

**THE INFLUENCE OF BACKGROUND MUSIC ON SHOPPING BEHAVIOR:  
CLASSICAL VERSUS TOP-FORTY MUSIC IN A WINE STORE**

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As part of a field experiment in a large U.S. city, the background music (classical versus Top-Forty) in a centrally located wine store was varied over a two month period. The results of an ANOVA indicated that the classical music influenced shoppers to spend more money. Additional findings suggest that, rather than increasing the amount of wine purchased, customers selected more expensive merchandise when classical music was played in the background. MacInnis and Park's (1991) notion that music is more persuasive when it "fits" the persuasion context is employed to account for these results.

**INTRODUCTION**

Kotler (1973-1974) coined the term atmospherics to describe various visual (color, brightness, size, shape), aural (volume, pitch), olfactory (scent, freshness), and tactile (softness, smoothness, temperature) dimensions of a store that can influence the purchase probabilities of consumers. Although Kotler requested that further research be conducted regarding the impact of these in-store factors on behavior, the academic literature on this topic remains rather sparse. The research that has appeared tends to be limited to a rather narrow range of consumer reactions. Specifically, researchers have focused on overt quantitative indicators (i.e. dollar amount spent, time spent, etc.) or perceptions of various dimensions of store image (see Bellizzi, Crowley and Hasty, 1983), while largely ignoring other aspects of shopping behavior (Eroglu, Ellen, and Machleit, 1991).

Moreover, due to the difficulties of conducting atmospheric research in the field, much of the emergent research has relied on verbal (i.e. Gardner and Siomkos, 1986) or visual (i.e. Eroglu and Machleit, 1990) simulations of retail environments. While these laboratory simulation techniques offer the advantages of methodological expediency and experimental control, their ability to realistically capture the desired store atmosphere is suspect. The literature on atmospherics would, therefore, be enhanced by research examining the impact of atmospheric variables on a wider range of consumer behavior in an actual retail setting. Consistent with this objective, this study entailed the observation of: (1) the number of shelf items examined, handled, and purchased, (2) the shelf location of the items examined, handled, and purchased, (3) the total dollar amount of the merchandise purchased, (4) the total amount of time spent shopping, and (5) the frequency with which patrons consumed merchandise on site, under two background music conditions (Top-Forty versus classical) in a downtown wine store.

## **THE LITERATURE ON THE EFFECTS OF MUSIC**

[See Bruner (1990) for a more detailed discussion of the various effects of music on moods, preferences, and general behavior.] The number of investigations addressing the influence of music on consumer behavior is still rather small. Although researchers have examined the effects of music volume (Smith and Curnow, 1966) and tempo (Milliman, 1982, 1986) on certain aspects of shopping behavior, Bruner (1990) suggests that the genre of the background music is likely to produce stronger effects on perceptions and preferences. Further, since preferences for musical genres are strongly influenced by individual differences (see Cupchik, Rickert, and Mendelson, 1982), varying the genre of a store's background music is more likely to produce differential effects across customer groups.

Yalch and Spangenberg (1990) examined this possibility by comparing the effects of easy-listening versus Top-Forty music on shoppers' estimates of the amount of time they spent shopping. They found that younger customers (under 25) reported spending more time shopping when exposed to easy-listening music, whereas older customers (25 and over) thought they were in the store longer when exposed to Top-Forty music. Yalch and Spangenberg speculated that shoppers who encounter non-typical environmental factors (i.e., younger shoppers exposed to easy listening music) perceive intervals of time being longer than they actually are.

The Yalch and Spangenberg study raises the possibility that the given musical genres can produce highly specific perceptions by consumers. In the context of the present study, the objective was to identify the background music that would create a setting appropriate for the purchase and consumption of wine. MacInnis and Park (1991) have formalized this notion by defining the "fit" of music as "consumers' subjective perceptions of the music's relevance or appropriateness" to the persuasion context (p. 162). Although MacInnis and Park were concerned with the persuasive impact of music in an advertising setting, their notion of "fit" seems applicable to the impact of atmospheric variables as well. The task then was to identify the music that best fits the context of examining, purchasing, and tasting wine.

## **WINE TASTING, CLASSICAL MUSIC AND SOPHISTICATION**

Arlott (1984) presents the work of several authors that imply that wine tasting is associated with a certain degree of foreignness, sophistication, and even snob appeal. In discussing the undertaking of his book on wine, Kramer (1989), for example, notes that:

At the time I knew nothing of wine and had no intention of crossing its path. Wine seemed forbidding, snobbish, and, above all, daunting in its complication. I was suspicious of its trappings and cowed by its air of sophistication (p. 8).

Empirical evidence supports this intuition. Lesch, Luk, and Leonard (1991) found that among women who consumed alcoholic beverages, wine drinkers in comparison to beer

and spirits consumers, were generally younger, better educated, and earned higher incomes. Wine drinkers also had a higher appreciation for art and lower regard for traditional female roles.

This suggests that wine purchasing, tasting and consumption are associated with higher socio-economic status, prestige, sophistication, and complexity. What kind of music would "fit" such a context? Farnworth (1969) offers the following insight:

But the diametrically opposed view, and quite possibly the more common one is [that]...the musically eliteCthe critics, the genius composers, and the musicologistsChave discovered or on their way to discovering what constitutes 'good taste.' One's jazz loving friends have a taste of low order; a higher order of taste is possessed by the man who loves the music of Mendelssohn but not that of Beethoven or Bach; and a still higher status has been reached by those who are more attracted to the works of Beethoven and Bach than to those of Mendelssohn (p. 98, insert ours).

Likewise, DiMaggio (1986) has developed a model describing the patronage behavior of performing arts audiences. He recommends that firms emphasizing highly artistic/cultural (as opposed to highly extravagant/popular) performances should charge a higher admittance price to the select, well-to-do audiences having more refined tastes. Stone (1983) provides a more detailed discussion of the association of classical music with maturity, formality, and higher socio-economic status. Overall, the implication is that, if wine tasting and consumption are sophisticated, prestigious, complicated, and even snobbish behaviors, then the classical genre of music appears to be well suited for complimenting these activities.

## **PROPOSITIONS**

Although this study was conducted on a largely exploratory basis, the general proposition suggested by the aforementioned works is that playing classical music in the background will increase the amount of merchandise: (1) examined, (2) handled, and (3) purchased, and (4) the amount of time patrons spend in the store relative to playing other genres of music in the background.

## **METHOD**

The study was conducted in a downtown restaurant in a large southeastern city. The restaurant featured a wine cellar, clearly visible through a glass section of the floor, that was open to patrons who wished to just visit, sample some wines, or purchase some bottles of wine. This unique setting afforded the opportunity to examine the impact of background music on shopping, purchase, and consumption behavior.

## **Data Collection**

All observations were recorded between 6 p.m. and 11 p.m. on successive Fridays and Saturdays beginning May 4, 1990 and ending July 28, 1990. Each of the two experimental conditions (i.e., classical versus Top-Forty music) was counterbalanced with respect to the day of the week via random assignment of the latter to the former. Further, no data were collected on dates where the researchers were able to identify exogenous factors (i.e., holidays, special events, etc.) likely to influence demand.

The data were collected via direct observation. Each consumer was observed as s/he entered the wine cellar. The observer, who was naive to the research hypotheses, stood behind a counter labeled 'Employees Only' and posed as an inventory keeper. From that position he was easily able to observe each consumer as s/he perused the merchandise in the cellar. Since the wine cellar averaged eleven customers per evening, there was rarely more than one customer in the store at any time, making observation of search and purchase behavior a relatively easy task.

## **Independent Variables**

**Manipulated Variables:** Prior to the study, musical selections from several genres of music, including classical and Top-Forty, were randomly played on a given evening according to the whims and preferences of the manager. Classical versus Top-Forty background music was manipulated by repeatedly playing only selections from one of the two genres on a given night. The music played in the classical condition consisted of: The Mozart Collection, Mendelssohn Piano Concerto #2, My Favorite Chopin, Vivaldi - The Four Seasons. These recordings were selected because they were similar to the classical selections played in the wine cellar before the study began. In the Top-Forty music condition, the following sections were played: The Traveling Wilburys: Volume 1, Fleetwood Mac: Behind the Mask, Robert Plant: Manic Nirvana, Rush: Presto. In order to qualify as being "Top-Forty," the recordings had to be one of Billboard Magazine's top forty albums (tapes) and have a single (song) in Billboard's top twenty singles list in the six months prior to the study. The volume of the music was held constant across the two conditions.

**Measured Variables:** Customer type was measured by classifying patrons as being either single male, single female, a male/female couple, or a group of people not consisting of male/female couples. Patrons were also classified into the following customer age categories: 20 to 29, 30 to 39, 40 to 49, 50 to 59, 60 and up. If a couple or group of consumers were judged to consist of members belonging to more than one age category, this variable was coded as missing data.

## **Dependent Variables**

**Information Search:** Similar to Hoyer (1984), information search was measured by observing subjects' inspection of the merchandise on the shelves. Four variables were recorded. The observer counted the number of items examined. This was defined as the

sum of all items (i.e. wines) for which the customer: (1) stopped to read the shelf label for more than three seconds, (2) pointed to the bottle on the shelf, and/or (3) touched the bottle on the shelf. The observer also counted the number of items handled. In order to qualify as being handled, an item must have been pulled from the shelf by a customer. Since the wine bottles were stored at three distinct shelf levels, with the middle level corresponding to the "eye level" of an adult of average height, the observer was able to record the shelf location of items examined and the shelf location of items handled.

**Purchase Behavior:** Both observational and objective measures of purchase behavior were employed in the present study. The observer recorded the number of items purchased, the shelf location of the items purchased, and, since he had access to the register, the total dollar amount of each customer's purchase.

**Consumption Behavior:** Since the wine store contained a dining area for wine tasting and/or general consumption, the observer noted whether any wine was consumed in the wine cellar.

**Additional Measures:** Due to some of the relationships and effects implied in the literature review, the observer recorded the amount of time each customer spent in the cellar by noting the exact time at which the customer(s) entered and exited the wine cellar.

## **Data Analysis**

Because this study was conducted in the field rather than the laboratory, individual subjects were not randomly assigned to each music condition. Rather, the researchers employed a counterbalanced experimental design wherein the successive Fridays and Saturdays of the sixteen week period of the study were randomly assigned to experimental conditions. Thus, background music (classical versus Top-Forty) and day of the week (Friday versus Saturday) were completely crossed experimental factors with individual shoppers nested within day of the week. Consistent with the recommendations of Keppel (1982), individual night rather than individual shopper is the appropriate unit of analysis for an ANOVA.

However, since subjects were "assigned" to experimental units conditions on the basis of having happened to enter the wine store on a particular Friday or Saturday for whatever reason, the observed variation between nights in each condition could be due to differences that existed between the groups quite independent of the music manipulation (i.e. selection bias).

### TABLE 1

#### MEANS AND STANDARD DEVIATIONS BY MUSIC CONDITION

In order to check for preexisting differences between groups, chi-square analyses were performed on cross-tabulations of background music condition with each of the two

primary sample descriptors, customer age and customer type. Although neither of the two analyses reached traditional levels of significance, both approached significance (chi-square  $< .11$  for type and chi-square  $< .12$  for age). Thus, the influence of music on each dependent variable is reported after the variance shared with customer age and type has been removed from the latter.

A second major threat to internal validity of the study concerns exogenous events (i.e. a professional basketball game at a nearby arena) that might have influenced store traffic on a given night. In order to remove variance in each dependent variable due to differences in levels of store traffic, average behaviors rather than total behaviors constituted the observations for a given night. Thus, there were sixteen observations for all dependent variables, each representing an average for the store on a given night, included in the ANOVAs reported below.

## RESULTS

Table 1 presents the means and standard deviations for each dependent variable by music condition. There was little or no impact of background music on the number of shelf items examined ( $F = 0.02$ ,  $p < .90$ ), the number of items handled ( $F = 0.93$ ,  $p < .35$ ), the number of items purchased ( $F = 0.65$ ,  $p < .43$ ), the frequency with which patrons sampled wine on site, (Chi-square =  $0.49$ ,  $p < .49$ ), or the amount of time spent in the store ( $F = 0.34$ ,  $p < .57$ ). [Interestingly, shoppers examined, handled and purchased significantly more items from shelf level two, lending credence to the emphasis that salespersons place on obtaining "eye level" shelf space.] Background music did, however, influence the amount of money shoppers spent ( $F = 6.01$ ,  $p < .02$ ) with classical music producing a higher level of sales than Top-Forty music. When the variance shared with customer age and customer type was removed from sales, the influence of music remained significant ( $F = 4.74$ ,  $p < .032$ ). [Given the exploratory nature of the five implied hypotheses, a family-wise correction was applied to all analyses (see Keppel, 1982, pp. 145-46). The reported effect of background music on sales is significant at a family-wise error rate of 0.15.]

The findings regarding the impact of background music on total sales and the number of items purchased suggests that rather than influencing patrons to purchase greater quantities of merchandise, the classical music led them to buy more expensive items. The implications of this result are discussed below.

## DISCUSSION

The result that shoppers purchased more expensive merchandise when classical music was played in the background is consistent, if not overwhelmingly supportive, of MacInnis and Park's (1991) contention that music must fit the persuasion context in order to produce the desired outcome. If consumers associate wine consumption with prestige and sophistication, then Top-Forty music may provide an incompatible cue, communicating, as Konecni (1982) suggests, a more common, less refined environment. This explanation suggests that retailers should devote considerable attention to the

symbolic meaning underlying each purchase experience. If consumers are seeking sophistication, then in-store cues must suggest, and even facilitate that experience. The same holds for other sought shopping experiences like excitement, relaxation, etc.

It is also possible, however, that consumers had very little experience purchasing wines, and thus had only vague expectations and intentions upon entering the cellar. Many customers, in fact, commented that they had never visited a wine cellar. If this was the case, then the background music may have operated independently of the expected purchase experience. At least two explanations for the results are suggested under this scenario.

One possibility, suggested by the work of Markin, Lillis, and Narayana (1976), and an anonymous reviewer, is that, given the unfamiliar setting of the wine cellar, consumers, consciously or unconsciously, sought external cues as to appropriate behavior. The classical music may have communicated a sophisticated, upper class, atmosphere, suggesting that only expensive merchandise should be considered. Customers may even have felt pressure to conform to the setting implied by the music by purchasing expensive wine.

A second possibility is that the background music communicated to shoppers the price and quality of the merchandise in the store. Yalch and Spangenberg (1990) suggest that any retailer wishing to convey a high prestige, high price image should consider classical background music. The results of the present study support this contention. It is possible that shoppers, being somewhat unfamiliar with wine cellars and wines in general, used the classical music as a cue and inferred that the cellar contained mostly high priced merchandise. As noted by a second anonymous reviewer, a "no music" control condition would have been helpful for discriminating the former explanation, which implies that Top-Forty music inhibited sales, from the latter two, which suggest that classical music enhanced sales.

It is interesting that the number of items examined, handled, and purchased, the total amount of time spent in the store, and the decision to taste wines on site were unaffected by the background music. A potential explanation for these null results, suggested by an anonymous reviewer, is that various aspects of musical selections affect perceptions and behaviors differently. Most of the null results were obtained for actual behaviors. Perhaps musical tempo, rather than genre, produces a stronger influence on these variables (see Milliman, 1982, 1986). However, musical genre may be more integral to affecting (conscious) perceptions regarding appropriate behaviors, merchandise quality, etc (see Bruner, 1990).

## **LIMITATIONS**

As with any field experiment, this study is limited by two distinct but related shortcomings affecting internal validity. The first concerns a selection bias. Since subjects were "assigned" to experimental conditions on the basis of having happened to enter the wine store on a particular day for any given reason, it is possible that mean

differences in information search behavior, purchase intentions, etc. existed among the experimental groups quite independent of the actual treatments. We attempted to assess selection bias by examining the distributions of customer age and customer type within each lighting condition. However, numerous other differences may have existed between the two groups, thus biasing our interpretation of the observed variation in total sales by music condition. The second threat to internal validity concerns the inability to control for exogenous factors that might have influenced the amount of store traffic on a given night. Since the dependent variables of the study were average rather than total behaviors, external influences on store traffic need not have influenced the results directly. However, the literature suggests that an individual shopper's behavior depends on the number of other customers present in the store. Further, this research implies that the presence of other shoppers may produce either beneficial (Kotler, 1973-74) or detrimental (Harrell, Hutt, and Anderson, 1980; Eroglu and Harrell, 1986; Eroglu and Machleit, 1990) effects for the retailer. Although the wine cellar rarely contained more than two customers, the interpretation of the results should be tempered somewhat due to the failure to control for these social environmental variables.

A second shortcoming of this research concerns the inability to assess the reliability of the observational measures due to reliance on a single judge. Although single observers have been employed in previous research on atmospherics (see Milliman, 1982), the behaviors to be recorded were simple in nature (i.e. time spent in a specified area) ensuring a reasonable degree of reliability (see Carlsmith, Ellsworth, and Aronson, 1976). The observational measures of information processing activity in the present study were somewhat more complex. Hoyer (1984), however, relied on a single observer to measure the information search and choice processes of supermarket shoppers. Like Hoyer, the authors of the present research attempted to minimize measurement error by developing: (1) highly specific descriptions of the behaviors to be observed, and (2) a coding scheme that was easy to implement. It was hoped that these precautions, combined with the low number of customers on a per hour basis, would produce an acceptable level of accuracy.

A third limitation of this research concerns the manipulation of classical versus Top-Forty music. First, as discussed above, since the experimental design did not include a "no music" control condition, it is difficult to determine whether classical music facilitated the selection of expensive wine, or whether Top-Forty music inhibited such selections. In addition, although the popular selections were randomly chosen from a population of cassettes determined to be the most popular by various music publications, no such procedure was employed in determining the classical selections. It is, therefore, difficult to say whether the latter music condition adequately represented the classical music genre. Moreover, the manipulation may have been confounded with several other dimensions of music (i.e. tempo, pitch, familiarity) known to influence perceptions and behavior (see Bruner, 1990).

Finally, this research failed to directly assess the "fit" of the music to the persuasion context (see MacInnis and Park, 1991), but rather inferred fit on the basis of second-hand sources. Although the present study was largely exploratory in nature, a more direct indicant of fit would have been desirable. Similarly, the work of Mehrabian (1976) and

Donovan and Rossiter (1982) has focused on the dimensions of subjective experience that mediate the impact of atmospheric variables on behavior (see also Owens, 1992). However, the reluctance of store management to employ intrusive measures prevented the assessment of subjective reactions, thus leaving their status as mediators untested. Of course, the pretesting of various musical selections would have allowed for the manipulation of music conditions along subjective dimensions (see, for example, Stratton and Zalanowski, 1984). However, the implicit assumption underlying such a pretesting procedure, that individuals have relatively homogeneous reactions to the musical selections regarding the dimensions of interest, is somewhat suspect (see Cupchik et al, 1982).

## CONCLUSION

This research found that patrons spent more money in a wine store when classical rather than Top-Forty music was played in the background, though the number of shelf items examined, handled, and purchased, and the amount of time spent did not vary by music condition. The findings regarding the impact of background music on total sales and the number of items purchased suggest that, rather than influencing patrons to purchase greater quantities of wine, the classical music induced them to purchase more expensive wines. Though it did not directly test formal hypotheses, this result offers support for MacInnis and Parks' (1991) notion that music must be appropriate for the context in which it is employed in order to enhance persuasion, and for Yalch and Spangenberg's (1990) suggestion that classical music evokes perceptions of higher priced store merchandise.

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