Semantic satiation and word association¹

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Forty Ss gave word associations to 12 common English words after undergoing a semantic satiation treatment for six of the words. For half the Ss the satiation treatment was of the stimulus material in the word association test while half were satiated for responses (the most common word association to items on the list underwent satiation treatment.) Satiation treatment retarded association speed when stimuli were satiated but had a tendency to facilitate association speed when response satiation was attempted.

As early as 1919 Basette and Warne reported lapses of meaning following verbal repetition. Lambert & Jakobovits (1960) showed a decrease in meaning on Osgood's semantic differential following satiation treatment. Smith & Raygor (1956) reported that following semantic satiation treatment word associations to satiated words tended to be less common than those to untreated words. The present study can be considered an extension of this latter study although not concerned with personality factors.

In the present study word association was employed to compare the effects of satiation of stimulus words which had a highly popular response to the effects of satiation of stimulus words that lacked such a popular response. Further in Condition 2 employing two other groups, the most common associates of both high and low stimulus words were satiated. It was anticipated that semantic satiation would reduce word meaning and make associations less available. In Condition 2 it was expected that satiating associations would have primary effect in the condition where words had a single common association. It was anticipated that satiated words having been reduced in meaning would be less available as associations and with low commonality words the probability of satiating the S's first associate would be small as compared to words with a single high common associate.

Method

Twelve words, six with high common associations—a single association with a frequency greater than 600/1000, and six with low common associations—no single association with a frequency greater than 400/1000, were chosen from the college norms on the list provided by Palermo & Jenkins (1964). Twenty volunteers from New College's student body were assigned at random to each condition. In Condition 1 S was given printed on separate index cards three high words and three low words from the list one at a time following the satiation treatment of Lambert & Jakobovits (1960) of having S repeat the word for 15 sec. (all possible combinations of three high and

three low words were used over all Ss). After a 10 sec. break, he repeated the next word until all six presented in random order had been exposed and satiated. In Condition 2 the procedure was the same except that for each of the six words the most common associate from the list of Palermo and Jenkins was satiated rather than the word itself. Thus, for example, the most common associate to "dogs" is "cats." Therefore in Condition 1 the word "dogs" would be satiated while in Condition 2 "cats" would be satiated.

In both conditions following satiation treatment a standard word association test was given with the words exposed visually by a Carousel projector and employing a voice key to measure association speed. Three practice words preceded all 12 selected words with each S serving as his own control since he was satiated for six of the words and not for six others matched for commonality of association.

Results

In Condition 1 a t-test for correlated variables between association speed for satiated and untreated words showed a significant treatment effect ($t=2.29$, $df=19$, $p<.025$, one-tailed). Considering the high and low words separately, there was a significant effect; $p<.05$ in the low group, but the difference in the high group, while in the expected direction, fell short of statistical significance, $.10 < p < .20$.

In Condition 2 effects of satiation treatment had opposite effects on high and low words but neither effect was large or statistically significant. Further examination of the data indicated that for the low words association speed was slightly though not significantly quicker when S gave the satiated response as his association than when he did not. Also for the low association words the satiated associate occurred significantly more frequently than it did when not satiated ($\text{Chi-square}=5.83$, $p<.02$).

Discussion

The results of our study do indicate an effect of semantic satiation on immediacy of availability of responses in word association. The semantic satiation treatment seems to have two effects, as reported by our Ss. One is to make the first connection to a word, the word itself (an S-S association) with a very high degree of probability. Thus in a S who had "dogs" satiated the first response likely to come to mind is "dogs." Since this is unacceptable (S is told to give a different word) it takes him a little longer to think of an associate for a satiated word than for an unsatiated word. The second effect is to produce a change in meaning by altering at least

a word's pronunciability and perhaps its perceived form. The failure to obtain significant differences with respect to Condition 2 while obtaining significance in Condition 1 may be interpreted as an indication that effect 1, increasing probability of an S-S association, is the more powerful effect by a large margin.

References

- Basette, M. F., & Warne, C. J. On the lapse of verbal meaning with repetition. *Amer. J. Psychol.*, 1919, 30, 415-418.
- Lambert, W. E., & Jakobovits, L. A. Verbal satiation and changes in the intensity of meaning. *J. exp. Psychol.*, 1960, 60, 376-383.
- Palermo, D. S., & Jenkins, J. J. *Word association norms*. Minneapolis: University of Minnesota Press, 1964.
- Smith, D. E. P., & Raygor, A. L. Verbal satiation and personality. *J. abnorm. soc. Psychol.*, 1956, 52, 323-326.

Note

1. This research was supported by an Academic Year Extension grant under the National Science Foundation Program for Research Participation by College Teachers. I would like to thank Dr. Arthur Melton for his sponsorship.