
**Appendix
Print Ad Copy**

Positive Framed Appeal

THEY'LL LOVE YOUR FRESH BREATH.

Mintgard — A refreshing way to freshen your breath and to ensure good oral hygiene.

You can enjoy fresh breath if you practice good oral hygiene. Healthy gums, cavity protection, and a germ-free mouth are assurances of clean breath. So brush, floss, and visit your dentist regularly. Since many people don't clean their teeth regularly, the extra care of rinsing with mouthwash can be important for fresh breath and good oral hygiene.

Mintgard is the only mouthwash with the American Dental Association's Council on Dental Therapeutics Seal of Acceptance for helping to ensure good oral hygiene.

Using Mintgard mouthwash after brushing promises you fresh breath 47% more than using fluoride toothpaste alone.* And its strong formula keeps breath fresh for up to 6 hours.

* Based on clinical tests.

A refreshing way to have fresh breath **MINTGARD**

Negative Framed Appeal

THEY'LL HATE YOUR BAD BREATH.

Mintgard kills germs that cause bad breath, gingivitis and plaque.

Your mouth may be full of oral germs that cause foul-smelling breath, plaque and gingivitis. And you don't want gingivitis. Gingivitis is a gum disease characterized by red, swollen gums. If left untreated, it can progress to periodontitis, which can result in tooth loss. It also causes bad breath. Three out of 4 adults have gingivitis. Mintgard is the only mouthwash with the American Dental Association's Council on Dental Therapeutics Seal of Acceptance for helping to ensure good oral hygiene.

Using Mintgard mouthwash after brushing reduces oral germs up to 47% more than using fluoride toothpaste alone.* And its strong formula keeps breath germ-free for up to 6 hours.

* Based on clinical tests.

A refreshing way to have fresh breath **MINTGARD**

Sordid... is the calling
of those who buy
wholesale in order to
sell retail, since they
would gain no profits
without a great deal of
lying.

Cicero

Consequences of an Unpleasant Experience with Music: A Second-Order Negative Conditioning Perspective

M. Elizabeth Blair and Terence A. Shimp

This research examines the undesirable effects that an unpleasant experience with a musical composition can have on consumers' attitudes toward a brand that is subsequently associated with the music in an advertising-type relationship. Results from an experiment using second-order classical conditioning procedures indicate that subjects who were originally exposed to music in an unpleasant context held less favorable attitudes toward the brand than did subjects who were not preexposed to the music but rather learned it only in context of conditioning trials. Theoretical and practical implications are discussed.

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Introduction

Advertisers in their ubiquitous use of music in television and radio commercials undoubtedly have different goals in mind, ranging from pure affect-transfer objectives to language-like rhetorical tasks. (See Scott [1990] for a provocative discussion of the latter.) Although academic researchers have increasingly studied the implications of music's use in advertising (Gorn 1982; Kellaris and Cox 1989; Mitchell 1988; Park and Young 1986; Tom 1990), the theoretical mechanisms by which music influences consumers' cognitions, moods, and behaviors remain uncertain and worthy of further inquiry (cf. Bruner 1990; Scott 1990; Tom 1990).

The present research contributes to this tradition by investigating an issue heretofore unstudied. Consider the situation where a consumer develops an association between a song and an unpleasant experience only later to hear this same song used in a commercial. The experience is likely to result in less positive, and possibly negative, affect toward the brand in comparison to the situation where the song has not been associated with an unpleasant experience. In this study we examine the impact that an unpleasant experience with music has on the music's tendency to produce relatively negative attitudes toward a brand that is subsequently associated with the music. It is important to note, as a matter of reporting integrity, that the study was conceived as a classical conditioning test of so-called US-preexposure effects and not a test of negative conditioning per se. However, the reorientation is justified insofar as the experimental findings are more meaningfully interpreted from a negative-conditioning perspective.

The research is theoretically relevant in two respects. First, it holds implications in terms of better understanding the functioning of attitudinal conditioning in an advertising setting. Second, it provides insight into the role that immediate past experience plays in determining the impact that a particular musical composition has on consumers (cf. Scott 1990).

This study also holds potential relevance for advertising practitioners. It is to be expected that advertisers choose music which their target consumers find appealing. However, considering the idiosyncratic nature both of music tastes and past listening experiences, any musical composition (such as a contemporary popular song or golden oldie) likely engenders a variety

of associations in the minds of different audience members, all of which are not positive and some of which may be extremely negative. Certainly, an advertiser would never intentionally select music that has negative associations. Yet, when copytesting is performed for purposes of selecting one piece of music from a set of options, the selected music is demonstrated merely to be better liked in the *aggregate* than other options, but this certainly does not assure that all audience members like the music. Every consumer can attest to the fact that s/he at least occasionally dislikes the music used in commercials. Hence, when a piece of music produces negative feelings and thoughts among a subsegment of a brand's target audience, the commercial use of that music may unintentionally condition those consumers to evaluate the brand less positively than they otherwise would. This is precisely the issue addressed in the experiment hereafter described.

Research Overview

The research involved two linked phases: a preconditioning phase followed by a conditioning phase. In the *preconditioning phase*, subjects returned to the research site on repeated occasions and each time listened to different audiotaped business books, all of which were introduced and concluded with the same theme music. Because the encumbrance of repeatedly returning to the same site during designated nonclass hours in wintry weather turned out to be an unpleasant overall experience, the theme music itself, which later was to become the unconditioned stimulus in the conditioning phase, became less liked due to its association with this experience.

Two groups, conditioning and control, were involved in the *conditioning phase*. The conditioning group received repeated exposures to a fictitious brand of sportswear (the conditioned stimulus, or CS) paired with what had been the theme music in the preconditioning phase. This music now constituted the unconditioned stimulus (US) in what amounted to a second-order conditioning experiment. A second-order conditioning experiment is one where the US is not inherently or naturally evocative but rather acquires its positive or negative reinforcement status by virtue of prior learning experiences (Rescorla 1980). That is, the preconditioning phase led to the theme music becoming less liked due to its association with a task that itself was disliked.

The control group experienced the same experimental procedure as the conditioning group with the

notable exception that it received no systematic pairings between the CS (sportswear brand) and US (theme music). Thus, as described in detail in the methods section, the conditioning phase was designed to forge an association between the CS brand and the theme music for the conditioning group but not for the control group. Because the theme music experienced diminished affect in the preconditioning phase, the conditioning group should therefore evidence less favorable attitudes than the control group toward the conditioned stimulus. Such a result would evidence negative attitudinal conditioning and thus would provide empirical support for this study's key research hypothesis.

Methods

Conditioned and Unconditioned Stimuli

Conditioned Stimulus Pretest. Pretesting was undertaken to select a *neutrally* evaluated brand name (the CS) for a fictitious line of sportswear. It was important to select an unvalenced word so that attitude conditioning would be possible. Twenty-five Portuguese words were chosen for pretesting insofar as this language is virtually unknown among the student populace. All words were rated on three 7-point bipolar scales: pleasant/unpleasant, dislike very much/like very much, left me with a good feeling/bad feeling. The word selected as the CS brand was *Garra*. This choice was based on the fact that *Garra*'s pretest average rating on the three items ($M = 11.17$) was virtually identical to the average overall rating of the remaining 24 brands ($M = 11.40$). Moreover, *Garra*'s average rating was not significantly different than the average ratings of three other Portuguese names which, as described in detail shortly, were used as filler items: *Mingja* ($M = 10.69$; $t < 1$); *Ebano* ($M = 11.94$; $t < 1$); and *Jorro* ($M = 11.32$; $t < 1$). An additional selection criterion favoring the choice of *Garra* was the fact that it had virtually no association with any particular English word. Twenty-eight percent of the pretest respondents indicated that *Garra* brought an English word to mind, but there was no consistent pattern of associations; rather, the evoked words had little more than phonetic similarity to *Garra*—words such as *garage*, *gargle*, *garbage*, *garrison* and *growl*.

Unconditioned Stimulus Pretest. The unconditioned-stimulus pretest was designed to identify a piece of music that was both positively evaluated and relatively unfamiliar to our subjects. Selecting unfa-

miliar music was desirable so as to prevent prior idiosyncratic associations with familiar music from inhibiting conditionability (McSweeney and Bierley 1984). Ninety-one respondents rated 20 instrumental compositions, all selected from the new-age genre. The music ultimately selected was "Thanksgiving" by George Winston. Compared to the average overall rating of 19 other compositions ($M = 18.16$), Thanksgiving's average rating ($M = 21.77$) was significantly more positive ($p < .001$) on a four-item 7-point scale ($\alpha = .86$). Although 32 percent of respondents indicated familiarity with "Thanksgiving," this level of familiarity had to be accepted because the completely unfamiliar compositions did not receive sufficiently positive evaluations. Moreover, this tradeoff in no way biases the results of the conditioning experiment but rather makes them more conservative in that familiar stimuli are, as noted above, less effective unconditioned stimuli.

Subjects

All pretest respondents and subjects in the final experiment were upper-division business students. A total of 169 subjects participated in the final experiment. Subjects were recruited under the guise of evaluating audio cassette tapes of business programs which, according to the cover story, were being considered for inclusion in next year's marketing curriculum. They received course credit for participating. Because, as will be described later, the conditioning phase was made to appear independent of the preconditioning phase, subjects were offered \$5 at the end of the preconditioning phase to induce their participation in a second, supposedly unrelated, experiment (the conditioning phase). Only a few students who participated in the preconditioning phase were unable or unwilling to participate in the conditioning phase.

Manipulations and Procedure

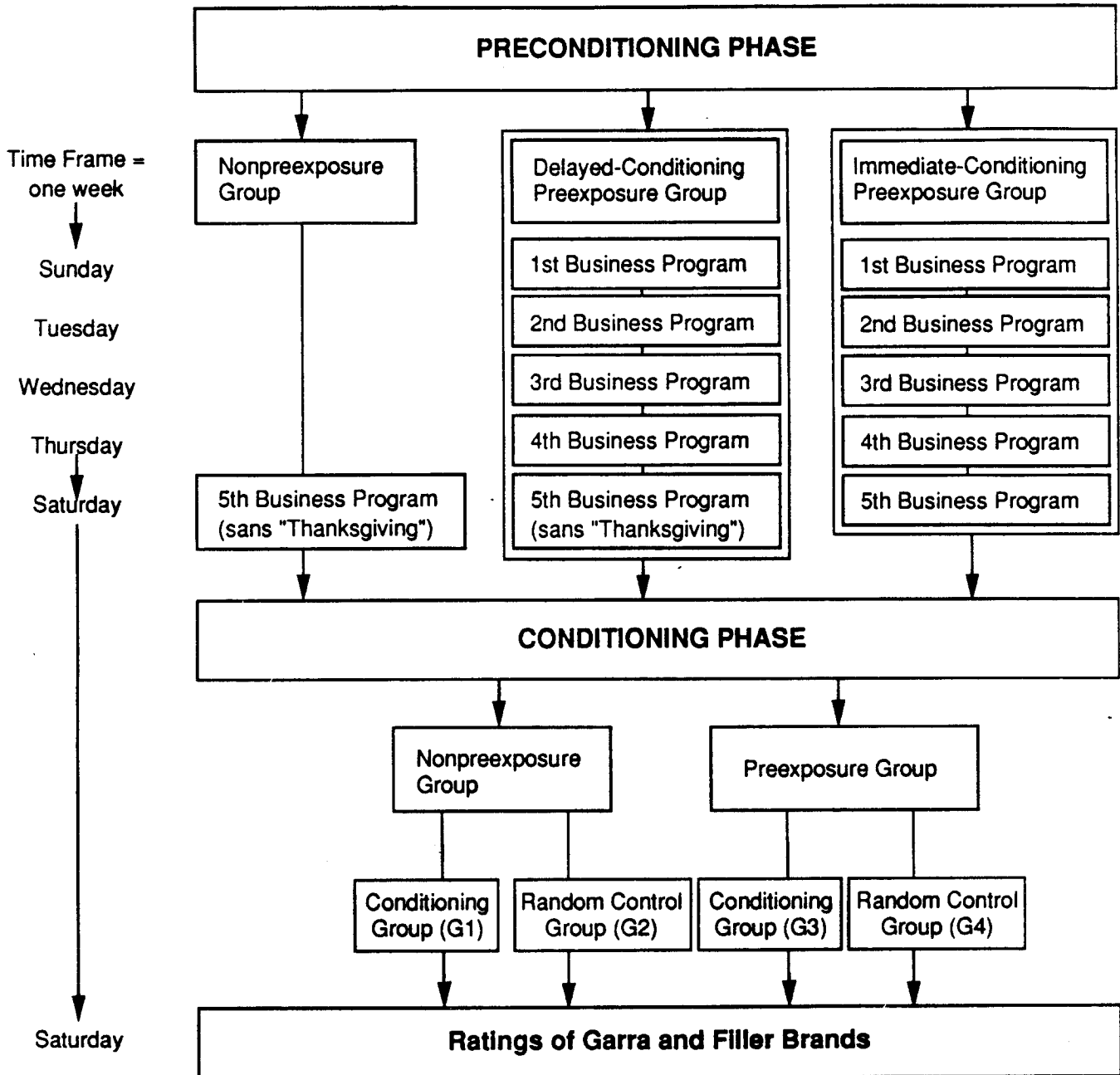
The preconditioning phase was designed to set the stage for the subsequent conditioning experiment. Specifically, manipulations to three separate groups varied the likelihood that negative conditioning would result in the conditioning phase (see Figure). A *nonpreexposure group* was not exposed to the theme music (which later, in the conditioning phase, would become the US) prior to the conditioning phase; hence, this group was not expected to experience negative conditioning. A delayed-conditioning preexposure

group received the last of multiple preexposures two days prior to receiving conditioning trials, while an immediate-conditioning preexposure group received its last preexposure to the theme music only minutes prior to the conditioning phase. These latter two groups were included to test for the so-called US-preexposure effect (Kamin 1969; McSweeney and Bierley 1984; Rescorla and Wagner 1972), which, as it turned out, did not materialize. Hence, because there is no theoretical reason, from a negative conditioning perspective, to expect differences between these groups and because their responses to the dependent variables were virtually identical, the two groups are pooled as the *preexposure group* in the conditioning phase. The preexposure group is expected to hold less favorable attitudes toward the CS than the nonpreexposure group since the preexposed group would have learned an association between the theme music and the unpleasant experience of participating in the preconditioning phase.

Approximately half of the subjects from the preconditioning phase formed two conditioning groups, nonpreexposure- and preexposure-conditioning groups (groups G1 and G3 in the Figure). These groups received multiple conditioning trials in a forward-conditioning manner wherein at each trial the CS (Garra) always preceded the US ("Thanksgiving"). The remaining subjects from the preconditioning phase constituted two control groups (groups G2 and G4 in the Figure). Each control group received the identical number of exposures to the CS and US as did its corresponding conditioning group, but the CS and US were presented in a completely random fashion with respect to each other, thereby precluding the formation of a contingency relation between the two stimuli.

Preconditioning Procedure. Subjects were told that they had been recruited for purposes of evaluating "business success stories" on cassette tape for possible future use in the marketing curriculum. These tapes, each approximately 20 minutes in length, were slightly altered versions of commercially produced books-on-cassette (e.g., Tom Peters' *In Search of Excellence*). The tapes were altered by removing their introductory/closing statements and theme music, and replacing these with appropriately customized statements and "Thanksgiving" as the theme music. The alterations were made by a professional radio announcer, who also provided the voice in introducing and closing the tapes. The newly inserted introductory statements briefly overviewed what the listener would hear during a particular program. Introductions lasted from

Figure
Overview of Preconditioning and Conditioning Phases



one and one-half to two minutes, and were accompanied throughout with the "Thanksgiving" music. Closing statements of 40-to-60 seconds duration were accompanied with the "Thanksgiving" music and served to recap the program and introduce the topic of the next program. Subjects at the end of each program filled out a questionnaire to indicate how much they liked the tape; this measure served no purpose other than to legitimize the cover story.

The preexposure group listened to one of five business tapes on five occasions: Sunday, Tuesday, Wednesday, and Thursday evenings, and Saturday afternoon of the same week. The nonpreexposure group met only once, on Saturday, the day of the actual conditioning experiment. Subjects in this group also evaluated a business tape immediately prior to the conditioning treatment, but the tape was denuded of the "Thanksgiving" theme music.

After subjects finished evaluating the last business program, a second experimenter entered the room and expressed his need for subjects in conducting another study "in a classroom down the hall." The experimenter offered \$5 for subjects to participate in this supposedly unrelated study. Subjects were taken by the second experimenter to a different room to receive either the conditioning or random control procedure and to complete a questionnaire containing dependent variable measures.

Conditioning Procedure. Using an established procedure (cf. Shimp, Stuart and Engle 1991; Stuart, Shimp and Engle 1987), the CS (Garra) and three filler Portuguese names (Mingja, Jorro, and Ebano) were presented by a slide projector onto a screen at the front of the room. In the conditioning groups, each word slide was followed by a 25-second snippet of music. These snippets included the US ("Thanksgiving")—which always followed Garra but never any of the other names—and three other 25-second snippets of instrumental music that were determined by pretesting to be relatively neutral, i.e., not particularly liked or disliked. The slide presentation was preprogrammed to run automatically with the audio tape, using a recorded (but silent) tone to advance each slide.

To make the presentation more attractive and to support the cover story, slides of 10 mens' shirts were inserted throughout the visual presentation. Subjects were told that Garra, Mingja, Jorro, and Ebano were potential brand names for a Brazilian line of clothing. The entire presentation included shirt slides, word slides, and music snippets sequenced as follows: a shirt slide for four seconds, a word slide for four sec-

onds, and then a blank screen while music played for 25 seconds. This sequence was repeated 40 times, so that each of the four Portuguese words appeared 10 times, and the four snippets were heard 10 times each. The 25-minute presentation was designed so that the 10 conditioning trials (i.e., Garra-"Thanksgiving" pairings) were embedded among the pairings of filler names and music snippets.

The control subjects viewed a similar preprogrammed presentation. They received the identical number of exposures to Garra, "Thanksgiving," and all filler materials as did subjects in the conditioning group. However, in comparison to the conditioning groups where "Thanksgiving" always immediately followed the slide of Garra, in the control groups Garra never immediately followed "Thanksgiving," but instead was always followed by one of the three filler snippets. Hence, these groups control for the possibility of mere exposure effects as an alternative account (Rescorla 1967).

Dependent Variables

Subjects received a questionnaire booklet immediately following exposure to the conditioning or control procedure. To minimize hypothesis guessing, the questionnaire included measures of attitudes toward the three filler brands as well as toward the target CS brand, Garra. Four counterbalanced versions of the questionnaire rotated the order of brand names so as to prevent order bias. No order effects were detected.

Two dependent variables assessed the amount of attitudinal conditioning. The first, Attitude toward the Brand, measured evaluations of the Garra name and was operationalized as the summation of five 7-point bipolar items similar to those used by previous conditioning researchers: pleasant/unpleasant, unattractive/attractive, dislike very much/like very much, interesting/boring, left me with a good feeling/left me with a bad feeling (cf., Allen and Madden 1985; Gorn 1982; Shimp et al. 1991; Stuart et al. 1987). The second variable, Appropriateness of Brand Name, assessed subjects' perceptions of Garra's appropriateness as a brand name for the sportswear items seen in the presentation. It was operationalized as the summation of three 7-point bipolar items: appropriate/inappropriate, undesirable/desirable, and fitting/not fitting. The high correlation between the two summated variables ($r = .81$, $p < .01$) justified forming a composite variable, Attitude toward Garra, by summing the eight individual items ($\alpha = .96$). Analyses are based on this single variable.

Table
Descriptive Statistics and Contrast Tests

Group ^a	Size	Attitude toward Garra ^b
G1	30	37.67 (13.24)
G2	34	35.32 (11.64)
G3	55	32.07 (9.24)
G4	50	37.36 (10.25)

Contrasts	t-value	prob ^c
1. G1 > G2	0.75	.22
2. G3 < G4	-2.78	.00
3. G1 > G3	2.28	.02

^aGroup 1 = Nonpreexposure, conditioning; Group 2 = Nonpreexposure, random control; Group 3 = Preexposure, conditioning; Group 4 = Preexposure, random control.

^bThe range of scores is from 8 to 56, with higher scores reflecting more positive attitudes.

^cOne-tail probabilities.

Anticipated Effects

Evidence of classical conditioning is obtained by comparing mean scores in the conditioning groups against their corresponding controls. The first contrast predicts positive attitudinal conditioning for subjects who received Garra-“Thanksgiving” trials but were not preexposed to “Thanksgiving” music during the preconditioning phase (group G1). This group is expected to hold *more favorable* attitudes toward Garra than its corresponding control group (G2). Contrast 2 predicts negative attitudinal conditioning whereby the preexposure conditioning group (G3) is expected to hold *less favorable* attitudes toward Garra than does its corresponding control group (G4). A third contrast logically extends from the previous contrasts and predicts that the nonpreexposed conditioning group (G1) should hold more favorable attitudes toward Garra than does the preexposure conditioning group (G3).

Results

Descriptive statistics and results of appropriate contrast tests are presented in the Table.

Nonpreexposure Effects

Although the means are in the right direction, the difference between the nonpreexposed conditioning group (G1) and its control (G2) is not sufficient to achieve statistical significance (see contrast 1). Even

though “Thanksgiving” was the most favorable of all pretested music, it apparently was not a sufficiently salient US for the student subjects in this experiment. The lack of conditioning also might be explained by the possibility that the CS (a foreign word) and the US (new-age American music) might not have been sufficiently relevant to one another to allow strong conditioning (see Domjan and Burkhard 1986). Nevertheless, this failure to achieve conditioning in the nonpreexposed group does not undermine the more central issue of negative conditioning in the preexposed groups.

Negative Effects of Preexposure

Contrast 2 shows that subjects in the preexposed conditioning group (G3) evaluated Garra *less* positively than did subjects in the corresponding control group (G4). Also, contrast 3 indicates that the nonpreexposed conditioning group held significantly more favorable attitudes toward Garra than did the preexposed conditioning group. It is obvious that subjects developed a *disliking* for “Thanksgiving” during the preconditioning phase. This reversal in valence apparently occurred because “Thanksgiving” was associated with the unpleasant experience of having to participate in a number of time-consuming preconditioning sessions.

Indirect support for this explanation is provided by examining subjects’ evaluations of the final business program immediately prior to the conditioning phase of the experiment. All subjects (those who previously had been subjected to multiple programs along with the nonpreexposed group) evaluated this program on three 7-point bipolar scales (pleasant/unpleasant, dislike very much/like very much, interesting/boring) and on an additional 7-point rating scale (“How much would you like to hear the entire 60 minute program?”). The 64 nonpreexposed subjects who listened only to the last business program without the “Thanksgiving” theme music gave the program a mean score of 17.55 (out of 28 possible). The 105 subjects who were preexposed to multiple programs gave the last program a mean score of 15.53 ($F=5.90, p=.02$).

This statistically significant difference suggests that the preexposed subjects had grown somewhat tired of the business programs and, accordingly, viewed the “Thanksgiving” music less favorably than did the nonpreexposed subjects, who had not previously listened to the “Thanksgiving” music in context of the business programs. It, of course, would have been preferable to directly test this possibility by having all subjects evaluate “Thanksgiving” *per se* prior to

the conditioning phase, but doing so would have produced a transparent demand cue.

Discussion

These results indicate that the "Thanksgiving" music was not a sufficiently salient US to produce positive attitudinal conditioning for those subjects (the nonpreexposed group) who were exposed to "Thanksgiving" only during conditioning trials. However, this same music demonstrated *negative* attitudinal conditioning toward the name Garra in subjects who had been preexposed to "Thanksgiving" in context of a time-consuming and bothersome preconditioning experience.

Theoretical Significance

What other explanations might account for these results? We can envision only one plausible alternative, that being a demand-artifact account. It could be argued that preexposed subjects, who had previously heard the "Thanksgiving" music as part of their preconditioning experience, would have immediately recognized that music during conditioning trials, thereby creating a demand cue. With this cue, subjects may have initiated role playing and responded in a demand-congruent fashion. However, because it is highly unlikely that naive subjects in the preexposed conditioning group would have contemplated that they were expected to like Garra *less*, any role playing would have led them to bias their evaluations of Garra in a positive, not negative, direction. But bias in this direction would have led to positive conditioning rather than the observed negative conditioning. Hence, on logical grounds, the presence of demand artifacts is not a tenable alternative explanation for the results. We therefore are confident in attributing the findings to negative conditioning.

Although marketing and advertising researchers have addressed the role of negative information in general (Scott and Tybout 1981; Weinberger, Allen and Dillon 1981), there are relatively few empirical demonstrations of negative attitudinal conditioning outside of basic psychology. Psychologists have demonstrated negative attitudinal conditioning by using some fairly extreme unconditioned stimuli. For example, Zanna, Kiesler and Pilkonis (1970) obtained evidence of negative conditioning using slight levels of electric shock as US, and Moore, Moore and Hauck's (1982) results evidenced negative conditioning with negatively valenced words providing the US. Our

finding is the first demonstration of negative conditioning to music since Gorn's (1982) finding that subjects were less likely to choose pen colors that had been paired with unappealing Asian-Indian music.

The important distinction between the present findings and Gorn's (1982) is that the negative stimulus in his research was fundamentally disliked by subjects. By contrast, our extensive pretesting established that the "Thanksgiving" music was liked at the outset of our experiment. It was only through association with an unpleasant preconditioning experience that the valence of "Thanksgiving" reoriented in a negative direction. This holds potentially important implications for advertising practice.

Practical Implications

The US in this research, "Thanksgiving," was not beloved by subjects nor was it particularly salient. For this reason it quickly acquired negative affect when associated with a rather unpleasant experience. A strongly liked song would probably not be so easily degraded. Nonetheless, the reality is that most songs and instrumentals selected by advertisers are probably loved by only a fraction of the target audience. Some audience members are likely to hold negative associations for the music. For example, the commercial use of a golden-oldie tune may stir pleasant nostalgic memories in many audience members who were teenagers when the music was popular, but for others that same music may be associated with an unpleasant time of confusion, low self-esteem, and perhaps unrequited love. Many other opportunities for negative music associations exist in light of the fact that music is such a prominent and memorable stimulus.

It is for reasons such as these that using music in commercials is potentially risky. In fact, because the probability of negative associations rises with increased music popularity, well-known music poses the greatest risk of negative associations. The catch is that this music also represents the best opportunity for attention gaining and positive affect transferral. Yet, a conservative risk strategy would argue in favor of using completely unknown or relatively unknown music that nonetheless is copytested to be liked by audience members.

Popular music has a certain cachet and is probably easier for advertising agencies to convince clients to use; however, the risk of negative associations may overshadow the commercial value of music that undoubtedly is liked by the advertising creative who selected it but which may evoke negative associations