve as studied words with the additional 5 serving as new items during a later source recognition test that included all studied items as well.
- Taboo words included mostly profanity: FUCK, SHIT, ASSHOLE, etc.
- The type of isolate varied between subjects (Semantic or Taboo) while the presence of an isolate in a given list varied within subjects.
- All words were presented either visually (SEEN source) or heard over the computer speakers (HEARD source).

Procedure

- 72 participants were asked to view a list of 80 serially presented words in categorical blocks (10 lists of 8 words each).
- Immediately after the study phase, all participants began a source recognition task in which they identified the study source of presented words as having been SEEN, HEARD, or NEW in the context of the study.





Results & Discussion

- Presenting a semantic isolate always increases source memory for the isolate relative to a control word, regardless of the type of isolate being presented, $F(1, 70) = 104.06$, $p < .001$, $\boldsymbol{\eta_p^2 = .598}$. This difference was larger with a semantic isolate because of an increase in memory for all words when lists contained a taboo word, $F(1, 70) = 7.06$, $p = .01$, $\eta_p^2 = .09$.
- Experiencing a taboo isolate in the experiment increased source memory for nearly all other words in the experiment compared with the semantic isolate condition, $F(1, 70) = 6.01$, $p = .02$, $\eta_p^2 = .08$.
- Source memory for words following a taboo isolate was worse than control words, $t(35) = 3.1$, $p = .004$, however this was not the case with semantic isolates, $t(35) < 1$, $p = .46$.
- These results suggest that one potential explanation for the valence enhancement effect seen in item and source memory is that a valenced event is isolated against a background of typically neutral events, thus increasing the distinctiveness and memorability of the one that is valenced.