

Memory for product names: The generation effect

CHARLES P. THOMPSON and CAMILIA BARNETT
Kansas State University, Manhattan, Kansas 66506

Two studies were performed using ads constructed so that a listener would tend to generate the product name once during the ad. Under conditions approximating normal listening conditions, product names from ads in which the listener sometimes generated the product name were recalled better than product names from ads in which these names were always provided by the ad. These results are consistent with other research demonstrating that subject-generated items are better recalled than experimenter-provided items. We know that some advertisers use rather clever procedures to get the consumer to produce the product name. These data suggest that those techniques are effective.

One of the goals of an advertising campaign for a new product is to insure that the product name is remembered by the consumer. To accomplish this goal, effective advertising uses a number of techniques to entice the potential consumer to attend to the ad in general and to the product name in particular.

Once the consumer has been persuaded to attend to the ad, memory for the product name depends on a number of factors. One of the most important factors is simply repetition. The effects of spacing of ads (e.g., Zielske, 1959), number of repetitions of ads (e.g., Ostheimer, 1970; Strong, 1977), and the effects of too many repetitions (i.e., ad wear-out; e.g., see Grass & Wallace, 1969) have been well documented in advertising research. In this paper, we wish to point out another repetition effect that occasionally occurs in advertising but has not been the subject of published advertising research.

The repetition effect to which we refer has been dubbed the generation effect (Slamecka & Graf, 1978). The general finding in list-learning studies has been that subject-generated items are remembered better than experimenter-presented items. This is true even when the task demands are such that the subject is forced to generate exactly the same items provided by the experimenter in a control condition. In the context of advertising, the generation effect would be identified as an advantage for recall following consumer-produced repetition of the product name as opposed to recall following sponsor-produced repetition of the product name. We believe that there are at least two types of ads in which the generation effect probably occurs. The first is the catchy jingle that is repeated a couple of times and then ends abruptly just before the last repetition of the product name. The urge to complete the jingle and, thus, to generate the product name, is almost irresistible. The second is the ad with the friendly but bumbling salesman (or woman) who, at the end of the ad, urges us to be sure to "buy Heever Clooners—

uh, I mean Hoover Cleaners. . . ." Once again, the urge to immediately correct the spoonerism, and, hence, to generate the product name, is extremely strong.

The present experiments compare ads using multiple within-ad product name repetitions with ads in which generation by the participant is substituted for one of the repetitions. As will be seen, participant generation produces memory for the product name that is at least as good as, and sometimes better than, the memory produced by an extra repetition.

EXPERIMENT 1

We began by using conditions that we thought would produce a maximum generation effect. The ads were simulated radio ads, and the conditions differed from those under which individuals might listen to radio ads in three important respects. First, everyone was required to listen to the ads. However, while it is important to recognize that this requirement will inflate our retention measure (relative to retention for actual ads), the inflation should be a constant factor over all conditions and pose no problem for interpreting the results. Second, participants in one condition were required to generate the missing product name. While that requirement should produce a maximum generation effect, it probably also would produce a generation effect greater than would be found in a natural situation. Third, all participants were informed that they would later be tested for recall of the ads. Once again, such information should inflate recall performance but should do so approximately equally for all conditions.

Method

Subjects. A total of 40 undergraduates enrolled at Kansas State University participated in the experiment. The 20 subjects in each condition were tested in a single group session. All of the subjects were informed at the outset that they would be listening to a series of commercials and that they would be

asked to recall the product names at the conclusion of the session.

Material and Procedures. Subjects in both conditions were presented 16 bogus advertisements via tape recorder. The advertisements were between 60 and 85 words in length and lasted approximately 25 sec. The advertisements simulated a radio commercial for a common product (e.g., a car, soap) and a fictitious product name (Aztec, Speckels) was associated with each.

The critical distinction between the two conditions was the manner in which the product names were presented. In the standard condition, the subjects heard each product name three times during the commercial: once in the beginning, once in the middle, and once at the end of the last line. A 10-sec delay occurred between advertisements. In the generate condition, the subjects heard each product name two times during the commercial: once in the beginning and once in the middle. In contrast to the standard condition, the product name was omitted during the last line of each advertisement. During the 10-sec delay following each commercial, the subjects in the generate condition were instructed to write down the product name in a test booklet. A separate page was provided for each product name.

Following the 16 commercial presentations, the subjects in both conditions were instructed to count backward by threes from a given three-digit number for 30 sec to minimize short-term memory effects. During this period, the experimenter collected the test booklets of subjects in the generate condition. All of the subjects were given a blank sheet of paper at this time. The subjects were then informed that they would have 5 min to write down, in any order, all of the product names that they could recall. At the end of this period, the experimenter collected the free recall responses. Finally, the subjects were given a sheet of paper that listed the product types and subjects were instructed to attempt to recall the specific product name associated with each. The experimenter then collected the cued recall response sheets.

Results and Discussion

The number of product names correctly recalled was tabulated for each subject in each condition. The mean number correctly recalled for each condition is presented in Table 1. Separate analyses of variance were performed on the data for cued and free recall.

Given that the conditions had been designed to maximize any generation effect, the results were somewhat surprising. As can be seen in Table 1, the mean number of product names recalled was only slightly higher for the generation condition than for the standard condition, and that was true in both the cued and free recall measures. In fact, an analysis of variance performed on these data showed that the slight numerical advantage of the generation condition was not statistically significant [$F(1,38) < 2$ for both analyses].

EXPERIMENT 2

Under the conditions of the first experiment, generating the product name was essentially equivalent to presenting the product name. It seemed likely, however, that under a set of more realistic conditions, the generate condition might prove to be inferior to the presentation condition. More specifically, generation might be inferior when the participants were not

Table 1
Mean Number of Product Names Correctly Recalled in Free and Cued Recall for Each Condition

Recall	Standard	Generation
Free	8.6	8.7
Cued	10.3	11.4

informed about recall and were not required to generate the product name. The second experiment was designed to test that possibility.

Method

Subjects. A total of 100 undergraduates at Kansas State University participated in the experiment. The 20 subjects in each condition were tested in a single group session.

Materials. The materials were identical to those used in Experiment 1, except that the product name repetition in the middle of the ad was replaced by a neutral word such as "it."

Experimental design. Twenty subjects were tested under each of five conditions. Two conditions were identical to the two conditions in the initial experiment, with the single exception that a 15-min interpolated task (answering questions on TV viewing habits) was substituted for the 30-sec counting-backward task. As before, the interpolated task was intended to prevent rehearsal and minimize recall from short-term memory. The two replicated conditions were designated as the standard-informed and generation-informed conditions. Two additional conditions differed from the first two conditions only in that the subjects were not informed that they were to be tested for recall of the product names. These were designated as the standard-uninformed and generation-uninformed conditions. Finally, the implicit generation-uninformed condition differed from the generation-uninformed condition only in that subjects were not required to write down (or to generate) the omitted repetition of the product name.

Procedure. The procedure was identical to that used in Experiment 1, with the exception of the modifications indicated in the experimental design.

Results and Discussion

As before, the number of product names correctly recalled was tabulated for each subject in each condition. The mean number correctly recalled for each condition is presented in Table 2. Again, separate analyses were performed on the data for cued and free recall. These analyses demonstrated reliable differences among the conditions for both free [$F(4,95) = 18.75$, $MSe = 6.28$] and cued [$F(4,95) = 25.59$, $MSe = 7.17$]

Table 2
Mean Number of Product Names Correctly Recalled in Free and Cued Recall for Each Condition

	Recall	
	Free	Cued
Standard Uninformed	2.6	5.2 ^b
Implicit Generation Uninformed	4.7	6.1 ^b
Generation Uninformed	7.4 ^a	11.3 ^b
Standard Informed	7.3 ^a	10.2 ^c
Generation Informed	8.6 ^a	11.6 ^c

Note—Means that do not differ reliably have common superscripts.

recall. A Newman-Keuls test performed on the means is also summarized in Table 2.

As can be seen, the results of Experiment 1 were replicated in the comparable conditions of Experiment 2. That is, for both free and cued recall, the generation-informed condition was numerically, but not statistically, superior to the standard informed condition.

More important (and contrary to our prediction), the generation effect occurred under conditions more nearly approximating those under which individuals listen to radio ads. The generation effect differed for the free and cued recall tests, however. That is, while both generation (uninformed) conditions were reliably superior to the standard-uninformed condition in the free recall test, only the generation-uninformed condition was superior to the standard-uninformed condition in the cued recall test.

The practical implications of these experiments for advertising are quite straightforward. In all conditions in both experiments, the generation condition was always numerically superior to the standard condition. One can reasonably assume, therefore, that an ad inducing consumer generation of the product name would

(other factors, of course, being equal) be at least as good as an ad simply repeating the product name. More important, under some of the most realistic conditions, the generation condition was reliably superior to the standard condition in producing recall of the product name. In short, these data strongly suggest that ads inducing the consumer to generate the product name should be very effective in promoting product-name recall.

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