Novel Verbs: perceptual representations with new language comprehension

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Abstract Ideas

- Novel words used as adjectives with corresponding pictures.

- Test reaction time and matching/ correctness

- Kind-based system used and spatiotemporal was a key part

- Should respond faster to matching pictures/words

Past Studies

- Zwaan et. al 2004: Language comprehension does affect motion event visual representation

- ? Do novel words have the same affect?

- It is believed children focus on the kind (does the 'grouping' match) along with the motion affect
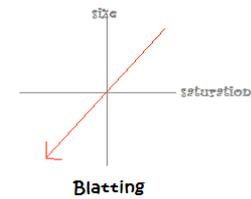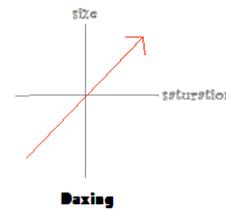
Kind/Object based work

- 12 months+ associate noun with kind and adjectives with perceptual (property)
- This tests mostly with object based because of spatiotemporal (from one point to another)

Warm-Up

- The participant was read sentences or shown pictures and with the experimenter teaching the novel words...

- Watched pictures move...either stay the same size, grow larger, or get smaller

What was used?

- He daxed the ball (meaning the ball would be larger because it grew larger and darker in color...coming towards the participant)

Sentences with Novel Adjectives

- "The spaceship was daxing as it flew."
- "As the truck drove, you could see it blatting."
- "The ball daxed when he threw it."
- "The ball blatted as he threw it."

- Had warm-up and test trials

Experiment Information

- Ages 4-5 using a computer
- Of 37 sentences in test trials, 15 daxed, 15 blatted, and 7 did nothing

- There was always a mask frame after the sentence was read and the first picture was shown (very short time)

Results

- **Average Reaction times (correctness in parentheses)**

- Daxing pictures (toward)
- Match 512 (.98)
- Mismatch 478 (.92)

- Blatting pictures
- Match 508 (.98)
- Mismatch 487 (.91)

- Responses below 1800 would be kept
- Reaction times should be faster and more accurate when pictures match (pictures did not always have to match because of the motion effect!)

- (all predicted results and outcomes)

Discussion/Ideas

- The warm-up trials were crucial (the participant needed to know the novel word but not too much as to test if not knowing the word would still lead to after motion effect)

- The match pictures should be much faster and more "correct" then the mismatch. However, the mismatch were good too because it showed that there was even more after effect present.

More Discussion…

- Spatiotemporal was a focus for the growing/shrinking from pt. To pt.
- It seemed as though kind played a part when another picture was shown IF it did not match the 'category' of the picture that matched the sentence (dog with spaceship vs. dog with cat)

Conclusion

- It is hard to narrow down the aspect of kind based vs. object based in this study.

- It is harder to tell transformations for young kids if they transform across two dimensions at the same time (not do and could lead to better results?)

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