Word Meaning III

HUL 243

2nd Sep 2024

- Discussion on polysemy, ambiguity and vagueness
- Ambiguity is found when 2 lexemes have two distinct meanings that are used in separate contexts
- Lexical Decision Task

Ambiguity

- How do human beings cognize the meanings of ambiguous words ?
- Words with multiple meanings (e.g. bark (dog) and bark (tree)
- **Lexical access** is the term given to the process of retrieving words from the mental lexicon
- The systematic organization of the words in our mind is known as the mental lexicon
- Psychological models describe the process of retrieval of a word from this mental lexicon (e.g. TRACE, Logogen)

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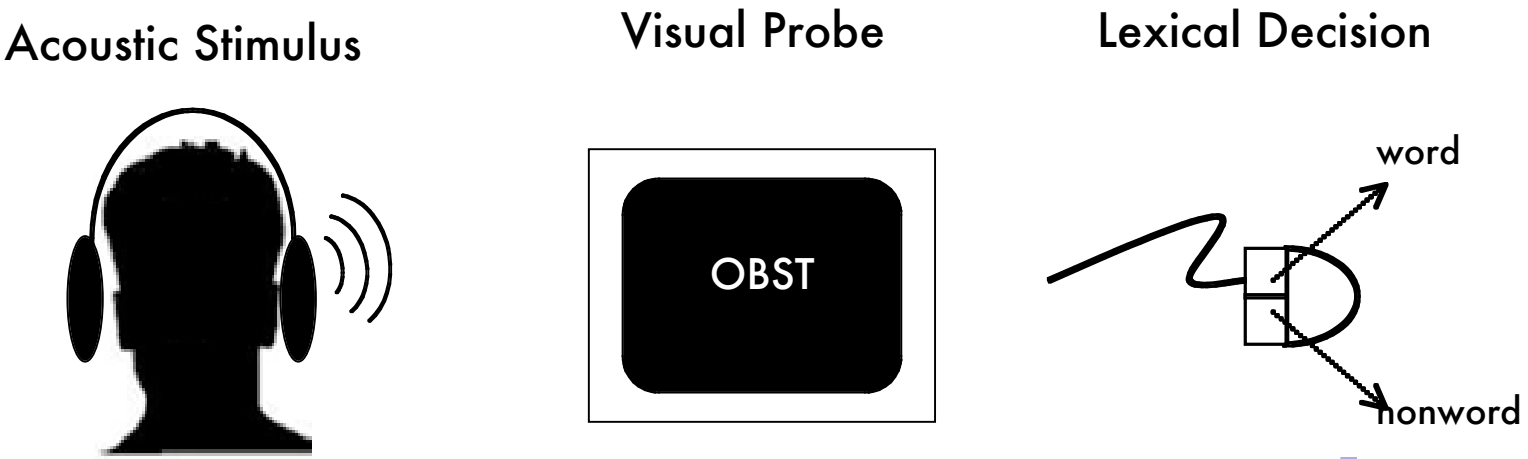

- Reaction times to a probe that is related (or identical) to a word they have heard before are *shorter*
- If the probe is unrelated or not seen before, then the reaction times would be longer
- The presence of a related/identical word prior to the visual proble **facilitates** the decision (and vice versa)
- This element explains the **priming** part of the paradigm
- This paradigm is popular in the investigation of lexical ambiguity

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- **Exhaustive access** hypothesis: when an ambiguity is encountered, all of the available senses are momentarily available, even though the context will tilt towards one particular meaning
- **Exclusive access** hypothesis: when an ambiguity is encountered, clues from the context lead to immediate selection of (one) meaning)
- Note that we are unaware of this process of lexical access: it happens subconsciously
- Effect of context is *post-access* in the former and *pre-access in the latter*

Meaning dominance

- All the meanings of a word are not created equal
- *scale* has a dominant meaning of 'weighing scale', subordinate meaning of 'fish scale'
- E.g. *bug* has the meaning 'insect' but also 'spying device' or 'software bug'
- Ambiguous words can be biased e.g. *scale* or balanced e.g. *bug*

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- Four such separate lists were constructed with counterbalancing of related/unrelated probes

- The experimenters also added appropriate controls: other kinds of visual letter strings (non-words, unrelated words)
- During the experiment, the participants heard the sentence containing the ambiguous word *scale* and exactly at that point the probe appeared
- At this point they had to make the lexical decision task : word/non-word

- Reaction times for the decision tasks showed that participants were *faster* with probes related to **both** primary and secondary meanings
- This was true even though the sentences contained examples with biased meanings (with one meaning being more frequent and dominant as compared to the other)
- This result supported the **exhaustive access hypothesis**
- The effects of the context become useful *after* access

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- This time, however, half the probes were shown *immediately* after the ambiguous word
- The other half were shown 1.5 seconds after the ambiguous word
- If the probe was immediately shown, the pattern of the previous experiment was replicated (facilitation of both meanings)
- But if the probe was delayed, then only the contextually appropriate meaning was facilitated

- The experiments show that even low-frequency (rarer) meanings are accessed when a word is heard
- This is despite the fact that a contextual bias is present in the sentence
- It appears that when we access the meaning of the word, it is an automatic, somewhat autonomous process at first
- Later, the context's effects kick in

Summary

- The study of lexical access with respect to ambiguous words reveals that we retrieve meanings exhaustively
- Further, very quickly and unconsciously we then map the right meaning to the right (existing) context

References

- Accessing lexical ambiguities during sentence comprehension: Effects of frequency of meaning and contextual bias. Onifer and Swinney, 1981. Memory and Cognition