JOURNAL OF VERBAL LEARNING AND VERBAL BEHAVIOR 7, 703–706 (1968)

SUPPLEMENTARY REPORTS

Recognition and Correct Responding Mediated by First Letter of Trigram Stimuli[1]

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Re-examination of previous research reveals that in paired-associate learning, the stimulus-recognition response requisite for association activation depends significantly upon the first letter of trigram stimuli, and that given stimulus recognition on this basis, appropriate associations are activated.

In a recent article (Martin, 1967a), evidence was presented that in the paired-associate situation correct responding is contingent upon stimulus recognition. Eight trigram-number pairs were practiced, via the study-test method, for 12 trials. On study trials, the eight pairs were presented aurally while *S* listened silently. On the alternating test trials, 24 trigrams were presented. Eight of these were the study-trial stimuli; the remaining 16 were filler trigrams that were new on every test trial. To each trigram, *S* first had to indicate whether or not he recognized it as a study-trial trigram; then he had to emit a number response, the first one that came to mind. The results, which were later replicated (Martin, 1967b), were that the probability of a correct response increased steadily over trials, but only on the condition of stimulus recognition; regardless of prior-trial correct responding, if a stimulus was not recognized the probability of a correct response fell to the level of chance.

Of interest here is the fact that *S*s made false recognitions; that is, there were numerous instances of erroneous assertions that a filler trigram was a study-trial stimulus. This type of recognition error had a probability of .33 in Test Trial 1 and declined regularly to .02 on Test Trial 12. At the suggestion of A. W. Melton (personal communication), the filler trigrams were examined for the extent to which they had first letters in common with study-trial trigrams. Out of the 16 filler trigrams, which were new on every test trial, an average of 5.4 of them had their first letter identical to a first letter of one of the study-trial trigrams. The remaining 10.6 trigrams had first letters that were different from any of the first letters of the study-trial trigrams. The proportion of false recognitions of these two classes of filler trigrams are shown as the lower two curves in Fig. 1. Collapsing over the 12 test trials,

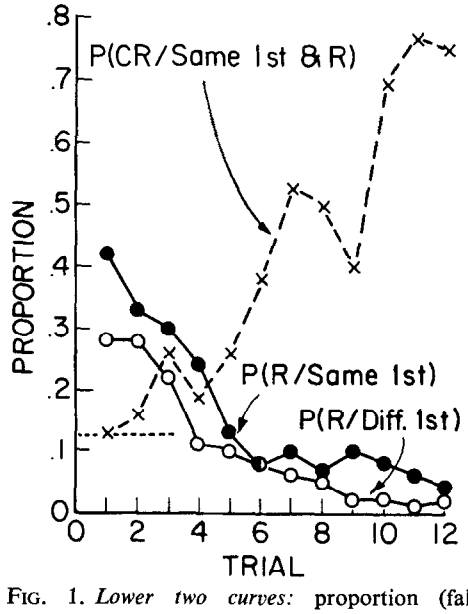

FIG. 1. *Lower two curves:* proportion (false) recognitions (R) given filler had Same or Different first letter as one of the study-trials stimuli, as a function of test-trial number. *Upper curve:* proportion "correct" responses (CR) given the filler had Same first letter and was (falsely) recognized (R).

those that had a first letter identical with the first letter of one of the study-trial stimuli were falsely recognized significantly more frequently than were

[1] This research was supported by the Advanced Research Projects Agency, Department of Defense, monitored by the Air Force Office of Scientific Research, under Contract No. AF 49(638)-1235 with the Human Performance Center, Department of Psychology.

those whose first letters were different, $z = 6.11$, $p < .001$. Considering trial blocks 1–4, 5–8, and 9–12 separately, the corresponding statistics are $z = 4.47$, $z = 1.63$, and $z = 5.46$, for which the following p values obtain: <.001, .10, and <.001. Thus it appears that the first letter of a trigram stimulus plays a significant role in stimulus recognition.[2]

Under the influence of the Postman-Greenbloom (1967) finding, the responses to falsely recognized fillers that had their first letters identical to a first letter of one of the study-trial trigrams were examined. A response to such a filler trigram was called correct if it was the response that went with the corresponding study-trial stimulus. In other words, if the filler trigram RZQ was falsely recognized, presumably confused with the study-trial stimulus of the pair RXL-6, and if *S* emitted the response "6" to RZQ, then "6" was called correct. The proportion "correct" responses, as just defined, are shown as the upper curve in Fig. 1. Although false recognition of fillers declines with practice, the efficacy of the first letter (so long as that first letter is one that also occurs as a first letter of a study-trial trigram) as an elicitor of the "correct" response increases regularly. The learning curve of Fig. 1 is very much like the learning curve of Fig. 2 in Martin (1967a): both begin at the chance level, .125, and rise in a comparable, orderly fashion.

The point of this supplementary report is that first letters are significant cues for stimulus recognition and, given stimulus recognition, can accurately activate appropriate associations.

[2] Although trigram meaningfulness (M) was a stimulus variable in this experiment, false recognitions were not affected by M. Hence all results of this supplementary analysis involve collapsing on M.

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(Received May 17, 1967)

The Prediction of Children's Narrative and Directive Language

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The supposed singularity or familiarity of the language of nursery-school children was assessed by a word-prediction technique. Twenty-one adults, representing 3 levels of experience with children, responded to 100 short phrases. The test items included narrative and directive messages constructed with both correct and erroneous syntax. As hypothesized, correct response scores were significantly higher for correct syntax and directive material. A significant interaction indicated that narrative phrases had greater survival under conditions of error syntax. The predictability of narrative and directive phrases parallel findings of previous research on adult printed language of the same type and length.

Previous research from the standpoint of the "encoder" has shown that the child's syntax is truly unique (Menyuk, 1964a). From the "decoding" standpoint, the same investigator found that four- and five-year-old children could evaluate spoken sentences and correct those containing common restricted forms. The present study determined how accurate adults are at reconstructing children's utterances. The study also considered whether the amount of exposure to children would alter performance.

Method. The stimulus material for this experiment consisted of 100 short phrases culled from the taped responses to verbal tasks of ten children, ages 4 years, 3 months to 5 years, 6 months. These tasks elicited narrative and directive messages, constructed with either erroneous or correct syntax. Examples of the four classes of utterance are the following: "draw a line around it" (Directive-correct); "you supposed to make" (Directive-error); "in the prickly stuff" (Narrative-correct); "holded the door open" (Narrative-error). The three groups of adults were seven teachers, seven parents, and seven other adults who