EFFECTS OF STORE MUSIC ON SHOPPING BEHAVIOR

Richard Yalch

Eric Spangenberg

After a review of research on the use of store music, an experiment was conducted comparing the effects of background and foreground music on clothing store shoppers. In-store interviews revealed a preference for foreground music but customers' moods and unplanned purchases were not substantially enhanced by hearing foreground music. However, customers' perceptions of their shopping time varied with the type of music, depending on their age. Counter to expectations, the effects of music did not vary with the type of music, depending on their age. Counter to expectations, the effects of music did not vary with time of day. These results suggest that choosing to play store music solely to satisfy customers' preferences may not be the optimal approach but rather music should be varied across areas of a store that appeal to different-aged customers.

Many retailers and service organizations use some form of environmental music to enhance their atmosphere and influence customer behavior. For example, some restaurants use bright lights and fast-tempo music to encourage rapid turnover during lunch times when the demand for tables is high, but in the evening, when few customers are waiting use dim lights and slow music to encourage customers to linger and consume high-margin items such as cocktails and desserts. Although the importance of music in establishing an atmosphere is obvious little is known about how atmospheres affect customers.

In 1973 the concept of atmospherics was introduced.[2] It refers to the design of an environment through the use of colors, lighting, sounds, and furnishings to stimulate perceptual and emotional responses by consumers, and ultimately to affect their

Richard F. Yalch is Professor of Marketing and International Business at the University of Washington in Seattle. He earned his Ph.D. from Northwestern University in 1974, majoring in Marketing. His numerous research publications are concerned primarily with assessing how consumers respond to promotional efforts.

Eric Spangenberg is a doctoral student in marketing at the University of Washington. He earned his M.B.A. from Portland State University. He plans to do his dissertation research on some aspect of consumer behavior.

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behavior. Music is one of the most frequently used atmospheric factors to enhance the delivery of services to customers. Support for the use of music to enhance service offerings comes from studies conducted by psychologists and consumer researchers. Our review of this research suggested several possible effects from using music in a retail setting, and we have been conducting research to help us better understand these effects. This article reviews published research on the effects of music and then discusses one of our experiments.

Literature Review

Published research on music in retail settings is surprisingly limited but fairly consistent in showing that sales may depend on the type of music being played. For example, research sponsored by the MUZAK Corporation, conducted in two grocery stores, reported higher sales per customer when MUZAK music was played, compared with radio music, contemporary environmental music, or no music.[9] Another supermarket study reported a 38 percent increase in sales when the store played slow music compared with fast music.[4] This sales increase was attributed to music's effect on shoppers' pace of movement in the store. They spent 17 percent greater time traveling between two observation points in the store when slow music was played relative to fast music. In a second study by the same researcher, it was reported that a restaurant's customers spent more time at their tables, consumed more alcoholic beverages, but ate no more food when slow music was played compared with fast music.[5] However, not all research has found a sales effect. A study looking at the effects of volume determined that shoppers spent less time in a store when loud music was played compared with soft music but it saw no effect on sales or customer satisfaction.[7] It is noteworthy that in all these studies, any improvement in sales was attributed to customers spending more time in the outlet, either because they moved at a slower pace or merely because they stayed longer.

A significant amount of research on the effects of music in education and in work place environments has been conducted. Much of this research involves the use of music as a learning aid, an issue relevant to advertising rather than to service delivery. However, some of this research is useful in that it provides a basis for understanding how music may affect human behavior in a retail setting. The following application illustrates how psychological research might be applied to retailing situations. A psyhological experiment found that discussion groups spent a longer time and had more verbal interaction when exposed to soothing background music compared to stimulating music or no music.[8] This finding suggests that soothing music would be appropriate in retail settings such as a clothing store, where it is desirable for the salesperson to engage the customer in conversation prior to the purchase decision.

This psychological experiment further reported that soothing music's effect is clearest in novel or anxiety-arousing situations. Thus the choice of music would be more important in stores selling high-priced, infrequently purchased items than in stores offering low-priced, frequently purchased goods. However, generalizing to specific retail or restaurant environments requires knowing what behaviors are desired. For example, music that facilitates discussion between individuals may be desirable where customers are likely to seek the advice of the salesperson but be undesirable in a self-service grocery store, where customers engaged in conversation tie up the shopping carts and clog the aisles.

Development of Research Questions

In our review of published research, several issues became apparent to us which suggested the need for an in-store experiment. The first issue concerned what aspects of shopping might be affected by the choice of store music. Although most part research has considered time to be a critical factor in explaining how music affects sales, only *actual* time has been considered. Little consideration has been given to customers' perceptions of time. Psychological research has shown that the tempo of environmental sounds can alter individuals' perceptions of the amount of time that has elapsed. If individuals budget a

certain amount of time to shopping and they perceive that this time period has elapsed, they may decide to quit shopping.

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Another subjective factor that might be influenced by music is the customer's mood. Music clearly can alter one's mood, as is evidenced by its use in movies to augment various scenes. It also seems reasonable to expect that buying decisions reflect shoppers' moods. On the basis of this reasoning, we decided to focus our research on mood and perceived time as key measures of music's impact in a retail setting.

The second consideration in our research was the choice of music. Music can be characterized in many ways, such as by type (e.g., popular, country and western, and classical), tempo, and presence or absence of vocals. One of the most frequently used classifications in between foreground and background. They differ primarily in that foreground music includes original artists and lyrics, whereas background music uses studio musicians playing instrumental. Also background music tends to be more restricted in its range of tempos, frequencies, and volume. Some music suppliers claim that foreground is more suited for retail environments than is background music.[6] Generally, foreground music commands more attention from customers while they shop. We wondered, then, whether foreground music might alter their mood and their perception of the amount of time elapsing more than would be the case with background music.

Another consideration in the choice of appropriate music in a retail setting was recognizing that customers' music preferences vary. Although it might be possible to segment a store's customers by music preference, it is more common to choose the type of music that is preferred by the majority of customers sharing some key demographic characteristics. For example, radio stations target listeners varying in race, age, and sex by their choice of music format. Age appears to be strongly associated with preference differences in music format. These differences are evident in shopping environments, with young-adult-oriented stores playing different music than Brooks Brothers. Given this observation, we wondered if different-aged customers reacted differently to foreground and background store music.

The final issue to be explored was the time of day. Customers clearly differ in their purpose for shopping. Some have specific purchase intentions and enter a store expecting to fulfill these intentions. Others are less certain about their needs and may in fact have little intention to purchase anything. These browsers may expect to acquire product information or may be merely killing time. However, a buying impulse could occur, resulting in an unplanned purchase. Discussions with retailers revealed some feelings that the percentage of shoppers fitting into either category, purposeful versus leisurely shopping, varied by time of day. A greater percentage of purposeful shoppers was expected during the morning than during the evening or on the weekends. Given that it was possible that music would affect purposeful shoppers differently than it would leisurely shoppers, we decided to study its effects during different time periods.

The Field Study and Predictions

A field experiment was conducted to explore the relationship between types of music provided in a retail store and in-store shopping behavior. The experiment was conducted at a department store that is part of a major West Coast chain. The retail store selected has two adjacent departments catering to different-age shoppers and typically served by different types of music. The experiment involved systemically varying the music played in the departments. Interviewers stationed at the exit doors intercepted shoppers and asked them to respond to a brief

questionnaire as part of a university's research project. A major part of the questionnaire concerned the shopper's mood, and the responses were later combined to form three measures of mood. Other questions concerned the shoppers' age, unplanned purchases, and an estimate of how much time was spent shopping. Details of the methodology are provided in Appendix A.

Three causal factors were of interest. One was the type of music being played in the store, foreground or background. In addition to varying the music between these two types, a no-music condition was used to assess the effects of using any type of music. The second causal factor was age. The existence of two departments appealing to individuals of different ages made it convenient to select samples with a wide range of ages and to divide them into two age groups (24 and under versus 25 and older) based on store management's view of the target customer for each department. A third variable was the time period when individuals were shopping. Observations occurred in two-hour blocks during a variety of time periods (morning, afternoon, evening, weekday and weekend) to ensure that both shoppers with a specific purpose and those merely browsing were interviewed, assuming that this aspect varied with these time periods.

The basic predictions were that foreground music would result in a more positive mood that background and that either would be better than no music. Second, because it was more distracting, customers' perceptions of time were expected to be longer when exposed to foreground music than to background music. Further, it was thought that any mood effects would be of more importance to leisurely shoppers than to purposeful shoppers, whereas time effects might impact purposeful shoppers more than leisurely shoppers. Finally, these effects of store music were expected to depend on the shoppers' age. Younger shoppers were expected to react more positively to foreground music than to background music, and the opposite was expected for older shoppers.

Experimental Findings

Table 1 presents the results of the experiment broken out by treatment condition, with the scale ranges in the far right columns. Our first question concerned the relationship between store music and customer mood, and these results are presented in the first three rows of the table. If we look at customers' state of mind when shopping, we see that foreground music resulted in a higher level of perceived activity while shopping than did background music. Interestingly, the no-music condition was even more arousing than the foreground music condition, possibly because of the loss of sound masking provided by music. Another aspect of mood, pleasant versus unpleasant, was unaffected, with the exception of slightly more positive feelings among the younger shoppers exposed to the background music. The third factor, a feeling of being dominant or submissive (i.e., the extent to which a customer feels in control of the interaction with the salesperson or controlled by the salesperson), did not vary in any significant way.

Also shown in Table l are the effects of music on shoppers' spending more money and time in the store than they had expected ad their liking of the music. The only significant difference was for liking, with the customers expressing a somewhat positive attitude toward the foreground music (4 would be neutral) and a negative attitude toward the background music.

The next issue was whether the type of music played in the store had similar effects for young and older shoppers (See Table 2). It was predicted that individuals who usually listened to Top Forty music (those under 25 years of age) would respond better to the foreground music than the background music. The opposite was expected for those who tended to listen to easy-listening-type or background music (individuals age 25 or older). However, the analysis of reported liking of the music revealed an unexpected finding. Both young and old shoppers rated the foreground music as more desirable than the background music, though there was a sharp decline in liking of the foreground music among shoppers 50 and older. Among those

under 50, however, the foreground music was consistently better received than the background music. This finding was particularly surprising because conversations with salespersons in the two departments revealed that they frequently received complaints from older shoppers about the obtrusiveness of the foreground music.

The most interesting effect of age was a significant interaction between type of music and age of shopper on perceived time spent shopping. Younger shoppers reported that they spent more time shopping than they planned when exposed to the background music, whereas older shoppers reacted this way to the foreground product. The research design does

Table 1
Effects of Store Music

Measures	Foreground Music	Background Music	No Music	Lowest Possible	Highest Possible
Active Mood	23.0	21.2[a]	24.7[a]	5	35
Pleasant Mood	46.5	48.2	48.0	9	63
Dominant Mood	12.9	12.8	12.2	3	21
Unplanned Buying	2.7	3.4	3.2	1	7
Unplanned Time Spent	3.6	4.0	3.3	1	7
Liking of Music	4.8[b]	3.4[b]	—	1	7
Group Size	33	32	21		

[a]Means are significantly different from each other ($F[1,54]=3.8$, $p<.03$) indicating shoppers felt more active when there was no store music compared with background music.

[b]Means are significantly different from each other ($F[1,61]=8.1$, $p<.01$), indicating shoppers preferred the foreground music to be the background music.

Table 2
Effects of Store Music by Age of Shopper

Measures	Under 25		25 and Over	
	Foreground	Background	Foreground	Background
Active Mood	22.3	20.6	23.9	22.1
Pleasant Mood	46.7	50.2	46.4	46.1
Dominant Mood	13.0	12.1	12.9	13.4
Unplanned Buying	2.4	3.8	2.6	3.0
Unplanned Time Spent	2.6[a]	4.6[a]	4.9[a]	3.4[a]
Liking of Music	4.9	3.3	4.7	3.5
Group Size	18	15	17	15

[a]The interaction between age and type of music is significant ($F[1,61]=14.6$, $p<.001$), indicating that younger shoppers felt they spent more time when listening to background music whereas older shoppers felt they spent more time when exposed to foreground music.

not allow us to determine whether actual time varied or only perceived time. There were no significant interactions between music and age on the mood measures.

A third set of predictions involved time of day as a moderator of the effects of store music on shoppers. It was predicted that shoppers would be in a better mood because of their preference for the foreground store music and this feeling would result in more unplanned purchases during leisurely shopping times than during purposeful times. The results (Table 3) revealed two significant effects. During the purposeful shopping times (mornings and afternoons), shoppers reported being in a more active mood and making fewer unplanned purchases when listening to foreground music compared with background music. There were no differences for these measures during the leisurely shopping times (evenings and weekends).

Conclusions

Despite widespread beliefs that music enhances a retail environment and thus results in increased store traffic, greater customer satisfaction, and higher sales, a literature review revealed minimal direct evidence supporting these beliefs. Consequently, a program of research was started to enhance our understanding of the complex relationship between retail shopping and such atmospheric factors as music.

The initial effort was successful in establishing that this research can be conducted in a field setting without disrupting normal business activities. Further, despite its limited scope and sample, the results suggest that shoppers do respond psychologically and behaviorally to environmental factors such as music even though few shoppers consciously note the presence of music. However, our ability to measure these effects is still relatively primitive, as is evidenced by the small differences in the psychological scales between the groups exposed to different types of music.

Perhaps the most intriguing finding of the initial research is the clear difference in perceptions of the amount of time spent shopping as a function of shoppers' age and type of music. When shoppers were exposed to music that they normally listen to (foreground for young shoppers and background for older

Table 3
Effects of Store Music by Time of Day

	Purposeful Times		Leisurely Times	
	Foreground	Background	Foreground	Background
Active Mood	27.1[a]	22.4[a]	20.7	21.0
Pleasant Mood	44.0	47.8	48.0	48.3
Dominant Mood	12.5	13.0	13.2	12.7
Unplanned Buying	2.4[b]	4.8[b]	2.8	3.1
Unplanned Time Spent	3.8	4.2	3.5	4.0
Liking of Music	4.4	3.3	5.1	3.4
Group Size	12	6	21	26

[a]The interaction between age and type of music is significant ($F[1,61]=3.6$, $p<.07$), indicating that during purposeful shopping times shoppers were more active when foreground music was playing. There was no effect during leisurely shopping times.

[b]The interaction between time and music is significant ($F[1,61]=3.7$, $p<.06$), indicating that during purposeful shopping times, shoppers made more unplanned purchases when listening to background music. There was no effect during leisurely shopping time.

shoppers), they reported spending less time in the store than they had intended relative to when they listened to music they do not usually select (background for young shoppers and foreground for older shoppers). We have two possible explanations. One is that shoppers who experience a nontypical environmental factor pay more attention to what is happening, and their ability to recall more events results in their perception of time as being greater than it actually was. Correspondingly, familiar environments require less monitoring,customers recall less of what happened while they shopped, and consequently they think that little time has passed. This phenomenon is probably similar to one's perception of how much longer it takes to drive to a destination than to return.

An alternative explanation is that individuals actually increased or decreased the amount of time they shopped depending on the type of music being played. If so, their perceptions may reflect this unanticipated change from the amount of time they had planned or normally shop. Additional research exploring this issue is warranted and should include measures of actual as well as perceived times.

Managerial Implications and Recommendations

It is interesting to speculate about how store managers should respond to our findings about the effects of music on shoppers. First, we would like to encourage more research in this area. Most stores select music on the basis of its appeal to its customers and, to a lesser extent, its employees. Research on store music and our findings do not establish that liked music is necessarily the most appropriate music to use in all situations. Serious consideration should be given to establishing desired shopper behaviors and how music might affect these behaviors. For example, more social interaction between shoppers and the sales staff might be encouraged by music played at a low volume. On the other hand, managers can encourage shoppers to shop faster by playing faster music or slower by playing slow music. Shoppers might perceive merchandise to be higher priced when presented with classical music and lower priced when presented with country and western music.

A second recommendation concerns the relationships between store music, moods, and shopping behavior. Although our research was not conclusive, a substantial body of research has established that music can alter moods and that mood changes affect behaviors. For example, academic research has established a classical conditioning effect by which individuals evaluated products more favorably when presented with liked music than with disliked music.[1] However, we again caution about selecting music merely because it is liked. For most purchases, individuals feel good about acquiring something new and can be expected to be in a good mood. However, for some purchases there may be a great deal of anxiety, and music that excites individuals could convert this anxiety to anger. Therefore, soothing music might be more appropriate.

A third recommendation is that services should not expect one type of music to be appropriate for all situations. Our study showed that age determined how shoppers responded to the store music even though the range of ages for the customers in the particular store studied was relatively small. Other factors such as the income, family life cycle, and education of the customers would seem good possibilities for segmentation. Thus a department store that appeals to customers varying in their demographic characteristics would probably benefit by offering a variety of different music for its different departments, depending on the profile of each department's target customers. Thus a department store might play rock in its teen-oriented departments, soft rock for its adult-oriented departments, classical in jewelry and furs, and country and western in outerwear.

Another consideration is whether the type of music should be varied over time. Stores frequently adjust their music according to the time of year, most clearly with the playing of holiday music in December. The results of this study suggest that consideration be given to varying the music between mornings, afternoons, and evenings as well as during the week and the weekend.

Many other effects of store music remain to be explored. Our current research plans include determining the effects of store music on a store's image, customers' evaluations of individual products, and total shopping time. Atmospherics remain an area of environmental psychology offering great potential for improving the efficiency and effectiveness of retail and service operations.

Appendix A: Research Methodology

Method

The final sample consisted of 86 shoppers in two men's departments at a mail department store in a major Northwest city. Respondents represented each of the cells in a three (music variation) by two (age of shopper) by two (time shopped) design. The experiment required subjects to respond to several questionnaire items after shopping under the conditions described below. The study took place over a four-day period that included weekdays and a weekend. Dates were selected in order to avoid two substantial summer sales at the store.

Procedure

One or two interviewers were stationed at the exit doors of two men's departments in a clothing store. After determining that a shopper had visited one or the other (but not both) of the two departments, the individual was intercepted before exiting the store and asked to respond to a brief questionnaire as part of a university's research project. The questionnaire was self-administered with clipboards and pencils provided by the interviewer. After completing the questionnaire, the respondent was thanked. Approximately 20 percent of the persons declined to be interviewed.

Experimental Factors

Three sound conditions were used: foreground (popular Top 40 with lyrics), background "easy listening" without lyrics), and no music. The classification of foreground and background music was chosen to be consistent with the environmental music industry's terminology. Each condition was provided in both departments. The departments adjoined one another with no walls, allowing a single sound system to be utilized in both departments simultaneously. Music was controlled by varying the volume and balance levels of the speakers in each department so only one music variation was playing at any given time. In the no-music condition, both sets of speakers were off.

A second factor was time of day. Shoppers differ in their goals. Some have a clear need in mind and shop only as long as necessary to find a suitable product. Others may have a variety of needs with none pressing, so they shop more leisurely and are less likely to make a purchase on a particular shopping trip. Of course, both types are found during all times of day and days of the week. Popular writings and conversations with retail salespersons revealed a belief that shoppers vary in their orientations toward shopping depending on the time of day. Morning shoppers are more likely to be purposeful than evening and weekend shoppers, who are more likely to be leisurely. Because the questionnaire had to fit within a one-page limit and we were unable to inquire directly about each shopper's orientation, we used time of day as a surrogate measure of orientation. Each music condition (foreground, background, and none) was played once during purposeful shopping times (in the morning), and twice during leisurely shopping times (either in the evening or weekend). Such an approach understates the effect of orientation because persons shopping with a certain orientation at a time when shoppers with another orientation predominate are misclassified. In the future, questionnaire responses should be used to make this determination.

The third factor was the age of the shopper. Subjects were drawn from shoppers in two departments: Young Men's Active Clothes (oriented to men ages 15-23) and Men's Sportswear (appealing to men over age 20). By choosing these two departments, we were able to contact individuals varying substantially by age. However, it turned out that the departments were not perfectly segmented. Of the 57 shoppers in the Young Men's

Department who were surveyed, 22 or 39 percent were over 25, and 11 of the 29 persons (38 percent) in the Men's Sportswear Department were under 25 years old. Consequently, having included an age question in the survey, we used age rather than department shopped to identify which shoppers were most likely to be attracted to the foreground and background music.

Questionnaire Responses

The one-page questionnaire consisted of three parts. The first part briefly described the study as a university research project. The second part consisted of 23 bipolar adjectives chosen to assess the shopper's mood while shopping. These included questions such as: are you happy or unhappy, sleepy or awake, in control or under control? Responses to these items were factor-analyzed to identify which items were related to each other. Items that had high factor loadings and that have been shown to relate to each other in the past[3] were combined to form three mood scales (with the number of items for each dimension listed in parentheses: Active-Inactive (5 items), Pleasant-Unpleasant (9 items), and Dominant-Submissive (3 items). The last part had five questions. Respondents indicated whether they felt that they had spent more or less money than they planned before entering the department, whether they had spent more or less time than they planned, their liking or disliking of the store music, their age, and whether they were regular shoppers of the store. Constraints placed on the research effort by the store management prevented our collecting measures of actual time and sales.

END NOTES

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