

Phantom-Words with simultaneous visual presentation

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Abstract

Abstract (to be written)

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0.1 Methods

We randomly combined the 24 into two sets of 9 symbols each to generate two sets of 6 words and two associated phantom words. We thus used a total of 18 symbols to generate 12 words and 4 phantom words.

0.2 Familiarization

We then created familiarization scenes according to the four configurations shown in the Figure below. Each scene comprised two words generated from different phantom-words. With 6 words per set, 4 different configurations, and 2 “orders” of the words in the scenes, we obtain $6 \times 6 \times 4 \times 2 = 288$ scenes.

Compared to the horizontal orientation, vertical shape combinations were rotated by 90 degrees to the left when the vertical shape combinations appeared on the left (i.e., in Configurations 1 and 2), and by 90 degrees to the right when the vertical shape combinations appeared on the right (i.e., in Configurations 3 and 4). The shapes were not rotated.

0.3 Test

0.3.1 Word vs. Part-Word test

As shown in the Figure above, each configuration admits exactly one part-word. For example, in Configuration 1, the only part-word without a bend uses the two top-most symbols from the vertical word and the left-most symbol from the horizontal word.

We randomly selected 12 combinations of words of the two sets, which each word appearing equally often as the first or second word. We randomly paired these combinations with a configuration and generated the corresponding words and part-words. Each configuration was used equally often. As a result, each word occurred twice, and each part-word once.

Words and part-words were presented centered on the screen rather than in their original positions. The test items were presented one after the other. The order was randomly chosen; an equal number of trials started with words and part-words, respectively.

0.4 Word vs. Phantom-word test

In the Word vs Phantom-word test, we presented all words and their corresponding phantom-words. As a result, each word occurred once, and each phantom-word three times. Orientations are chosen randomly. Items occur one after another, with the order of items chosen randomly.

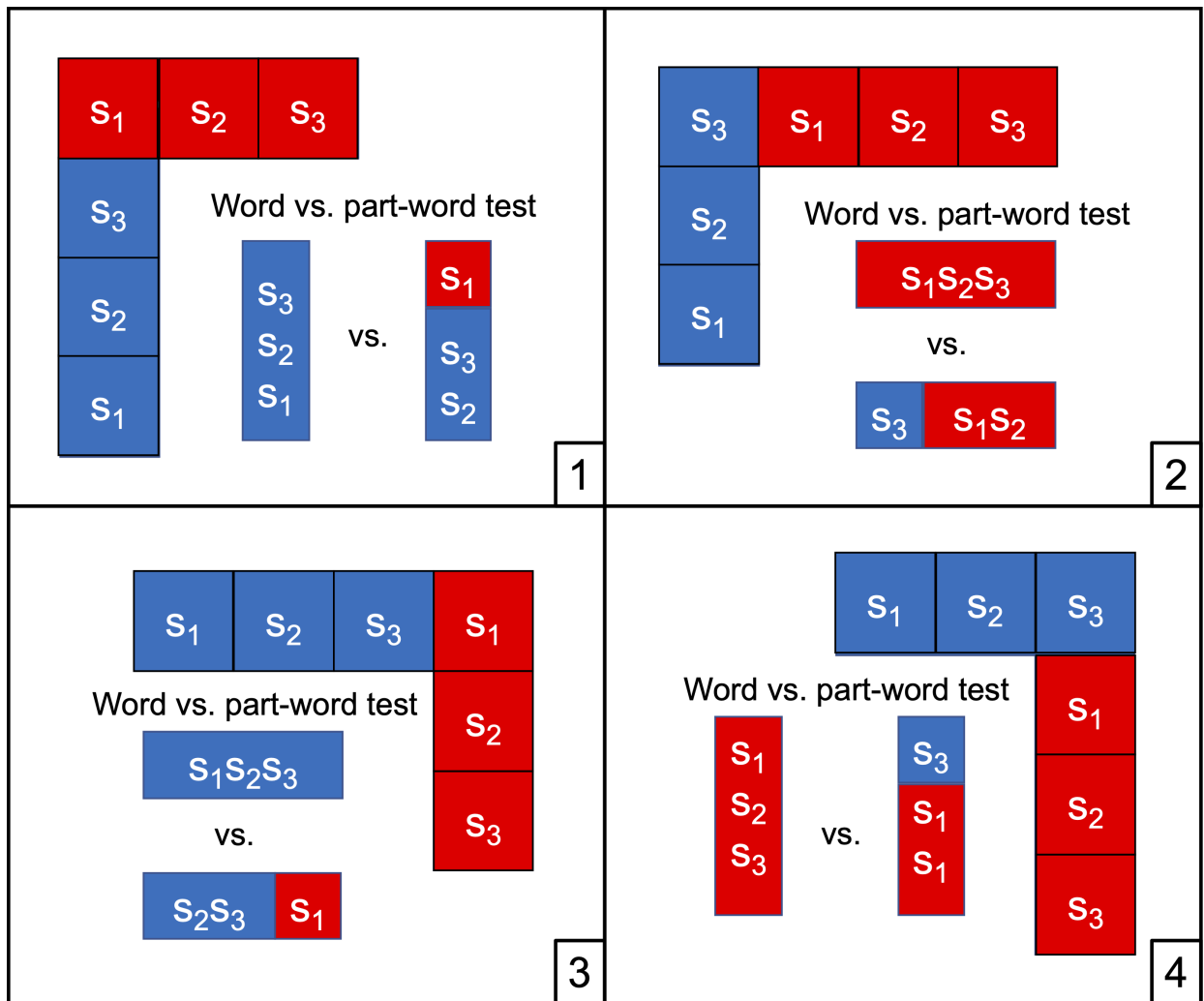


Figure 1: The basic configurations

0.5 Part-word vs. phantom-word test

In the Phantom-Word vs. part-word test, we reuse the same trials as in the Word vs. Part-Word test, except that words are replaced by the corresponding phantom-words. As a result, each phantom-word occurs 3 times, while each part-word occurs once. In line with Endress & Mehler's results, phantom-words are treated as legal items

0.6 Print testable files