

EFFECTS OF MERE EXPOSURE:

A COMMENT

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Zajonc's thesis that "mere exposure" enhances attitudes is both novel and intriguing. In its general form, this hypothesis seems to challenge the time-honored maxim of *Familiarity breeds contempt*, and rejects the traditional reinforcement theory whereby positive adient responses are established through conditioning and association. Zajonc presents two main lines of evidence in support of his hypothesis; one relates to the observation of an empirical correlation between the frequency of words in language and their positive affect; the other consists of data on the effect upon positive or negative affect of experimental manipulation of stimulus exposure. Let us see how this evidence bears upon Zajonc's hypothesis.

ATTITUDE ENHANCEMENT VERSUS THE POLLYANA HYPOTHESIS

The argument that "good words" outnumber "bad words" in everyday language is entirely convincing. Zajonc's data on the relation between word frequency in English and judgments of liking and favorableness is corroborated by our own cross-cultural work in some 20 language/culture communities around the world (see Osgood, 1964; Jakobovits, 1966). Evaluative judgments of monolingual subjects using indigenous forms of the semantic differential on some 500 translated-equivalent concepts show that the "E+ octants" (i.e., words given a rating on the "good" side of the Evaluative factor) are more dense than the "E- octants" by a factor of better than 4 to 1. The question that immediately poses itself is, of course, what is the reason for this universal preference for "good" words? Zajonc's hypothesis implies one reason: familiar words are more liked than unfamiliar words simply because we are exposed to them more often. There are two lines of argumentation that can be

offered against this view. First, if one looks at the antonymic pairs of words given in Zajonc's tables, the member of the pair that consistently receives higher values of frequency of occurrence almost always refers to an object, quality, or event that is intrinsically more valuable to man than its antonym (e.g., able, better, pure, smile, love, success, wealth, etc., versus unable, worse, impure, frown, hate, failure, poverty). So, the original question is thrown back to an earlier one, namely, why should humans choose to talk more often about "good things" as opposed to "bad things?" This latter question takes logical precedence over the earlier one of why high-frequency words are evaluated more positively than low-frequency words. The second line of argumentation relates to our finding with the cross-cultural data that "P+" words (i.e., on the Potency factor: "potent, strong") and "A+" words (i.e., on the Activity factor: "active, fast") outnumber "P-" and "A-" words by ratios of almost 5:1 and 2:1, respectively (Jakobovits, 1967).¹ In other words, there is a universal predilection in human societies generally for structuring the conceptual world as more "good, strong, and active" than "bad, weak, and passive." Osgood (1964) has referred to this world view as the "Pollyana hypothesis." Thus, Zajonc's data showing a preference for the higher use of "good" words must be viewed within a more general psycholinguistic context, namely the tendency on the part of human speakers to structure their world in a particular way. While we cannot offer, at the present time, an adequate explanation for this

¹ The data in Zajonc's Table 4 give the impression that P- and A- words are, on the whole, equally frequent to their P+ and A+ antonyms. While this appears to be the case for 10 of the 23 pairs presented, our extensive data on 500 concepts in 20 languages show that P+ and A+ words by far outnumber the P- and A- words.

human tendency, the account that will eventually be satisfactory will have to be more general than a "mere exposure" hypothesis restricted to positive evaluation or attitude enhancement.

This reinterpretation of the frequency-goodness correlation makes the assumption that the causal relation rests at the referential level: people structure their world in a fashion consonant with their need system, and this subjectivity is reflected in their speech. Zajonc's interpretation views the cause-effect relation in the opposite way: because of higher frequency of exposure, certain words develop higher goodness values. While this may indeed be the case in certain instances (e.g., on versus off, in versus out), it seems far fetched in the majority of instances, as has just been pointed out (love versus hate, success versus failure, etc.).

EXPERIMENTAL MANIPULATION OF EXPOSURE: GENERATION OR SATIATION?

Zajonc recognized that the frequency-value correlation does not constitute sufficient evidence for the causal relation between "mere exposure" and attitude enhancement. He therefore set out to demonstrate the causal relation by carrying out three experiments in which various stimuli (nonsense, paralog, Chinese-type nonsense characters, and photographs of faces) were presented in counter-balanced order to subjects a different number of times (usually varying between 0 and 25), and then rated on a scale of liking or favorableness (usually the "good-bad" scale of the semantic differential). The results showing changes in affect as a consequence of "mere exposure" are entirely convincing. What is less certain is the nature of the change. In Experiments I and II, as shown in his Figure 2, Zajonc used the "good-bad" semantic differential scale labelled from 0 (i.e., "extremely bad") to 6 (i.e., "extremely good") with 3 being the neutral point (i.e., "equally good and bad" or "neither"). The results show that the stimuli received a rating of about 2.6 (i.e., "slightly bad") with zero exposure value, then gradually decreased in "badness" with exposures of 1, 2, 5, and 10, and finally improved in "goodness" with 25 exposures (with a value of around 3.6, i.e., "slightly

good"). In terms of polarity, with 3 as the zero point on the scale, these changes indicate first a decrease then an increase as a function of frequency of exposure. The results of Experiment III, as summarized in his Figure 5, show a highly similar pattern. How are we to reconcile these results with the original hypothesis that mere exposure enhances attitude? We seem to be confronted here with a curious theoretical problem: does mere exposure enhance positive evaluation or does it mitigate negative evaluation? To take but one concrete example, is a "small tooth ache" *more good* than a "big tooth ache," or is it simply *less bad*? Theoretically, the two alternatives are distinguishable and the type of explanation invoked in the two cases can be quite different. Thus, a decrease in the "badness" of a stimulus as a result of its repeated exposure is variously explainable in terms of adaptation, semantic satiation, or extinction, whereas an increase in the "goodness" of a stimulus as a result of its repeated presentation is variously explainable in terms of potentiation or priming, semantic generation, or simply "mere exposure." Empirically, the question can be resolved by using two unipolar scales instead of the bipolar "good-bad" scale, and comparing the changes in the evaluation of stimuli under the same conditions of exposure. If the two sets of ratings are essentially independent, then Zajonc's hypothesis is incomplete, since mere exposure causes both a decrease in negative evaluation as well as an increase in positive evaluation (as attested by his data). If the two sets of ratings are essentially equivalent, then Zajonc's hypothesis can perhaps profitably be restated, for clarity sake, to include the notion of "mitigation of unfavorable attitude" as well as "enhancement of positive attitude."

These considerations lead to yet another conceptual difficulty. In its present form, the hypothesis implies that if a stimulus is initially "good," it will become even better under conditions of mere exposure. None of the evidence presented by Zajonc is directly relevant to this prediction since, as it has already been pointed out, all of his experimental stimuli initially received "bad" ratings. It is this aspect of the hypothesis that Zajonc apparently feels is contradictory to semantic sati-

ation theory. The latter would indeed predict that initially "good" stimuli should get "less good" with repeated exposure. The existing evidence on words as stimuli favors the semantic satiation theory (see Amster, 1964), although it must be pointed out that the usual conditions of verbal repetition in the satiation experiments are of a different order and type than the ones envisaged by Zajonc under his "mere exposure" hypothesis—an observation already made by Zajonc in his paper. It might be worthwhile to note that in one experiment by the present writer, reported in Jakobovits and Lambert (1964), the conditions of stimulus exposure more nearly approximate those used by Zajonc. Objects, their photographs, and their labels were separately exposed for a series of six 15-second periods to independent groups of subjects. Although the ratings reported were in terms of polarity scores over a set of scales including the potency and activity factors as well as the evaluation factor, the results for the object-stimuli are consonant with an attitude enhancement hypothesis. On the other hand, the results for the photographs and words as stimuli are more consonant with semantic satiation theory. Jakobovits and Lambert offered a tentative hypothesis for the resolution of this problem in terms of stimulus characteristics, but there would be no advantage in presenting it again here.

CONCLUSION

A cautious appraisal of the hypothesis proposed by Zajonc in his monograph must leave its status as uncertain. The evidence on the

value-frequency relation of words in language is interpretable in terms of a more general psycholinguistic principle. The set of studies on aesthetic appreciation cited in support of the hypothesis involve conditions of exposure too complex to be of conclusive value to a "mere exposure" hypothesis—as pointed out by Zajonc himself. With respect to the experimental evidence, one aspect of the hypothesis is supported, namely the decrease in "badness" of initially "bad" stimuli and their subsequent increase in goodness with further exposure. The fate of initially good stimuli remains to be determined. Despite these difficulties, Zajonc's hypothesis represents a challenging view and, in the opinion of this critic, is likely to stimulate a novel form of experimentation in research on both attitudes and meaning.

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