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MERE EXPOSURE **A Review of Theory & Research**

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ABSTRACT

This article is aiming to present overall results of three decades of study on the mere exposure phenomenon with differing and sometimes competing explanations about the sources of effects. Although mere exposure research originated from social psychology, it has several implications in communication. Another goal is to provide some implications in the persuasive communication. The literature review part of the article indicates several important experiments in great detail. This part summarizes the results of the selected studies including procedures and measures taken. The next two parts of the article demonstrate the different effects of repeated exposure to a stimulus and different theoretical explanations of the mere exposure. Besides, the sources of mere exposure effect caused several debates among researchers. At least two school of thoughts (affectivist vs. cognitivist) are still debating over the issue. Fifth part of the article mentions this debate and presents the counterviews. There is also practical implementations of the mere exposure is explained in the article.

INTRODUCTION

Most of us have experienced the changing evaluations that result from repeated exposures. Something that is initially unfamiliar and disliked comes to be liked or preferred after repeated exposures. For instance, the taste of an alcoholic beverage, bitter and repugnant at first, became not only tolerable, but increasingly pleasant after sufficient trials.

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Repeated exposure makes words more positive, food more appetizing, strangers more acceptable. The attraction between two people or two animals can be increased by repeated exposure.

However, exposure is not a prerequisite for attraction and attachment to occur. There are many other effective psychological processes, but "exposure itself, under certain conditions, is enough to increase attraction" (1).

The hypothesizing of mere exposure effects was first proposed by Zajonc (2). He presented evidence that mere repeated exposure to a previously unfamiliar stimulus was sufficient to enhance the affective evaluation of that stimulus. Empirically, mere exposure refers to a positive repetition-affect relationship that results from exposure alone. It is assumed that familiarization by repeated exposures will enhance liking. According to Sawyer mere exposure theory hypothesizes that "familiar objects and people are more liked than less familiar ones, and that by merely being repetitively exposed, something initially unfamiliar will be looked upon more favorably (3)". Zajonc defines mere exposure as "it is meant a condition which just makes the given stimulus accessible to the individual's perception (4)".

The question "why does repeated exposure increase the attractiveness of an object?" is answered by Harrison as:

"Consider something a person encounters for the first time: obviously he has no ready to response it. But in some ways this new object will be similar to others that he has encountered in the past; the word or face may be unfamiliar, he has certainly seen words and faces before. Generalizing from experience, the person will want to respond to the stimulus in several different ways. Some of these response tendencies may be incompatible and the individual will feel mild stress. Since this stress is associated with the unfamiliar object, the person is not likely to consider the object attractive. But as the stimulus is exposed

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- 1 R. B. Zajonc (1970, February). "Brainwash: Familiarity Breeds Comfort". **Psychology Today**. p. 32-35 & p. 60-62
 - 2 R.B. Zajonc (1968). "Attitudinal Effects of Mere Exposure". **Journal of Personality and Social Psychology**. 9 (2), p.1-27.
 - 3 A.G. Sawyer (1981). "Repetition, Cognitive Responses in Persuasion". Ed: R. R. Petty, T. M. Ostrom, & T. C. Brocks. **Cognitive Responses in Persuasion**. Hillsdale, NJ.: Lawrence Erlbaum, p.238.
 - 4 R.B. Zajonc (1968). **op.cit.**, p.641.

more, it becomes more familiar; the incompatible responses drop out and the person establishes a stable way of responding. The initial stress and discomfort are reduced greatly and the object becomes more attractive (5)".

There are also limitations of this response competition base explanation and also of mere exposure. In the original study, Zajonc assumed that increased liking can be observed when the stimulus is novel and neutral. He stated that the effect of the exposure on attraction is logarithmic: The strength of effects produced by exposure diminish with each additional exposure (6).

LITERATURE REVIEW OF MERE EXPOSURE RESEARCH

In a typical mere exposure experiment, a set of stimuli (preferably novel to subjects) are presented at varying frequencies to subjects, who are simply asked to observe them, and than to rate how much they like each one. Respondents generally rate the more frequently presented stimuli more favorably.

Support for the mere exposure hypothesis has come from a number of studies using a variety of stimulus objects including nonsense words, musical compositions, works of art, portraits, ideographs and so on. On the other hand, there are some research that used meaningful stimuli (e.g., persuasive messages).

Chaffee conducted a pair of experiments with 400 students in social studies classes (8th and 9th grade) at central California secondary schools. Students were asked to complete a simple word puzzle, which required for its solution that certain nonsense words (Greek letter names) be used more often than others. After completing the puzzle, the students were asked to evaluate the words on a 9-point like-dislike semantic differential scale. Both "only-after design experiments" showed that as familiarity increased, so did the likeness of the stimulus (7).

In his monograph, Zajonc described four experiments that provided empirical support for his hypothesis . In the experiments, he

5 R. B. Zajonc (1970, February). *op.cit.*, p.60.

6 R.B. Zajonc (1968). *op.cit.*

7 S.H. Chaffee (1967). "Salience and Pertinence as Sources of Value Change". *Journal of Communication*. 17

used Turkish-like words, Chinese-like characters, and men's photographs as stimuli. Overall, the results indicated a monotonic increase in likeness according to the number of exposures of nonsense stimuli. In the first experiment, 12 nonsense words were shown in 6 different frequencies (0, 1, 2, 5, 10, and 25). Those words promoted as Turkish adjectives and after the exposures asked subjects to evaluate them on a 7-point good-bad scale. Without exception, subjects rated the given word to mean something better if they had seen it more often. Because the first experiment required subjects to pronounce the words after each exposure, it was argued that there could be a relationship between identifying process and affective rating. To eliminate the possibility of such a relationship, Chinese characters were substituted for the nonsense words. Except for pronouncing words, the experiment design was similar to the first one. Besides, those characters were used as subliminal stimuli that subjects were not required to recognize or discriminate the ideograms. The results were interpreted as "the change in affective connotation is a linear function of the logarithm of the frequency" (8). Using the same experimental design, researcher tested the likeness of initially neutral faces of men (photographs) by means of 7-point like-dislike bipolar scale. Results indicated the similar effects in favor of the hypothesis.

Mere exposure research approach has been widely replicated and extended after Zajonc's original monograph. Many studies attempted to interpret the results of mere exposure, some of them have found different results than Zajonc's (Section III and IV).

Zajonc & Rajecki reported a field experiment that supports the mere exposure hypothesis. They chose 5 nonsense words as critical stimuli. The words were randomly assigned to appear 1,2,5,10 and 25 times within a 25 day period in two campus newspapers. After exposures, they administrated a questionnaire to all respondents that included a 7-point good-bad bipolar scale. The presented average ratings of exposed words as a function of frequency indicates a positive monotonic curve(9).

After some studies had reported an inverted U-curve effect as a result of repeated exposure, Zajonc et al. tested this function in a series of experiments. The first one was a within-subjects design that used previously

8 R.B. Zajonc (1968). *op.cit.*, p.16

9 R.B. Zajonc & D.W.Rajecki, (1969). "Exposure and Affect: A Field Experiment". *Psychonomic Science*. 17.

tested Chinese characters. Each subject was shown 2 stimuli 3 times, 2 stimuli 9 times, 2 stimuli 27 times and 2 stimuli 81 times. The remaining stimuli which were 0 frequency stimuli were presented only for baseline rating. To obtain the affective ratings, 7-point bad-good semantic scale was used. They assumed that the original experiment of mere exposure hypothesis used a maximum 25 exposures, that if there is any satiation effects could cause a decrease in the rating, 81 exposures could have caused that result. However, overall results of this experiment indicated no satiation effect. There was a positive increasing effect of repeated exposure (the average of the stimuli shown 81 times was 3.87, while in the original experiment, stimuli shown 25 times had an average rating of 3.78). The same researchers tested the rating artifacts with a second experiment to determine if there is a relative difference in maximum affective ratings based on the order of the highest number of exposures. The results indicated a difference, but not a statistically significant one. They also tested the experimental design with another experiment. This time, they used a between-subject design. The research question tested was: "do individuals who are exposed a stimuli 3 and only 3 times differ in their ratings of these stimuli from individuals who see each stimulus 27 times?"(10).The results did not indicate any significant difference that it is interpreted as insufficiency of between-subject design to evaluate exposure effects.

Additionally, Zajonc states that the mere exposure effect has a wide range of applicability for animals and people. They apply not only to human beings, but also to animals (11). This proposal was tested by Zajonc, Reimer and Hausser and Zajonc, Marcus, and Wilson in two studies by two different measurement techniques. In the first study, they tested the relationship between exposure frequency and object preference in chicks and approach behavior to given stimuli served as an indicator of object preference. Chicks were exposed to a number of objects for different amounts of time. As a result of exposure, chicks were able to discriminate among the objects, and their approach behavior to the different objects became dependent on the previously created familiarity

10 R.B. Zajonc, C.W. Swap, A. A. Harrison & P. Roberts, (1971). "Limiting Conditions of the Exposure Effect: Satiation and Relativity". *Journal of Personality and Social Psychology*. 18.

11 R. B. Zajonc (1970, February). *op.cit.*

of objects (12). The later study explored the gradual effects of repeated stimulus exposure on the formation of attachments in the chick. Stress calls of chicks provided a mean of measurement of attachment that "in a distress condition chicks produce calls in excess of 85 db., while familiar conditions produced calls in a 50-65 db. range" (13). The results produced a monotonic exposure effect of exposure that interpreted as the unfamiliar object was least effective in reducing distress calls than familiar objects.

Other support for the mere exposure hypothesis was provided by Hamid who tested not only Zajonc's proposal but also the inverted U-curve function of repeated exposures. He provided evidence to support a monotonic increase but curvilinear function (14). On the other hand, Zajonc et al. had already reported a satiation effect with one type of stimulus - abstract paintings. They tried to determine the reason for the inverted U-curve. At first, researchers tested the assumption that stimulus discriminability plays a major role in setting limits on the exposure effect. This assumption could not be supported by manipulating the discriminability of stimuli except abstract painting. They concluded that the results were being an exception at the time (15).

Zajonc, Crandall, Kail, and Swap tested the effects of extreme number of exposures in two experiments. They examined for a possible decrement in liking by exposing stimuli much more frequently than in any previous experiment. The experiment carried out in which the maximum number of exposures were 243. The first experiment varied the time interval between exposures in an attempt to increase boredom by decreasing the ratio of exposure time to the total session time. The purpose of the second experiment was to distinguish between affinity and exploratory reactions to exposed stimuli by comparing responses on

- 12 R.B. Zajonc, D.S. Reimer & D. Hausser (1973). "Imprinting and the Development of Object Preference in Chicks by Mere Repeated Exposure". **Journal of Comparative and Physiological Psychology**. 83.
- 13 R. B. Zajonc, H. Markus & W.R. Wilson (1974a). "Exposure, Object Preference, and Distress in the Domestic Chick". **Journal of Comparative and Physiological Psychology**. 86, p.583.
- 14 P.N. Hamid (1973). "Exposure Frequency and Stimulus Preference". **British Journal of Psychology**. 64.
- 15 R. B. Zajonc, P. Shaver, C. Tavis, & D.V. Kreveld, (1972). "Exposure, satiation, and stimulus discriminability". **Journal of Personality and Social Psychology**, 21.

rating scales. The first experiment involved 2 between-subjects factors (interstimulus interval and the order of stimuli in two experimental situations) and one within-subject factor (0, 1, 9, 27 and 243 frequencies). The stimuli had been shown in the orders of 0, 1, 9, 27 and 243 (Order I), and of 243, 27, 9, 1 and 0 (Order II). An ANOVA provided two significant results between the variables: 1- Stimulus-Frequency, and 2- Frequency-order. The Order II generated a typical exposure effect, but for Order I, the stimulus seen 243 times received the lowest ratings as a result of a boredom effect. They also tested the variety of bipolar scales that are interesting-boring, beneficial-harmful, good-bad, and like-dislike in a second experiment. Their analysis indicated an interaction between frequency and scale (16).

In addition to social psychology studies, there are some communication studies have been conducted to examine mere exposure effects. While previously discussed studies were using noncommunication stimuli to test exposure effects, following two studies replicated mere exposure research with meaningful and persuasive stimuli.

Becker and Doolittle hypothesized that "the effective evaluation of a candidate will be positively related to the amount of political advertising for that candidate (17)". They designed an experiment using three levels of advertising exposure (2, 5 and 10). Relatively neutral six male names were used as stimuli. Subjects were exposed to fictitious 7 second persuasive messages. Contrary to the hypothesis, the results presented a curvilinear (inverted U) relationship between exposure affect, so that affect increases with exposure only to a point, after which it decreases as exposure continues.

Miller tested the mere exposure effect by using a persuasive message, too. He assumed an inverted U-function as a result of psychological reactance to a persuasive message. He argued that "when individuals believe that a persuasive manipulation infringes upon their right to decide for themselves, they often react in a manner opposite to

16 R. B. Zajonc, R. Crandall, R.V. Kail Jr., & C.W. Swap. (1974). "Effect of Extreme Exposure Frequencies on Different Affective Ratings of Stimuli". **Perceptual and Motor Skills**. 38.

17 L.B. Becker & J.C. Doolittle (1975). "How Repetition Affects Evaluations of and Information Seeking About Candidates". **Journalism Quarterly**. 52, p.614.

the persuader's intention (18)". The researcher attempted to clarify the relationship between mere exposure and persistence of psychological reactance, and their effects on attitude enhancement in a political campaign. Subjects of the investigation were undergraduate college students who resided in a nine-story dormitory building. Students assigned to one of the four treatment conditions: no exposure-pretest condition, moderate exposure condition, overexposure, and exposure removal-delayed post-test condition. The stimulus object was a poster which read "REDUCE FOREIGN AID." This statement was also rephrased in smaller letters "Stop the Outflow of U.S. Dollars- Equalize Our Balance of Payments." Researcher also attached postcards to the poster that aimed U.S. congressmen. The return level of these postcards indicated volunteering of students (or behavior toward the message). The dependent measure of affective evaluation was rated on a 9-point Likert type scale from "strongly agree" to "strongly disagree." The statement was "Foreign aid funds should be greatly reduced." The questionnaire also included nine other political or social questions in order to minimize subject suspicion.

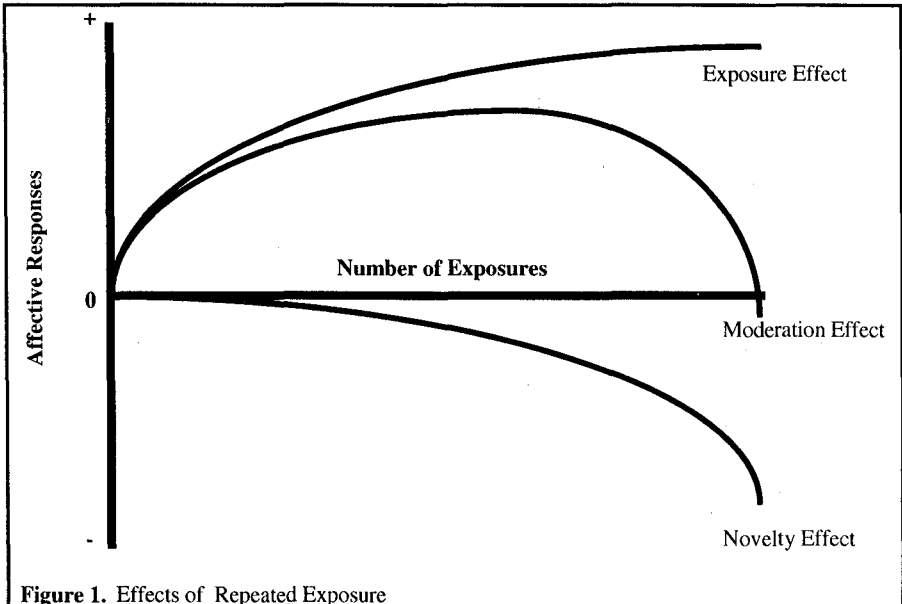
The experiment time was a one-week period. The day before posters were placed on the dormitory walls, a pretest was conducted. On the second day of the experimental period, 30 posters were placed on the walls (approximately 150 linear feet per poster) and left up three days (moderate effect). In the evening of fourth day, second group of randomly assigned students received the questionnaires. On the day five, 170 additional posters placed and left in additional two days (overexposure). In the evening of seventh day, third group responded the questionnaire. The next day posters were removed and on the day twelve, delayed post-test administrated. Results indicate that attitude toward the message was enhanced by moderate exposure, then significantly lowered in overexposure condition (still higher than non-stimulus condition). Delayed post-test effects is not significantly different from moderate or overexposure groups, but is different from non-stimulus condition. The number of volunteers were very small (22), and 64% of them occurred during the overexposure condition. Based on the results of experiment, the author concludes that "mere repeated exposure to a persuasive

18 R.L. Miler (1976). "Mere Exposure, Psychological Reactance and Attitude Change". *Public Opinion Quarterly*. 40, p.230.

message was sufficient to enhance the subjects' attitudes toward that message" (19).

EFFECTS OF MERE REPEATED EXPOSURE

Although the mere exposure hypothesis predicts an increasing likeness with increasing frequency of repetition, some research results indicated moderation and novelty effects, too (Figure 1).



A. Exposure Effect

The original study of Zajonc hypothesized mere exposure effects(20). The same results have been found by other researchers (21) and tested under several conditions, including exposure duration as low

19 *Ibid.*p. 232

20 R.B. Zajonc (1968). *op.cit.*

21 A.A. Harrison (1968). "Response Competition, Frequency, Exploratory Behavior and Liking". *Journal of Personality and Social Psychology*. 9.; R.B. Zajonc & D.W.Rajecki (1969). *op.cit.*; R.B. Zajonc, C.W. Swap, A. A. Harrison & P. Roberts (1971) *op.cit.*; R.B. Zajonc, D.S. Reimer & D. Hausser (1973) *op.cit.*; P.N. Hamid (1973). *op.cit.*

as 1/25 of a second (22) and exposure frequencies as high as 81 (23) and 231 (24) Examples related the exposure effect has been widely examined in section I.

B. Moderation Effect

Zajonc et al. reported that liking of abstract paintings increased on the low exposure conditions, but then steadily decreased as the number of exposures further increased (25). Berlyne proposed a theory based on the U-curve effect (two-factor theory). According to him, a tedium occurs at higher exposure levels for complex, varied stimuli and at a low frequency for simple, nonvaried stimuli (26). Based on the cognitivist point of view, Cacioppo and Petty interpreted the inverted U-curve as: "At higher exposure tedium and/or reactance may have motivated the individual to again attack the now offensive communication" (27). Batra and Ray rephrased this explanation as: "high exposure messages, having already been thought about, become offensive" (28). They also stated two implications of that explanation:

"First, if the point at which the message is thought about is delayed, the point at which it becomes offensive should also be delayed, and the curve of dependent attitudes should continue to rise rather than fall to the familiar inverted U shape. Second, the point at which the message is thought about is a function of the antecedent conditions for support argument and counter argument production in that situation. If the antecedent conditions are at low levels, such message-related thinking would not occur extensively in the first few exposures, the message would not become offensive until later, and the point of attitudinal downturn would be delayed. repetition would thus continue to increase attitudes. In contrast, when the antecedent conditions create high levels of support argument and counter argument production at

22 A.G. Sawyer (1981). *op.cit.*

23 R.B. Zajonc, C.W. Swap, A. A. Harrison & P. Roberts (1971). *op.cit.*

24 R. B. Zajonc, R. Crandall, R.V. Kaul Jr. & C.W. Swap. (1974). *op.cit.*

25 R. B. Zajonc, P. Shaver, C. Tavis, & D.V. Kreveld (1972). *op.cit.*

26 D.E. Berlyne (1970). "Novelty, Complexity and Hedonic value". *Perception & Psychophysics*. 8.

27 J.T. Cacioppo & R.E. Petty (1979). "Effects of Message Repetition and Position on Cognition, Response, Recall, and Persuasion". *Journal of Personality and Social Psychology*. 37, p. 105.

28 R. Batra & M. L. Ray (1986). "Situational Effects of Advertising Repetition: The Moderating Influence of Motivation, Ability and Opportunity to Respond". *Journal of Consumer Research*. 12, p.433.

low levels of exposure, the attitudinal downturn will occur earlier. In the latter situation, further repetition will yield no further attitudinal gain; attitudes may, in fact, decline with further repetition (29)".

The model of the differential production of support arguments and counter arguments at different levels of message repetition is first discussed by Cacioppo and Petty (30) and tested by Belch and Batra & Ray (31). Cacioppo and Petty formulated the elaboration likelihood model of advertising based on this interpretation (32).

C. Novelty Effect

Sawyer stated that a few studies found a novelty effect in which less exposed stimuli are more desired than more highly exposed ones. It is assumed that if the stimulus has a negative predisposition for subjects, repeated exposures reinforce this negative connotation (33).

INTERPRETATIONS OF THE EFFECTS OF MERE EXPOSURE

Because of different observed effects of mere repeated exposure, several theoretical accounts have been offered (34).

A. Demand Artifact

Demand Artifact explanation tested that "when the subjects' ratings of the stimuli were measured along with their estimates of the experimenter's hypothesis, subjects were more apt to guess that the hypothesis equated increased exposure with increased goodness than with badness; subjects tended to be consistent with their intuitive estimates of the experimenter's hypothesis; and the overall results very similar to those of Zajonc and his colleagues" (35).

29 *Ibid.*

30 J.T. Cacioppo & R.E. Petty (1979). *op.cit.*

31 G.E. Belch (1982). "The effects of Television Commercial Repetition on Cognitive Responses and Message Acceptance". *Journal of Consumer Research*. 9.; R. Batra & M. L. Ray (1986). *op.cit.*

32 J.T. Cacioppo & R.E. Petty (1979). *op.cit.*

33 A.G. Sawyer (1981). *op.cit.*

34 A.A. Harrison (1977). *op.cit.*; J.T. Cacioppo & R.E. Petty (1979). *op.cit.*; A.G. Sawyer (1981). *op.cit.*

35 A.G. Sawyer (1981). *op.cit.*, p.242.

On the other hand, the exposure effects occurred when it was nearly impossible to guess the experiment's intent when the individual objects either could not tell that frequency was a variable or could not guess the number of times other subjects had seen a stimulus (36). Artifact interpretation can not account for the mere exposure data. Based on his meta analysis results, Bornstein suggested that "... all mere exposure studies clearly indicate that the exposureaffect relationship is robust and reliable" (37).

B. Response Competition

Harrison developed a theoretical explanation to exposure effects and tested them with two experiments. "The results of two studies suggest that the exposure effects may possibly be accounted for in terms of the reduction of negative affect accompanying a diminution in the tension created by the coexistence of antagonistic response tendencies" (38). This coexistence of conflicting response tendencies labeled response competition. Response competition is "tension producing and provides negative tension by eliminating competing responses"(39).

There are major difficulties associated with the response competition. Harrison reports that "first, there is a possibility that response latency measures do not reflect response competition (i.e., meaningfulness). Second, there is not enough experimental support. Third, this formulation predicts only a reduction in negative affect with exposure and does not predict the growth of positive feelings (40)". Indeed, response competition as originally conceptualized is not predictive. It may be explained by moderation or novelty effects.

C. Classical Conditioning

The classical conditioning interpretation dealt with both the novelty effects and positive exposure effects of mere repeated exposure. This

36 A.A. Harrison (1977). *op.cit.*; A.G. Sawyer (1981) . *op.cit.*

37 R. F.Bornstein (1989). "Exposure and Affect: Overview and Meta-analysis of Research 1968-1987". *Psychological Bulletin*. 106, p.268.

38 A.A. Harrison (1968). *op.cit.*, p.367.

39 A.G. Sawyer (1981). *op.cit.*, p.244.

40 A.G. Sawyer (1981). *op.cit.*, p.244.; A.A. Harrison (1977). "Mere Exposure".Ed: L. Berkowitz. *Advances in Experimental Social Psychology*. 10. New York: Academic Press, p.65.

hypothesis does not offer an explanation of moderation effects of repetitions. As a hypothesis, classical conditioning offers that "the positive nature of participating in an experiment conditioned the evaluations of the experimental stimuli, with more positiveness conditioned to those more highly exposed" (41).

On the other hand, Zajonc, Marcus and Wilson presented initially negative stimuli for different frequencies. The results indicated that " the exposure effect can overcome an initially negative stimulus affect when the conditions of the mere exposure hypothesis are satisfied " (42).

D. Arousal Theories

1. Expectancy Arousal

Another possibility is that "expectancies mediate between familiarity and liking, and that people will like best those stimuli which are neither totally unanticipated nor perfectly predictable (43)". The expectancy arousal approach is closely akin to the response competition explanation, " Increased familiarity allows the subjects to represent in memory and anticipate the detailed nature of the stimulus. For example, the first syllable of a word may hint at the nature of reminder (44). Although Harrison stressed some differences between expectancy arousal and response competition hypotheses, Sawyer hypothesized that it is often difficult to distinguish predictions from those two theories. Besides, there are some validity problems as mentioned by Sawyer.

2. Arousal Potential

The arousal potential approach is almost psychobiological in nature. It is "the sum of the stimulus's psychological properties (i.e., brightness and intensity), and ecological properties (e.i., novelty and complexity)" (45). According to this approach, stimuli with moderate arousal potential are most favorable and increased exposure should decrease arousal potential. This interpretation could interpret the past

41 A.G. Sawyer (1981). *op.cit.*, p.242.

42 R. B. Zajonc , H. Markus &W.R. Wilson (1974a). *op.cit.*, p.248.

43 A.A. Harrison (1977). *op.cit.*, p.66.

44 A.G. Sawyer (1981). *op.cit.*, p.245.

45 *Ibid.* p.245.

empirical results, however little empirical investigation has been attempted.

Consequently, both expectancy arousal and arousal potential interpretations provide meaningful connections, but they offer very little predictive power (46).

E. Semantic Satiation and Semantic Generation

Satiation and generation approaches explain the mere exposure effects in terms of generalized changes in meaning. The semantic satiation suggests that repetition leads to decreases in meaningfulness with the consequence that initially negative stimuli become less positive. It is assumed that "in the former case experiments have begun with initially disliked stimuli but that in the latter case they have begun with initially liked stimuli" (47). Neither the validity of predictions nor of assumption have been well established. The semantic generation offers that repetition leads to increased rather than decreased polarization of ratings. The assumption here is that "experiments have begun with liked stimuli in the former case and with disliked stimuli in the latter" (48). Harrison evaluates these two interpretations as: "neither semantic satiation nor semantic generation provide very satisfactory explanation at the exposure effect at present" (49).

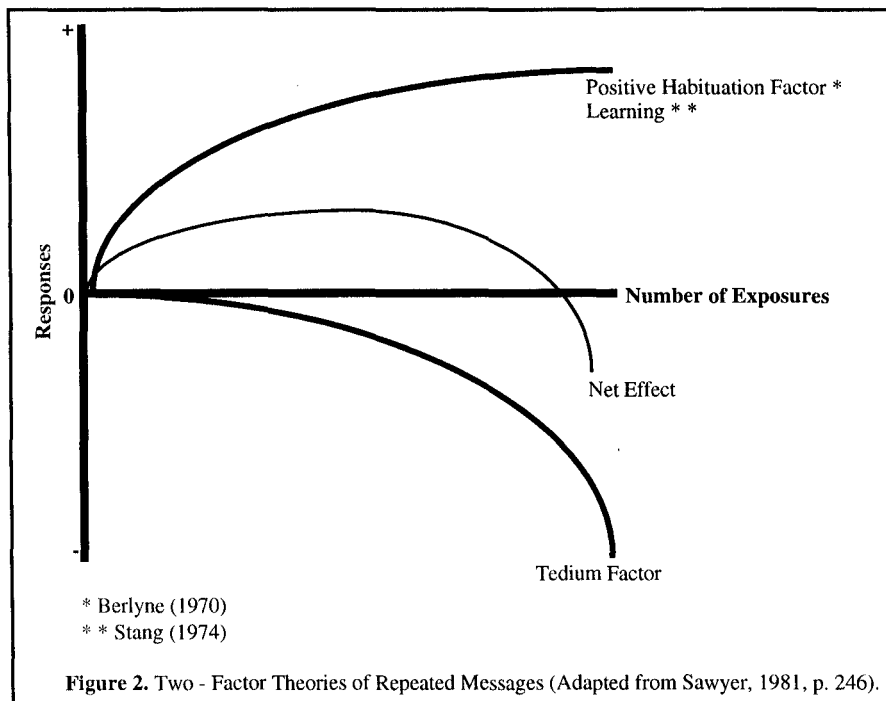
46 *Ibid.* p.246.

47 A.A. Harrison (1977).*op.cit.*, p.69.

48 *Ibid.* p.70.

49 *Ibid.* p.71.

F. Two-Factor Theories



It is assumed that there is an inverted U-curve relationship between familiarity and liking. This relationship is explained by involving two separate processes. The first factor, positive habituation (a reduction of uncertainty or conflict), is very similar to response competition. The second factor, tedium, increases with exposure and results in less pleasantness. With few exposures, positive habituation will predominate and exposure will lead to increased liking. Later, tedium will predominate and exposure will decrease liking (50)

Because two-factor theory provides an easy way of reconciling results, it has gained considerable acceptance. For example, Stang evaluated and defined two factors as learning and satiation (51). He argued that::

50 D.E. Berlyne (1970). *op.cit.*; A.A. Harrison (1977). *op.cit.*; A.G. Sawyer (1981). *op.cit.*

51 D.J. Stang (1974). "Methodological Factors in Mere Exposure Research". *Psychological Bulletin*. 81.; D.J. Stang (1975). "Effects of Mere exposure on Learning and Affect". *Journal of Personality and Social Psychology*. 31.

"since novel stimuli are less well learned than familiar stimuli, more learning about them is possible, and learning is about them is consequently more reinforcing than learning about other relatively familiar stimuli. The learning factor would thus be expected to cause the organism to *approach* novel stimuli. Second, when an organism has learned to recognize an object, satiation begins to build and motivate the organism to expose itself to other less well learned stimuli. Thus the satiation factor induces the organism to avoid familiar stimuli (52)".

ORIGINS OF AFFECTIVE RESPONSES TO MERE REPEATED STIMULI (COGNITIVIST VERSUS AFFECTIVIST VIEWS)

From a general perspective, mere exposure studies investigate how exposure to stimuli cause change in attitudes toward these stimuli without apparent cognitive elaboration. Delay about the origin of the affective responses divided researchers into two separate camp: "some believe that exposure leads to increased liking because of some thought process...attitude change must be mediated by learning or recognition...(while) others contend that such cognitive processes are not necessary" (53).

The cognitivist point of view argues that "cognitive activity is a necessary precondition of emotion because to experience on emotion people must comprehend-whether in the form of a primitive evaluative perception or a highly differentiated symbolic process (54)" According to cognitive theorists, "an individual must be able to identify a stimulus, classify it, and/or recognize it, for a mere exposure effect to occur (55)".

The counter argument is represented by Zajonc. In his speculative article, Zajonc provides evidence to support his evaluation: feeling and thinking (affect and cognition) are two separate systems (56). He emphasized that "affect and cognition are separate and partially independent systems and that although they ordinarily function conjointly,

52 D.J.Stang (1975). **op.cit.**, p.11.

53 E.L. Fink, J.L. Monahan & S.A. Kaplowitz (1989). "A spatial Model of the Mere Exposure". **Communication Research**. 16, p. 747.

54 R.S. Lazarus (1984). "On the Primacy of Cognition". **American Psychologist**. 39, p.124.

55 E.L. Fink, J.L. Monahan & S.A. Kaplowitz (1989).**op.cit.**, p.747.

56 R. B. Zajonc (1980). "Feeling and Thinking: Preferences Need no Inferences". **American Psychologist**. 35.

affect could be generated without a prior recognition (57)". This phenomenon tested by Obermiller. In an experiment, researcher tested the effects of exposure on affect and learning under various conditions of processing style. The results indicate that there is no evidence for the notion that affective responses occur independently of cognitive mediation. He concluded that "affective response is a function of the qualitative nature of cognitive elaboration" (58).

On the other hand, Fink et al. attempted to combine these two schools on a spatial model. Their study, contrary to expectancies, failed to represent the affective and cognitive effects of exposure. However, they provided evidence that for simple stimulus, affective change can occur in the absence of cognition (59).

Consequently, both views provide strong evidence to support their hypotheses, but they both have weak points, according to Fink et al. "Cognitivist studies often suffer from failure to control for recognition of stimuli by objects...." and counter argument fails "to account for passable unconscious cognitive process"(60).

IMPLEMENTATIONS OF REPETITION RESEARCH IN COMMUNICATION & ADVERTISING FIELDS

The message used in advertising and general communication research is obviously much different from the stimulus in the mere exposure research. The familiarity and complexity of communication stimuli is much higher. It can initially have positive or negative meanings. Besides, while communication and advertising research measure persuasion and liking of the objects or ideas presented in the message, mere exposure research measures liking for the message.

There is also overlap between mere exposure research and advertising, communication or consumer research. For instance, Belch examined the cognitive effects of advertising repetition. He stated that

- 57 R. B. Zajonc (1984). "On the Primacy of Affect". **American Psychologist**. 39, p.117.
 58 C. Obermiller, (1985). "Varieties of Mere Exposure: The Effects of Processing Style and Repetition on Affective Response". **Journal of Consumer Research**. 12, p.27.
 59 E.L. Fink, J.L. Monahan & S.A. Kaplowitz (1989). *op.cit.*
 60 *Ibid.* p.748.

most research about effects of advertising repetition has focused on outcome measures such as recall, attitude, and purchase intention, rather than the attitude toward the repeated advertising message. The results of the study indicate that neither attitudes nor purchase intentions were affected by the level of advertising exposure.

Moreover, there are direct tests of the communication stimuli rather than noncommunication stimuli. Zajonc & Rajecki simulated the advertising environment to test noncommunication stimuli (61). Cacioppo and Petty tested commercial wearout within the mere repeated exposure literature, and found an inverted U-curve function (62). Batra and Ray argue that "low involvement preferences may be based on gross awareness, but on a confounded affect-awareness basis, the differential awareness having created greater mere exposure affect(63)".

In addition to advertising exposure studies, Krugman stated that advertising repetition serves as a reminder. He theorized that only three advertising exposures are sufficient to stimulate a buying decision. Within a hierarchy, Krugman explains that first exposure creates curiosity, second recognition, and third decision. According to Krugman's theoretical perspective, exposure frequencies greater than 3 are repeats of the second or third exposure effects (64).

Direct implications of mere exposure in advertising are summarized by Sawyer. Sawyer suggests that:

1. Repetition produces attitude change before behavior change on high involvement topics, but the reverse may occur on low involvement topics.
2. Exposure effects are greater when the stimuli are varied on each presentation rather than identical.
3. Repetition of soft-sell ads would increase persuasion more than

61 R.B. Zajonc & D.W.Rajecki (1969).*op.cit.*

62 J.T. Cacioppo & R.E. Petty (1985). "Central and Peripheral Routes to Persuasion: The Role of Message Repetition". Ed: L. Alwitt & A. A. Mitchell. **Psychological Process and Advertising Effects: Theory, Research, and Application**. Hillsdale, NJ: Lawrence Erlbaum.

63 R. Batra & M.L. Ray (1983). "Advertising Situations: The Implications of Differential Involvement and Accompanying Affect Responses". Ed: R. J. Harris. **Information Processing Research in Advertising**. Hillsdale, NJ:Lawrance Earlbbaum. p. 142.

64 H.E.Krugman (1972). "Why Three Exposures May Be Enough". **Journal of Advertising Research**. 12 (6).

repetition of hard-sell ads.

4. Repetition increases the persuasiveness of refutational ads more than of one-sided ads.
5. Repetition increases the permanence of individual attitude changes(65)".

Additionally, Sahin tested the effects of television commercial repetition under high and low advertising message involvement conditions. He suggests that "if audiences' involvement to the advertising message is low, higher repetition can be used to increase positive feelings toward the ads" (66).

CONCLUSION

In his monograph, Zajonc proposed that "mere repeated exposure is sufficient to increase likeness to a stimulus," it was not a new idea at the time (67). On the other hand, he provided strong evidence to support his hypothesis. Although this issues can be analyzed as a part of the main theory, social learning theory, this paper is limited by the effects of repetition, and particularly by the mere exposure theory.

There are several debates on this issue. From the beginning, many researchers have presented different interpretations of exposure effects. According to original hypothesis, it is predicted that affective evaluation (attitudinal effects of exposure) positively increase by increasing exposure frequency and several research results supported this expectancy. At the same time, another effects of exposure have been found. Simultaneously, several interpretations took place. Among them, the two-factor theories hold the most premise explaining repetition effects.

On the basis of the certainty of "mere repeated exposure effects" another debate occurred about the origin of effect: Cognitive vs. affective. This point is especially important for implication of mere exposure research, because especially in advertising many message strategies are based on the cognitive persuasion. Those explanations are assumed the

65 A.G. Sawyer (1981). *op.cit.*, p. 260-261.

66 A.A. Şahin (1995). "Immediate and Delayed Effects of Television Commercial Repetition Moderated by Advertising Message Involvement". Unpublished MA Thesis: Marquette University.

67 R.B. Zajonc (1968). *op.cit.*

cognitive hierarchy of effects that presumes the cognitive changes as a prerequisite of affective changes. If there is an independent affective process, advertising strategies (or theories) will be needed to elaborate.

Overall results of nearly three decades of study provided varying interpretations and implications, but still some components are missing. It is needed to provide more empirical data to support one or another approach in this research area.

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