Comments on Bourmayan, Stojanovic & Strickland (2023) "Valence First"

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Overview of Handout Content:

1. Conceptual (higher-level) notes:
   1.1. Do the dimensions tested track what you think they're tracking?
      i. Thoughts
      ii. Methodological responses
   1.2. Main vs. alternative hypotheses

2. Thoughts on other possible experimental paradigms
   2.1. Evaluating context/task effects
   2.2. A more naturalistic task?
   2.3. Switching cost paradigm (cf. Hafri, Trueswell, Strickland 2016)

1 Conceptual Considerations

1.1 Are the features testing what we think they're testing?

1.1.1 Thoughts

- There seems to be a good amount of polysemy in the words chosen
- In particular, some of the word pairs may not show the desired featural dissociations:
  - 'hug'/'like', are they really different domains? they are conceptually similar—hugging is a consequence of liking
- Is Physical vs. Psychological a good (=accessible for naive participants) dimension for testing the ontological category of an event?
- Challenge here is to get words with the right features (or show the right dissociation of features) to test what you want.
  $\rightarrow$ Do the words in fact have the right features?
- We want words that have **both** features lexically encoded as equally as possible.
  $\rightarrow$ Are the features encoded equally in the items?

1.1.2 Methodological Responses

- Norming for core word meaning across several dimensions
  - If we quantify these values they can used as control variables in statistical models
  - Set a number of featural norming criterion for evaluating emotionality and extremity of language (Rockledge & Fazio 2015; Rockledge et al 2018, Evaluative Lexicon)
- How consistent are the judgements across speakers?
  - If there is more variability, then the feature is less likely to be a part of the core meaning of the word; likewise, less variability is stronger evidence for the feature being a part of core meaning.
  - Can be a good way for determining candidate features for core meaning (evidence that denotative aspects of meaning vary less between participants,
- Including words that have neutral valence as control items
- Experiment 1:
  - Controlling for log frequency, length, arousal...
  - Control & filler items?
    Controls as criterion for excluding participants
  - Counterbalancing key-press between subjects and collecting demo data on handedness
- Experiment 2:
  - Controlling for similarity effects by measuring semantic relatedness
  - Items matched after more rigorous featural norming
  - Exp1 results can be used to choose items for Exp2

1.2 Main vs. Alternative Hypotheses

Main Hypothesis: **Affective Primacy Hypothesis**, that the affective component of lexical meaning is prior to the non-affective component of lexical meaning.

- **Cognitive Primacy Hypothesis**: it's the non-affective information (ontological category) that's more primary in processing (Nummenmaa et al. 2010)

- **"Context/Task Primacy Hypothesis"**: which kind of content is primary is determined by context/task demands, i.e., affective contexts favor affective information, while non-affective contexts favor non-affective information (Lai et al. 2012)

- (**Null Hypothesis**: there are no differences across content types)
- (**Null′ Hypothesis**: differences fall on a completely different dimension)

2 Other potential methodologies

2.1 Evaluating context/task as a factor

- Considering alternative hypotheses, I would be interested in looking at the role that context or task demands play in the processing of ontological vs. affective categorization
- Consistent with recent views on probabilistic cognition, essentially context/task demands can be thought of as affecting expectations about upcoming categories
- Consistent with views on expectations modulating categorization
- Which aspect of meaning is more important to the communicative act at hand?

2.2 A more naturalistic task?

- If you're interested in language processing, then using a more naturalistic task
- Self-paced readings, where verbs are embedded in sentences

2.3 Switching cost paradigm

- Parallel to event role recognition literature (Hafri, Trueswell, Strickland 2017)
- If either valence or ontological category evaluation is automatic process, then there should be a cost when the evaluation category is switched from the one demonstrated