

# The Effects of Background Music on Consumers' Desire to Affiliate in Buyer-Seller Interactions

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## ABSTRACT

The effect of music-induced pleasure and arousal on consumers' desire to affiliate in buyer-seller interactions were investigated in the context of bank services. Background music was manipulated using classical music extracts pretested to vary in pleasure (low, moderate, and high) and arousal (low, moderate, and high) according to the Affect Grid (Russell, Weiss, & Mendelsohn, 1989). Independent and interactive effects of music-induced pleasure and arousal on consumers' desire to affiliate were found. Higher desire to affiliate was associated with more pleasure and more arousal; pleasure had a stronger positive impact under low and high arousal than under a moderate level, and arousal had a stronger effect under low and high pleasure compared to moderate level. Theoretical and practical implications of the results are provided. © 1995 John Wiley & Sons, Inc.

Past research on personal selling has focused on single-transaction settings, with strong emphasis on the seller side of the exchange (for exceptions, see Crosby, Evans, & Cowles, 1990; Schurr & Ozanne, 1985;

Sujan, Bettman, & Sujan, 1986). The bulk of this work has investigated individual, organizational, and situational characteristics that could influence bargaining processes in tangible good exchanges (e.g., Leigh & McGraw, 1989), sales effectiveness (e.g., Szymanski, 1988) or salespeople's satisfaction (e.g., Brown & Peterson, 1993).

Surprisingly little research has investigated the ongoing services provided by sellers. Yet these are critical to long-term commitment and repeated purchase, in particular for service firms. Crosby et al. (1990) suggested that relational selling behaviors such as cooperative intentions and mutual disclosure between insurance salespeople and their customers contribute to the strength of the buyer-seller bond and to future sales opportunities. This issue is particularly critical when selling services in a long-term relationship such as banking, in which both buyers and sellers are typically in the company's facilities during much, if not all, of the exchange process. Firms in these industries have an opportunity to create an environment that will make the whole exchange process as effective as possible both in terms of buyer and seller satisfaction and sales volume.

Research is needed to understand how management could more effectively use service environments to influence the occurrence of relational behaviors in buyer-seller exchanges. In this article we briefly review past research related to the influence of music-induced pleasure and arousal on consumers' desire to affiliate in a buyer-seller interaction. Then we investigate empirically these effects in the context of banking services.

## **BACKGROUND**

Research has shown that music can influence consumers' response to advertising (e.g., Alpert & Alpert, 1990; Gorn, 1982; Kellaris & Cox, 1989; MacInnis & Park, 1991) and to retail environments (e.g., Milliman, 1982; 1986; Yalch & Spangenberg, 1990). Consumers' perceptions of music as an aesthetic product have also been investigated (e.g., Holbrook, 1981; Holbrook & Anand, 1990; Kellaris, 1992). Findings include changes in emotional states, attitude toward the ad and toward the brand, purchase intention, and behavior (for a review see Bruner, 1990).

To our knowledge, no one has investigated how music may influence the buyer-seller interaction itself. Yet a number of studies, emerging mostly from clinical psychology, have found that the presence of background music influences how people interact with one another. Early studies on verbal interaction found that the presence (compared to the absence) of background music increases verbal exchange and affiliative behaviors such as smiles and eye contacts (Dollins, 1956; Sommer, 1957). Later work has compared responses to soothing or sedative and

stimulating background music (e.g., Borling, 1981; Mezzano & Prueter, 1974; Smith & Morris, 1976, 1977; Stratton & Zalanowski, 1984). Generally, soothing music promoted more intense and more affective interactions (Mezzano & Prueter, 1974; Prueter & Mezzano, 1973) and induced more verbalizations (Stratton & Zalanowski, 1984). Inverse or null effects are generally reported for stimulating music.

Can those findings from clinical research be generalized to buyer-seller interactions? Although the idea is intuitively compelling and findings from studying abnormal conditions help our understanding of normal functions, some caution is required. Beyond obvious differences in the nature of clinical and commercial encounters, the conceptual definitions of *soothing* or *sedative* and *stimulating* background music used in most clinical studies present an important confound between pleasure and arousal, two basic dimensions of emotional experience (Russell, 1978). In this line of research, sedative music features a slower tempo and is associated with high positive emotions and low anxiety. Stimulative music is characterized by a higher tempo with increased anxiety and arousal.

Underlying this conceptual difference between sedative and stimulating background music is the assumption that arousal and pleasure can be positioned on a single dimension: low arousal (slow tempo) is associated with positive emotions, and high arousal (fast tempo) is associated with negative emotions. This view is contrary to that of optimal arousal theories (Berlyne, 1960; Fiske & Maddi, 1961). These posit that there is a single optimal point on the arousal dimension, located at the intermediate level. This point is optimal in terms of physical comfort, cognitive performance, and hedonic tone. Consumer research with nonmusic stimuli has generally been supportive of an optimal level of arousal (e.g., Anand & Sternthal, 1990; Rethans, Swasy, & Marks, 1986; Sonbanmatsu & Kardes, 1988).

Recent studies on the variation of emotions as a function of music tempo (Holbrook & Anand, 1990; Holbrook & Gardner, 1993; Kellaris, 1992; Kellaris & Kent, 1991, in press; Kellaris & Rice, 1993) suggest that fast-tempo music may not necessarily be associated with anxiety and other negative emotions as assumed in clinical research. For instance, Kellaris and Rice (1993) reported that fast-tempo music was perceived as less irritating, sad, and depressing than slow-tempo music, whereas no effect was found on positive affective qualities (good, pleasant, nice) and on sedativeness (calm, soothing, tranquil, sentimental). In a study that manipulated tempo over a broad range, Holbrook and Anand (1990) found that moderate tempo induces more positive affective responses, consistent with the prediction from optimal arousal theories. However, Holbrook and Gardner (1993) found that the more pleasurable a musical stimulus, the greater the level of arousal that produced maximum receptivity (more positive hedonistic responses) as measured by listening time.

More direct evidence of independent and interactive effects of pleasure and arousal comes from the work of Mehrabian and Russell in environmental psychology (Mehrabian & Russell, 1974, 1975; Russell & Mehrabian, 1978). They found that environment-induced pleasure (slides of indoor and outdoor scenes) creates positive attitudes and approach behavior toward physical settings in general and more specifically, enhances affiliation with other persons.

In conclusion, studies that have considered affiliative attitudes and behaviors have either not manipulated music or have confounded induced pleasure and arousal. On the other hand, studies that have controlled or manipulated music-induced pleasure and arousal (or musical characteristics that induce them) have not investigated interpersonal interaction. Therefore, this study was designed to investigate the specific and interactive effects of music-induced pleasure and arousal on buyer-seller interactions and to explore the psychological mechanisms that underlie their effects.

## **METHOD**

### **Overview of the Study**

An experiment was conducted using a between-subjects design to manipulate both pleasure (low, moderate, and high) and arousal (low, moderate, and high) induced by the musical background in a video simulation of a bank branch. Variations in levels of pleasure and arousal were manipulated with classical music extracts having different tempo and affective responses. These were pretested for their induced level of pleasure and arousal using the Affect Grid (Russell et al., 1989). Subjects indicated their desire to affiliate with the bank personnel and wrote their retrospective thoughts.

### **Subjects**

Subjects were 270 undergraduate business students in a French-Canadian university. There were 116 males and 151 females (three did not specify), and the average age was 24.8 years old. Subjects were invited to participate in a study on consumer satisfaction with banking services. They were exposed in groups to one of the nine experimental conditions (3 pleasure  $\times$  3 arousal).

### **Development of Experimental Stimuli**

The musical stimuli used for the main experiment consisted of a preselection by a musicologist and a pretest with a group of subjects taken from the same population as for the main study.

**Preselection.** Classical music extracts were selected by a musicologist to form sets of 18 slow-, 18 moderate-, and 18 fast-tempo musical extracts while controlling the following parameters: flowing rhythm, consonant harmony, major mode, medium or high pitch, with orchestration, and a soft or medium volume. Tempo is the structural characteristic that has been found to be the closest determinant of music-induced arousal level (Hevner, 1937; Holbrook & Gardner, 1993). The tempo was measured in BPM (beats per minute), with, respectively 40–76 BPM in the slow category, 77–107 BPM in the moderate category, and 108–208 in the fast category. Within each set, the musical extracts were selected to induce a range of pleasure levels by lay people between 20 and 30 years old who were to be subjects in the main experiment. They were also expected to be of low or moderate familiarity for the subject population.

**Pretest.** Fifteen subjects (seven males and eight females) listened to the selected 54 musical extracts in three sessions that they could perform at home using the experimental material. Each session included a set of 18 musical extracts. The three sets (Set) were formed by randomly assigning musical extracts within each level of tempo to one of the three sets, under the constraint of equal numbers of each tempo within each set. Thus, each set included 6 slow-, 6 moderate-, and 6 fast-tempo extracts. Within each set, the 18 musical extracts were presented in one of three random orders (Version). Each set could be audited in the first, middle, or last sessions (Session). Subjects' individual auditing assignments (Group) were made according to a Greco-Latin square design that combined Group (3)  $\times$  Session (3)  $\times$  Set (3)  $\times$  Version (3).

After appropriate training (see Russell et al., 1989 for the detailed procedure), subjects were instructed to indicate the degree of pleasure and arousal induced by each musical extract, using the Affect Grid (Russell et al., 1989). The Affect Grid is a  $9 \times 9$  matrix that enables subjects to express simultaneously their emotional state along both dimensions of pleasure (horizontal) and arousal (vertical) by marking the appropriate coordinate in the grid. The Affect Grid presents good validity and reliability (Holbrook & Gardner, 1993; Olney, Holbrook, & Batra, 1991) and is recommended when repeated measures are necessary (Russell et al., 1989). Subjects also indicated their level of familiarity with each of the 54 musical extracts on a 9-point bipolar scale.

Within each level of tempo defined a priori by the expert and validated by subjects' arousal ratings, musical extracts that presented the most extreme values and the middle value for pleasure were selected. The list of stimuli are presented in Table 1. The mean ratings on the pleasure dimension were, respectively, 4.07, 5.31, and 6.85 for low, moderate, and high pleasure levels ( $F[2,114] = 21.42, p < 0.001$ ). The mean ratings on the arousal dimension were, respectively, 2.47, 5.80, 7.95 for stimuli categorized as low, moderate, and high arousal levels ( $F[2,114] =$

**Table 1 Description of Background Music Stimuli**

Musical Extracts	Familiarity <sup>a</sup> mean (s.d.)	Arousal <sup>a</sup> mean (s.d.)	Pleasure <sup>a</sup> mean (s.d.)	Exp. Conditions	
				Arousal	Pleasure
Horn concerto no.3 in E flat major K.447—first mvt.—Mozart	2.55 (1.90)	2.58 (1.16)	6.17 (1.59)	Low	High
Prélude à l'après-midi d'un faune-first mvt.—Debussy	2.51 (1.74)	2.79 (2.04)	4.36 (2.10)	Low	Moderate
Piano and cello sonata in F major op.99—first mvt.—Brahms	1.54 (0.92)	2.07 (0.92)	3.29 (0.92)	Low	Low
Brandenburg concerto no.2 in F major BMV 1047—second mvt.—Bach	3.22 (2.39)	6.15 (1.34)	7.38 (1.26)	Moderate	High
Brandenburg concerto no.6 in B flat major BMV 1051—second mvt.—Bach	2.44 (2.32)	5.86 (0.95)	5.71 (1.98)	Moderate	Moderate
Overture IV in D major BMV 1069—first mvt.—Bach	2.15 (1.42)	5.43 (1.74)	5.00 (1.96)	Moderate	Low
Oboe concerto in C major K.314—third mvt.—Mozart	2.85 (2.27)	7.64 (0.93)	6.93 (1.64)	High	High
Divertimento in D major K.136—third mvt.—Mozart	2.56 (1.95)	8.00 (0.68)	5.86 (2.03)	High	Moderate
Symphony no.5 in C minor, op.67 second mvt.—Beethoven	3.33 (1.87)	8.21 (0.89)	3.93 (2.37)	High	Low

<sup>a</sup>1 to 9 scale with increasing directionality.

196.06,  $p < 0.001$ ). The level of familiarity did not vary across conditions (mean = 2.57;  $p > 0.20$ ).

Each of the nine selected musical extracts served as the background to the same 4-minute video simulation that was filmed in a branch of a real bank. Subjects were asked to imagine themselves waiting for a transaction that required interacting with the bank personnel. The video focused alternately on a female clerk with whom they would have to interact and on the customer who was currently being served. Under each experimental condition, one background music was recorded at the same comfortable volume level and was listened to by the subjects at the same volume.

## Dependent Variables

***Desire to Affiliate.*** Following Russell and Mehrabian (1978), attitudinal and behavioral measures of subjects' desire to affiliate with the bank personnel were recorded. Attitudinal items were how friendly did subjects feel toward and how much did they like the bank personnel (7-point scale; not at all–very much). The three behavioral measures were smile, say hello, and chat with the bank personnel in the forthcoming transaction (7-point scale; very unlikely–very likely).

***Retrospective Thought Listing.*** Subjects were asked to take 2 minutes to list as precisely as possible all thoughts or feelings that could have come to their mind as they were watching the video. They completed this task after having responded to the other dependent variables.

## Ecological Validity of the Stimuli

Subjects of the main study rated the scenarios as fairly consistent with reality (mean = 5.29; 7-point scale from not at all to very much) and said that they would not be too surprised to encounter the scenario in real life (mean = 2.33; 7-point scale from not at all to very much). In addition, these two ratings did not differ across conditions (all  $p > .14$ ).

## RESULTS

Was consumers' desire to affiliate with the bank personnel influenced by variations in the level of music-induced pleasure and arousal? Mean scores were first computed for the subscales of attitudinal and behavioral measures of desire to affiliate (Cronbach alpha of 0.56 and 0.62, respectively). A multivariate analysis of variance (MANOVA) was conducted on the attitudinal and behavioral measures with levels of pleasure and arousal as between-subjects factors. The results revealed that arousal significantly influenced desire to affiliate ( $F[2,254] = 4.74, p < .02$ ), whereas a marginally significant effect emerged for pleasure ( $F[2,254] = 2.73, p < .07$ ). In addition to these main effects, the interaction was significant ( $F[4,254] = 2.45, p < .05$ ).

Separate analyses of variance were conducted on the attitudinal and behavioral measures of desire to affiliate and means are presented in Table 2. Both music-induced pleasure and arousal significantly influenced the attitudinal measures of desire to affiliate ( $F[2,257] = 6.11, p < .004$ ;  $F[2,257] = 5.57, p < .005$ , respectively, for pleasure and arousal). These effects are of comparable strength (omega square of 0.37 and 0.34, respectively, for pleasure and arousal). Subsequent contrast analyses revealed that high-arousal background music induced more desire to

**Table 2 Mean Attitudinal and Behavioral Measures of Desire to Affiliate as a Function of Pleasure and Arousal**

	Desire to Affiliate	
	Attitudinal Measure <sup>a</sup>	Behavioral Measure <sup>a</sup>
Pleasure		
Low	3.45 <sup>2</sup> (n = 98)	5.81 <sup>2</sup> (n = 98)
Moderate	3.90 <sup>1</sup> (n = 85)	5.76 <sup>2</sup> (n = 85)
High	4.18 <sup>1</sup> (n = 83)	6.11 <sup>1</sup> (n = 83)
Arousal		
Low	3.70 <sup>1</sup> (n = 78)	5.90 <sup>1</sup> (n = 79)
Moderate	3.51 <sup>1</sup> (n = 87)	5.88 <sup>1</sup> (n = 87)
High	4.18 <sup>2</sup> (n = 101)	5.89 <sup>1</sup> (n = 100)

*Note.* Within each experimental factor, means with different superscripts are different at  $p > .05$ . Comparisons are made separately for attitudinal and behavioral measures.

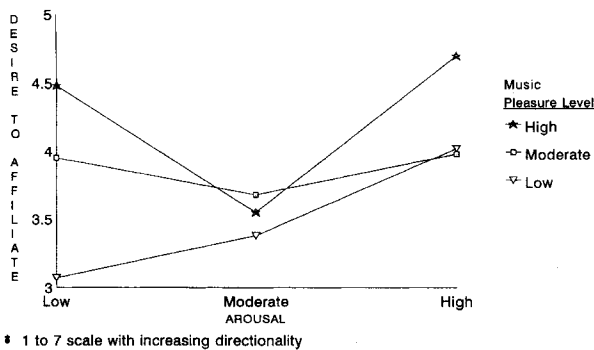
<sup>a</sup>Scale of 1–7 with increasing directionality.

affiliate than the other two arousal levels ( $t[2,213] = -3.20, p < .003$ ), which did not differ significantly from each other ( $p > .40$ ). Similarly, low-pleasure music induced less desire to affiliate than the two other pleasure levels ( $t[2,202] = 3.26, p < .002$ ), which did not differ significantly from each other ( $p > .20$ ).

Main effects of pleasure and arousal on the attitudinal measure of desire to affiliate were qualified by a marginally significant interaction ( $F[4,257] = 2.19, p < .08$ ). As can be seen in Figure 1, music-induced pleasure significantly influenced consumers' desire to affiliate at low and high levels of arousal but had no effect at moderate levels ( $p > .40$ ). Under low arousal, a low level of pleasure had a detrimental effect on desire to affiliate in comparison to moderate- and high-pleasure conditions ( $t[2,73] = 3.60, p < .002$ ) which did not differ significantly from each other ( $p > .20$ ). Means are, respectively, 3.07, 3.95, and 4.48 for the low-, moderate-, and high-pleasure conditions. Under high arousal, desire to affiliate increased with high pleasure in comparison to low- and moderate-pleasure conditions ( $t[2,50] = -2.31, p < 0.03$ ), which did not differ significantly from each other ( $p > .90$ ). Means are, respectively, 4.02, 3.98, and 4.70 for low-, moderate-, and high-pleasure conditions.

Results can also be examined by comparing different levels of arousal within each level of music-induced pleasure. No effect of arousal emerged at moderate pleasure levels. For low-pleasure conditions, high arousal was associated with higher desire to affiliate than the two other





**Figure 1** Desire to affiliate (attitudinal measure)\* as a function of music-induced pleasure and arousal.

conditions combined ( $t[2,49] = -2.53, p < .02$ ), which did not differ significantly from each other ( $p > .30$ ). Means are, respectively, 3.07, 3.38, and 4.02 for low-, moderate-, and high-arousal conditions. Note that the difference between high- and moderate-arousal conditions was only marginally significant ( $t[2,57] = 1.81, p = .08$ ). In high-pleasure conditions, both low and high levels of arousal induced high desire to affiliate in comparison with moderate arousal ( $t[2,67] = 3.26, p < .003$ ), and they did not differ significantly from each other ( $p > .50$ ). Means are, respectively, 4.48, 3.55, and 4.70 for low-, moderate-, and high-arousal conditions.

The behavioral measure of desire to affiliate appears to differ from the attitudinal measure in its susceptibility to background music with unique and strong effects of induced pleasure ( $F[2,257] = 6.19, p < .003$ , omega square = 0.8094), and no arousal effect either at the main or interactive levels (all  $p > .80$ ). Means are presented in Table 2. Subsequent contrast analyses revealed a beneficial effect at high level of music-induced pleasure compared to moderate and low levels ( $t[2,160] = -3.51, p < .002$ ), which did not differ significantly from each other ( $p > .60$ ).

To investigate psychological mechanisms that underlie the effects of music-induced pleasure and arousal on consumers' desire to affiliate with the bank personnel, the content of retrospective thought listing was coded and analyzed. Data (thoughts and feelings combined) were categorized by two independent judges in terms of their valence, and individual scores were computed for total number, number of positive, neutral, and negative pieces of information. The coding instructions were adapted from Sujan (1985). Interjudge agreement was 83.9%, and coding discrepancies were resolved through discussion.

On the average, subjects listed 4.19 pieces of information, and no difference was found across conditions in the overall number of listed thoughts (all  $p > .12$ ). A multivariate analysis of variance (MANOVA) was conducted on the number of positive, neutral, and negative thoughts with pleasure and arousal as between-subjects factors. The results

revealed a marginally significant interaction between music-induced pleasure and arousal (Wilks's lambda = 0.9387,  $F[8,474] = 1.92$ ,  $p < .06$ ) with no significant main effects (all  $p > .13$ ). Consequently, within each level of pleasure, an additional MANOVA was conducted on the number of positive, neutral, and negative thoughts with arousal as single between-subjects factor. A significant arousal effect emerged for high-pleasure condition (Wilks's lambda = 0.8660,  $F[4,160] = 2.985$ ,  $p < 0.03$ ).

Separate univariate analyses of variance (ANOVAs) on the number of positive, negative, and neutral thoughts generated under high-pleasure conditions revealed that music-induced arousal influenced the number of positive and negative thoughts (respectively,  $F[2,81] = 3.16$ ,  $p < .05$  and  $F[2,81] = 3.29$ ,  $p < .05$ ). Reflecting a U-shaped relationship, more positive thoughts were associated with low and high levels of arousal compared to moderate levels ( $t[2,72] = 2.28$ ,  $p < .03$ ; test for nonlinearity  $F[1,81] = 4.44$ ,  $p < .05$ ). The means of positive thoughts were 0.78, 0.24, and 0.44, respectively, for low, moderate, and high arousal. Low- and high-arousal conditions did not differ significantly ( $p > .20$ ), and low arousal was only marginally different from the moderate level ( $t[2,31] = -2.307$ ,  $p < 0.03$ ). Finally, low arousal induced significantly fewer negative thoughts than the two other conditions combined ( $t[2,51] = 2.03$ ,  $p < .01$ ), which did not differ significantly from each other ( $p > .70$ ).

## DISCUSSION

The empirical evidence presented here suggests that background music may influence buyer-seller interactions in some systematic way. The results showed that music-induced pleasure and arousal have independent effects on consumers' desire to affiliate in a buyer-seller interaction with more desire to affiliate usually associated with more pleasure and more arousal, and with some evidence of interactive effects. Music-induced pleasure had a stronger positive impact (attitudinal measure) under low and high arousal than under moderate arousal and, arousal had stronger effects under low and high pleasure, compared to moderate pleasure.

These findings did not replicate those in clinical psychology, according to which soothing background music was associated with more interpersonal interaction than stimulating music. When significant differences were observed for music-induced arousal, they favored high-arousal music. However, it is interesting to note that for high-pleasure background music, under low arousal—a condition that is conceptually similar to the soothing condition in clinical studies—consumers' desire to affiliate was higher than under moderate arousal but equal to the one reported under high arousal. Thus, beyond conceptual differences, divergence in findings may also be due in part to differences in the range of pleasure and arousal levels used in these studies and the one we used.

Our results also diverge from studies that have investigated the effect of music tempo and found hedonistic responses to be most favorable at moderate levels of arousal (e.g., Holbrook & Gardner, 1993). Across all pleasure conditions, high-arousal music induced a more positive attitudinal measure of desire to affiliate, whereas arousal had no significant effect on the behavioral measure. When separate analyses were conducted within each level of pleasure for the attitudinal measure of desire to affiliate, under low-pleasure conditions, a low-arousal background music induced lower desire to affiliate than both moderate- and high-arousal conditions. Moreover, the U-shaped relationship that emerged between arousal and desire to affiliate under high-pleasure background music seems to contradict the inverted U shape predicted by optimal arousal theories and generally observed with hedonistic measures in studies that have used music and nonmusic stimuli.

Are these results a mere artifact of our methodology or do they reflect conceptual differences that exist between hedonistic responses (e.g., time listening to music in Holbrook & Gardner, 1993) and one's desire to affiliate with sales or service people in a commercial transaction? Methodologically, it may be that the ranges of pleasure and arousal levels used in our study were narrower than in previous ones. For instance, if the range of arousal had been too narrow, a linear or stable relationship would have been found because of the short distance between two levels of arousal. However, this cannot explain the fact that a U-shaped pattern emerged with significant divergence from linearity. The U-shaped curve observed under high-pleasure music with less desire to affiliate associated with moderate tempo may also be related to consumers' expectations for this type of music as the typical background music in a bank. Being consistent with expectations, background music with moderate tempo could have attracted less attention. Madsen (1987) suggested that it may be changes in background music that attract attention to music and determine whether it will or will not be the focus of attention. Even though subjects reported no difference across conditions on the conformity of the experimental stimuli to real-life bank environments, this explanation is consistent with the pattern of thought-listing results under the same condition. The number of positive thoughts generated under the different arousal levels mirrored exactly the pattern obtained for the attitudinal measure of desire to affiliate: More positive thoughts were generated under slow and fast tempi than under the moderate one.

Note that our results, which show that high-pleasure music enhances the desire to affiliate at the two extremes of the arousal continuum, may be consistent with an alternative conceptualization of arousal. Apter (1982) suggested that peaks of pleasure could be located at the two extremes of the arousal continuum (e.g., very relaxing and very exciting stimuli). Empirical support for this theory in environment-elicited

emotional responses was provided by Walters, Apter, and Svebak (1982) in a study on color preferences.

A partial account for the observed discrepancy between our results on the effect of arousal and affiliative behaviors and past research on arousal may come from conceptual differences in the measured variables. Most previous studies have considered a hedonistic response or a general approach-avoidance tendency. Even in the few studies that have used it, *desire to affiliate* was defined very broadly as one's feelings or act of friendliness toward a stranger or other people (Russell & Mehrabian, 1978, p. 364). In a buyer-seller interaction, consumers have precise role-defined expectations that may moderate how they would react to environment-induced emotional changes, and these may provide a partial account for the shape of the relationship between desire to affiliate and arousal. Recall that under low-pleasure background music, the desire to affiliate increases with the level of arousal. Increased arousal associated with unpleasant feelings may induce anxiety, which, in the general model of approach/avoidance used in environmental psychology, is supposed to induce avoidance behavior. However, in a commercial setting, consumers usually expect the contact personnel to reduce their anxiety. In such conditions, as our results suggest, they may be likely to express a higher desire to affiliate under conditions of increased arousal. This reasoning is consistent with Schacter's (1959) suggestion that reducing anxiety is one of the most important factors motivating one's desire to affiliate.

Finally, the overall beneficial effect of music-induced pleasure with more desire to affiliate observed with increasing level of pleasure is consistent with past research in environmental psychology that has used nonmusic stimuli, and with consumer research that has considered variables other than affiliative attitudes and behaviors. We did not find empirical evidence that this effect was mediated by attentional processes.

## LIMITATIONS AND CONCLUSION

This study is the first to investigate the impact of music-induced pleasure and arousal on consumers' desire to affiliate in buyer-seller interactions, and the results should be interpreted cautiously for many reasons. Methodological limitations are related to the student population and the single use of classical music. In addition, despite meticulous care in pretesting the background music and designing the film scenarios, all of the subtleties of a real-world experience may not have been captured by our methodology based on video simulations. However, Bateson and Hui (1992) have demonstrated the validity of video for theory testing that requires environmental manipulations.

Additional limitations are due to the focus on buyer-seller interactions in a bank setting. Even though we believe that role expectations in this exchange are in many ways comparable with other sales transac-

tions, part of the interactive process differ. Replications should be done with other types of buyer-seller interactions. Future research should also investigate the salesperson responses to these background music manipulations as well as their effects on the interactive process, taking the dyad as the unit of observation.

Despite these limitations, our findings provide a useful first step in developing a theoretical understanding of how music or other environmental factors can influence consumers' desire to affiliate in buyer-seller interactions. For practitioners, this should provide insights on how to design environments that optimize the effectiveness of buyer-seller interactions.

## REFERENCES

- Alpert, J. I., & Alpert, M. I. (1990). Music influences on mood and purchase intentions. *Psychology & Marketing, 7*, 109–133.
- Anand, P., & Sternthal, B. (1990). Processing as a moderator of repetition effects in advertising. *Journal of Marketing Research, 27*, 345–353.
- Apter, M. J. (1982). *The experience of motivation: The theory of psychological reversals*. London: Academic Press.
- Bateson, J. E. G., & Hui, M. K. (1992). The ecological validity of photographic slides and videotapes in simulating the service setting. *Journal of Consumer Research, 19*, 271–281.
- Berlyne, D. E. (1960). *Conflict, arousal and curiosity*. New York: McGraw-Hill.
- Borling, J. E. (1981). The effects of sedative music on alpha rhythms and focused attention in high-creative and low-creative subjects. *Journal of Music Therapy, 18*, 101–108.
- Brown, S. P., & Peterson, R. A. (1993). Antecedents and consequences of sales person job satisfaction: Meta-analysis and assessment of causal effects. *Journal of Marketing Research, 30*, 63–77.
- Bruner, G. C. II (1990). Music, mood, and marketing. *Journal of Marketing, 54*, 94–104.
- Crosby, L. A., Evans, K. R., & Cowles, D. (1990). Relationship quality in services selling: An interpersonal influence perspective. *Journal of Marketing, 54*, 68–81.
- Dollins, C. (1956). The use of background music in a psychiatric hospital to increase group conversational frequency. *Music Therapy, 6*, 229–230.
- Fiske, D. W., & Maddi, S. R. (1961). *Functions of varied experience*. Homewood, IL: Dorsey.
- Gorn, G. J. (1982). The effects of music in advertising on choice behavior: A classical conditioning approach. *Journal of Marketing, 46*, 94–101.
- Hevner, K. (1937). The affective value of pitch and tempo in music. *American Journal of Psychology, 49*, 621–630.
- Holbrook, M. (1981). Integrating compositional and decompositional analyses to represent the intervening role of perception in evaluative judgments. *Journal of Marketing Research, 18*, 13–28.
- Holbrook, M., & Anand, P. (1990). Effects of tempo and situational arousal on the listener's perceptual and affective responses to music. *Psychology of Music, 18*, 150–162.

- Holbrook, M., & Gardner, M. P. (1993). An approach to investigating the emotional determinants of consumption duration: Why do people consume what they consume for as long as they consume it? *Journal of Consumer Psychology*, 2, 123–142.
- Kellaris, J. J. (1992). Consumer esthetics outside the lab: Preliminary report on a musical field study. In J. Sherry and B. Sternthal (Eds.), *Advances in consumer research* (Vol. 19, pp. 730–734). Provo, UT: Association for Consumer Research.
- Kellaris, J. J., & Cox, A. D. (1989). The effects of background music in advertising: A reassessment. *Journal of Consumer Research*, 16, 113–118.
- Kellaris, J. J., & Kent, R. J. (1991). Exploring tempo and modality effects on consumer responses to music. In R. H. Holman and M. R. Solomon (Eds.), *Advances in consumer research* (Vol. 18, pp. 243–248). Provo, UT: Association for Consumer Research.
- Kellaris, J. J., & Kent, R. J. (in press). An exploratory investigation of responses elicited by music varying in tempo, tonality and texture. *Journal of Consumer Psychology*.
- Kellaris, J. J., & Rice, R. C. (1993). The influence of tempo, loudness, and gender of listener on responses to music. *Psychology & Marketing*, 10, 15–29.
- Leigh, T. W., & McGraw, P. F. (1989). Mapping the procedural knowledge of industrial sales personnel: A script-theoretic investigation. *Journal of Marketing*, 53, 16–34.
- MacInnis, D. J., & Park, C. W. (1991). The differential role of characteristics of music on high- and low-involvement consumers' processing of ads. *Journal of Consumer Research*, 18, 161–173.
- Madsen, C. K. (1987). Background music: Competition for focus of attention. In *Applications of Research in Music Behavior* (pp. 315–325). Tuscaloosa: The University of Alabama Press.
- Mehrabian, A., & Russell, J. A. (1974). *An approach to environmental psychology*. Cambridge, MA: MIT Press.
- Mehrabian, A., & Russell, J. A. (1975). Environmental effects on affiliation among strangers. *Humanitas*, 11, 219–230.
- Mezzano, J., & Prueter, B. A. (1974). Background music and counseling interaction. *Journal of Counseling Psychology*, 21, 84–86.
- Milliman, R. E. (1982). Using background music to affect behavior of supermarket shoppers. *Journal of Marketing*, 46, 86–91.
- Milliman, R. E. (1986). The influence of background music on the behavior of restaurant patrons. *Journal of Consumer Research*, 13, 286–289.
- Olney, T. J., Holbrook, M. B., & Batra, R. (1991). Consumer responses to advertising: The effects of ad content, emotions, and attitude toward the ad on viewing time. *Journal of Consumer Research*, 17, 440–453.
- Prueter, B. A., & Mezzano, J. (1973). Effects of background music upon initial counseling interaction. *Journal of Music Therapy*, 10, 205–212.
- Rethans, A., Swasy, J., & Marks, L. (1986). Effects of television commercial repetition, receiver knowledge, and commercial length: A test of the two factor model. *Journal of Marketing Research*, 23, 50–61.
- Russell, J. A. (1978). Evidence of convergent validity on the dimensions of affect. *Journal of Personality and Social Psychology*, 36, 1152–1168.
- Russell, J. A., & Mehrabian, A. (1978). Approach-avoidance and affiliation as

- functions of the emotion-eliciting quality of an environment. *Environment & Behavior*, 10, 355–387.
- Russell, J. A., Weiss, A., & Mendelsohn, G. A. (1989). Affect Grid: A single-item scale of pleasure and arousal. *Journal of Personality and Social Psychology*, 57, 493–502.
- Schacter, S. (1959). *Psychological affiliation*. Stanford, CA: Stanford University Press.
- Schurr, P. H., & Ozanne, J. L. (1985). Influences on exchange processes: Buyer's preconceptions of a seller's trustworthiness and bargaining toughness. *Journal of Consumer Research*, 11, 939–953.
- Smith, C. A., & Morris, L. W. (1976). Effects of stimulative and sedative music on cognitive and emotional components of anxiety. *Psychological Reports*, 38, 1187–1193.
- Smith, C. A., & Morris, L. W. (1977). Differential effects of stimulative and sedative music on anxiety, concentration, and performance. *Psychological Reports*, 41, 1047–1053.
- Sommer, D. (1957). The effect of background music on frequency of interaction in group psychotherapy. *Music Therapy*, 7, 167–168.
- Sonbanmatsu, D. M., & Kardes, F. R. (1988). The effects of physiological arousal on information processing and persuasion. *Journal of Consumer Research*, 15, 379–385.
- Stratton, V., & Zalanowski, A. (1984). The effect of background music on verbal interaction in groups. *Journal of Music Therapy*, 21, 12–26.
- Sujan, M. (1985). Consumer knowledge: Effects on evaluation strategies mediating consumer judgments. *Journal of Consumer Research*, 12, 31–46.
- Sujan, M., Bettman, J. R., & Sujan, H. (1986). Effects of consumer expectations on information processing in selling encounters. *Journal of Marketing Research*, 23, 346–353.
- Szymanski, D. M. (1988). Determinants of selling effectiveness: The importance of declarative knowledge to the personal selling concept. *Journal of Marketing*, 52, 64–77.
- Walters, J., Apter, M. J., & Svebak, S. (1982). Color preference, arousal, and the theory of psychological reversals. *Motivation & Emotion*, 6, 193–215.
- Yalch, R., & Spangenberg, E. (1990). Effects of store music on shopping behavior. *Journal of Consumer Marketing*, 7, 55–63.

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