Mark Van Selst

San Jose State University

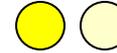# COGNITION

Symbolic Distance Effect
Semantic Congruity Effect

Fall 2012

Symbolic Distance Effect

Magnitude comparison effect:
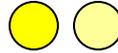
Which is more yellow?   Which is more yellow?

The SYMBOLIC DISTANCE EFFECT in cognition is essentially the *magnitude comparison effect* from perception but in cognition it is concepts of magnitude, rather than perceptual experience, that is being considered.

THE TASK:

1. present subjects the names of 2 things that have different values on some dimension
   - e.g., size, intelligence, time, space

2. vary the difference between the 2 values, from low to medium to high
   - e.g.,
     - animals that vary in SIZE
     - people who vary in INTELLIGENCE
     - historical events that vary in TIME
     - cities that vary in SPACE

3. subjects decide which of the 2 things is larger (smaller) on the dimension
4. press a button as quickly as possible indicate a response

SIZE: DOG vs. CAT   as compared to   DOG vs. Elephant
NORTHNESS: L.A. vs. San Francisco   as compared to   L.A. vs. SEATTLE
INTELLIGENCE: Obama vs. Romney   as compared to   Bush vs. Gore

Cognition   Van Selst (Kellogg Chapter 10)

Semantic Congruity Effect

Semantic: Of or relating to meaning, especially meaning in language.

Congruity: the state of being congruous (Corresponding in character or kind; appropriate or harmonious)

The **SEMANTIC CONGRUITY EFFECT** in cognition is like the semantic distance effect but rather than semantic distance being the important variable it is the "fit" of the to-be-judged dimension with the stimulus provided that is the important variable.

Illustration:

1. present subjects the names of 2 things that have different values on some dimension

    e.g.,   size, intelligence, time, space

2. vary the question asked of the 2 values, from one that is more appropriate to one that is less appropriate.

    e.g.,   for animal SIZE (which is SMALLER/MORE MASSIVE)

            For human intelligence (SMART/DUMB)

            For historical events (MORE RECENT/MORE ANCIENT)

            For geographic space (NEARER/FURTHER APART)

3. subjects decide which of the 2 things is the better exemplar

4. press a button as quickly as possible indicate a response

MASSIVENESS (SIZE):   FLEA vs. <u>MOUSE</u>   versus   **HIPPO vs. <u>ELEPHANT</u>**

TININESS (SIZE):   **<u>FLEA</u> vs. MOUSE**   versus   <u>HIPPO</u> vs. ELEPHANT

BOLD comparison is faster, <u>UNDERLINE</u> is the correct choice of the pairing

Cognition   Van Selst (Kellogg Chapter 10)

- Magnitude Comparison Effect
- Symbolic Distance Effect
- Semantic
- Congruency
- Semantic Congruency Effect

Copyright 2012 / Van Selst