Verbal satiation??¹

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Abstract

A 15 sec. verbal-repetition treatment failed to produce semantic (verbal) satiation in the present study. The experimental design employed in this study was such that it precluded confounding from possible regression effects.

Introduction

Yelen & Schulz (1963) failed to find evidence for semantic satiation in three experiments even though they used procedures similar to those employed by Lambert & Jakobovits (1960) in their successful demonstrations of satiation. Close examination of the data from these experiments revealed that some word-scale combinations exhibited "satiation" while others showed an opposite trend toward "generation" (an increase in mean scale-position following repetition). "Satiation" seemed to occur with word-scale combinations for which initial mean ratings were relatively extreme (near one on seven-point scales) while "generation" appeared to be characteristic of combinations with relatively neutral (near four) initial ratings. A fourth experiment explicitly confirmed the foregoing in that both "satiation" and "generation" were reliably demonstrated to result from a 15 sec. repetition treatment when two sets of appropriately pre-selected word-scale combinations were considered separately.

The results of these experiments prompted Yelen and Schulz to suggest the possibility that the use of the difference between pre- and post-treatment ratings as a basis for inferring the presence of satiation may, at least under certain conditions, be unsatisfactory because this difference could be confounded with regression effects. Namely, "...repetition in some way interferes with S's recall of his initial ratings or disposes S to believe that he is to change his initial ratings.... Hence, if S's initial rating was relatively intense, then there is a greater probability that his second rating will be less so. Analogously, if his initial rating is relatively neutral, the likelihood is increased that his second rating will be more intense (1963, p. 377)." The present experiment was designed to test further this regression-hypothesis.

In the present study, using the same word-scale combinations previously demonstrated to produce reliable "satiation" and "generation" effects in terms of pre- post-treatment rating differences, a so-called "posttest only" design (Cf., Campbell, 1957) was employed. With this type of design, Ss do not make pre-treatment ratings, only post-treatment ratings are obtained and regression effects cannot influence the results. Therefore, a failure to observe evidence for either "satiation" or "generation" in the present study would support the regression hypothesis.

Method

Sixty University of Iowa undergraduates served as Ss. Thirty were randomly assigned to the repetition condition and the remaining 30 Ss served under the control condition. The materials were the same as the ones employed by Yelen & Schulz (1963, Exp. IV). Briefly, these consisted of the five words used by Lambert & Jakobovits (1960) and six semantic scales, three designated "satiation" scales and three designated "generation" scales by virtue of the results Yelen and Schulz obtained with them in their Exps. II and III.

The procedures were also a replication of those employed by Yelen and Schulz in the unlabelled conditions of their Exp. IV with, of course, the important exception that no pre-treatment ratings were obtained. Only one rating, a post-treatment rating, was obtained for each word-scale combination. The words and scales, typed on 3 x 5 in cards, were exposed to S manually in clear plastic holders. Under repetition conditions, a word was exposed and S repeated the word aloud as fast as he could for 15 sec. At the end of the repetition interval a scale was exposed and S, using a wooden pointer, indicated his rating to E. After recording S's rating, E exposed the next word. This cycle was repeated until S had rated each of the five words on all six scales. Control Ss said each word once as it was exposed, and then rated it 15 sec. later. Order of presentation for the 30 word-scale combinations was random. The treatments were administered to the Ss individually.

Results and Discussion

The means of the ratings (per word-scale combination) and their standard deviations are shown in Table 1 as a function of the type of scale and treatment. As can be seen from Table 1, the means for "generation" scales under repetition and control conditions are nearly identical. In the case of the "satiation" scales, there is trend toward satiation with the mean of the ratings obtained under the repetition condition being greater than the one observed under control conditions. This trend is, however, easily within the limits of trends to be expected by chance ($t=1.03$; $p>.20$).

In an unpublished critique by Lambert and Jakobovits of Yelen and Schulz's paper (Cf., Amster, 1964) these

Table 1. Means and SDs of Semantic Differential Ratings under Repetition and Control Conditions

Type of Scale	Repetition		Control	
	Mean	SD	Mean	SD
"Satiation"	2.59	0.69	2.43	0.56
"Generation"	3.44	0.79	3.46	0.69

Table 2. Means and SDs of Semantic Differential Polarity Scores under Repetition and Control Conditions

Type of Scale	Repetition		Control	
	Mean	SD	Mean	SD
"Satiation"	1.697*	0.45	1.700	0.46
"Generation"	1.360	0.38	1.389	0.55

* Maximum polarization is represented by a score of 3, minimum polarization by a score of 0.

investigators have objected to the use of mean ratings as a measure of satiation. They favor the use of mean polarity scores. Hence, to preclude the possibility that the present results will be discounted because they are reported in terms of mean ratings, each S's ratings were transformed into polarity scores. The means and standard deviations of these scores are reported in Table 2. It is clearly evident from Table 2 that the conclusions based on mean ratings do not require qualification. Indeed, if anything, the evidence that the repetition treatment had no effect on S's ratings is even more compelling with mean polarity scores than it was with the mean ratings, the means for "satiation" scales as well as those for "generation" scales are virtually identical under control and repetition conditions.

In conclusion, the results of the present investigation are quite evidently in accord with the regression-hypothesis and fail to agree with Lambert & Jakobovits' (1960) postulation that repetition generates an I_T -like

inhibition of connotative meaning—semantic satiation. However, it should also be pointed out that the present results, as well as those obtained previously, do not necessarily imply that there is no such phenomenon as verbal or semantic satiation. That is, the present hypothesis is obviously quite incapable of encompassing numerous other results which support the hypothesis that verbal repetition does, indeed, produce satiation of meaning (e. g., Jakobovits & Lambert, 1962; Fillenbaum, 1963). Instead, the implication is that the pre- post semantic-rating technique may not be a satisfactory method for assessing the effects on connotative meaning that may result from verbal repetition because of possible confounding due to regression effects.

References

- AMSTER, H. Semantic satiation and generation: Learning? Adaptation? Psychol. Bull., 1964, 62, 273-286.
- CAMPBELL, D. T. Factors relevant to the validity of experiments in social settings. Psychol. Bull., 1957, 54, 297-312.
- FILLENBAUM, S. Verbal satiation and changes in meaning of related items. J. verbal Learn. verbal Behav., 1963, 2, 263-271.
- JAKOBOVITS, L. A., & LAMBERT, W. E. Mediated satiation in verbal transfer. J. exp. Psychol., 1962, 64, 346-351.
- LAMBERT, W. E., & JAKOBOVITS, L. A. Verbal satiation and changes in the intensity of meaning. J. exp. Psychol., 1960, 60, 376-383.
- YELEN, D. R., & SCHULZ, R. W. Verbal satiation? J. verbal Learn. verbal Behav., 1963, 1, 372-377.

Notes

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