國立台灣大學商學研究所博士班入學考試試卷（102學年度）

科目 消費者行為文獻評析 第 1 頁 /共 15 頁

（考試時間3小時）

以下兩篇文獻，請擇一作答。並請註明回答文獻一或文獻二。

(請勿兩篇皆作答!)

(文獻一) P2-5

Please read the following research paper and answer the following questions.

(1) Please write down the hypotheses developed for the predictions of this research. (30%)

(2) Please write down the procedure designed to test the hypotheses of this research. (40%)

(3) Please describe the potential managerial implications resulted from the predictions of this research. (30%)

(文獻二) P6-15

請閱讀論文 "Brand Familiarity and Advertising Repetition Effect" 之節錄，並回答下面的問題:

(1) 請畫出本文之研究架構圖(conceptual framework)。(20%)

(2) 請詳細條列本文之研究假說(research hypotheses) 。(20%)

(3) 請說明本文之理論貢獻。(20%)

(4) 如果你要重新做一個研究來驗證與這篇論文相同的研究假說，請問你會如何做?請說明你的研究設計會如何優於本篇論文?(40%)

試題請繳回

文獻雙面列印

文獻一

Coyote Joe's is a restaurant near campus that serves southwestern fare. It is the latest in a long series of assorted restaurant types, including a pizzeria, a hamburger place, and a French restaurant, that have opened and quickly closed in a seemingly well-situated retail location. What is paradoxical about this observation is that though each of these restaurants failed, similar restaurants subsequently have opened and apparently succeeded in the same general area.

Observations such as these seem to suggest that consumers may expect the history associated with a retail location to repeat itself; that is, they may anticipate and thus perceive that the presumably unsatisfactory aspects of a previous occupant of a retail space are revisited in future occupants. This phenomenon is an instance of a more general set of outcomes where there is a positive relationship between the value consumers place on a target stimulus and the value they place on the contextual cue that accompanies the target. This phenomenon generally is referred to as assimilation (Martin, Seta, and Crelia 1990).

Assimilation is not the only relationship that can be observed between a target and its context. For example, there are two successful restaurants in the same general area as Coyote Joe's, one a trendy bistro that occupies the site of a former auto body repair shop and the other a popular breakfast spot that inhabits a building that previously housed a funeral parlor. In yet another such instance, a casual clothing store in the area (The Gap) flourishes at a site that previously was inhabited by a rat-infested movie theater. This negative relationship between the value people place on the context and the value they place on the target is referred to as a contrast effect (Martin, Seta, and Crelia 1990).

The pervasiveness with which context effects are likely to occur in marketing settings suggests that an understanding of assimilation and contrast effects is of substantial interest. Indeed, in applied settings the context provided by programming, editorial material, and other advertising is likely to affect the impact of a contiguously presented target ad. Likewise, associations to a brand normally used may influence judgments of alternative brands and vice versa. As a starting point in understanding how such contexts affect the evaluation of a target object, we will briefly review the assimilation-contrast literature.

EXPLAINING ASSIMILATION AND CONTRAST EFFECTS

Sherif and Hovland's (1961) seminal research, which suggests that judgments of objects can be affected by contextual factors, has provided the impetus for exploring the robustness of assimilation and contrast effects. These outcomes have been observed in assessments of people (Herr 1986; Lombardi, Higgins, and Bargh 1987; Manis, Nelson, and Shedler 1988), groups (Wilder and Thompson 1988) and objects (Herr 1989; Herr, Sherman, and Fazio 1983; Shimp, Stuart, and Engle 1991), as well as in self-assessments (Strack, Schwarz, and Gschneidinger 1985).

Two disparate explanations have been offered to account for assimilation and contrast effects. One view, which has been advanced by Herr (1989), suggests that the extent of feature overlap between a context and a target object determines whether assimilation or contrast is found. The other view, suggested by Martin, Seta, and Crelia (1990) interprets context effects in terms of the cognitive resources devoted to the judgment task. We review these alternative explanations briefly and then offer a way of integrating notions of feature overlap and cognitive resources to provide a more comprehensive account of instances in which assimilation and contrast are likely to occur.

Representative evidence for the feature overlap view is reported in a recent marketing study conducted by Herr (1989). As part of his study, Herr used a priming task to introduce contextual cues to people who were knowledgeable about cars. In the moderate contextual cue condition, the cues were either moderately inexpensive cars (e.g., Tercel) or moderately expensive cars (e.g., Mazda RX-7), whereas in the extreme condition, the contextual cues were either very inexpensive (e.g., Ford Pinto) or very expensive cars (e.g., Mercedes Benz).

Then subjects were asked to make an ostensibly unrelated judgment about the price of a fictitious and thus unfamiliar car. Evidence for assimilation was found in the moderate cue condition: Subjects judged the price of the fictitious target car to be higher when the contextual cues were moderately expensive rather than inexpensive cars. In the extreme condition, a contrast effect was observed, in that subjects judged the fictitious car to be more expensive when the contextual cues were very inexpensive rather than very expensive cars.

In outlining the process thought to underlie such effects, Herr, Sherman, and Fazio (1983) suggest that upon encountering an unfamiliar target object or product, an individual attempts to categorize it conceptually, often by using a category that is most accessible because of its contextual activation. If the features of the contextual cues and the target product share considerable overlap, the product will be categorized as a member of the same category as that activated by the contextual cues. Accordingly, judgments concerning various aspects of the product will be made by assigning them the average level of this category on the dimension in question. Presumably it is this process that accounts for why assimilation has been observed when a target product is unfamiliar and the contextually activated subordinate category is moderately extreme (e.g., the moderately expensive car category), because under such conditions the overlap between the target product and the category is likely to be high.

When the category activated by the contextual cues and the unfamiliar target product share little or no overlap in features, as is likely to occur when an extreme conceptual subcategory is considered (e.g., very expensive cars), contrast occurs. This is explained by noting that, while the product is unlikely to be categorized as a member of the category activated by the contextual cues, the value of that category on the dimension in question is likely to be employed as a relevant end point on an individual's subjective rating scale for that dimension. Hence, because the extreme category associated with the contextual cues is likely to serve as an anchor or standard of comparison when judging the product, judgments of the unfamiliar target product are likely to be displaced from that category or product, resulting in a contrast effect.

Herr's findings and those cited earlier provide impressive evidence documenting the existence of context effects, and his notion of overlap seems to offer a reasonable account of the process by which these effects might occur. However, recent evidence indicates that assimilation and contrast can occur in the absence of variations in contextual cue-target object overlap (Martin 1986; Martin, Seta, and Crelia 1990). This research suggests that the level of cognitive resources or the effort people expend in making a judgment also plays an important role in determining the nature of the resulting context effect.

Along these lines, Martin, Seta, and Crelia (1990) used people's need for cognition as an indicator of effort and examined how it influenced the type of judgments made. People with a high need for cognition were found to exhibit a contrast effect, whereas people with a low need for cognition engaged in assimilation. These outcomes were explained by suggesting that only those with a high need for cognition expended the effort necessary to suppress associations to the contextual cues and to interpret the target object in terms of alternate and antithetic associations, thereby encouraging a contrast effect. People with a low need for cognition apparently used the less taxing assimilation strategy of simply applying the associations prompted by the context to the target object.

OVERVIEW OF THE STUDY

In the present research, we attempt to extend the current analysis of context effects in two ways. One theoretical extension entails reconciling Martin's notion of cognitive effort expended during processing and Herr's idea of contextual cue-target object overlap by incorporating both of these concepts in a two-factor theory of assimilation-contrast. We suggest that contrast will occur when two conditions are met: (1) the cognitive resources available at judgment are substantial and (2) there is little overlap between the contextual cue(s) and the target object. In the absence of either of these conditions, assimilation is expected. Support for these predictions would imply that two-factor theory offers a more parsimonious explanation than do currently available alternatives.

A second extension is directed toward exploring the robustness of assimilation-contrast investigations in marketing settings. Typically, assimilation and contrast effects are achieved by using a priming task to present multiple contextual cues, all implying a common theme,

prior to and separate from the target object information. These demonstrations are of limited marketing interest, because in applied settings it is seldom possible to control all of the environmental cues in which an appeal is presented. Assimilation and contrast research would be of greater practical importance if these phenomena were shown to emerge when a single contextual cue was presented as part of the target object message, because it would suggest that context effects could be subject to strategic control by careful selection of message content. In the present experiment, a single contextual cue is presented within a message describing a target object to ascertain whether assimilation and contrast can occur in this situation.

Also of practical concern is the robustness of assimilation and contrast effects when the type of contextual cue employed is more in keeping with strategic concerns than has been the case in previous investigations. In those studies, the contextual cues used have shared membership in the same basic level category as the target object (e.g., all were brands of cars). Yet in applied settings, it may be undesirable or inappropriate to link a target product with its potential direct competitors. This raises the question of whether context effects will occur when the contextual cue holds membership in a different basic level category from the target object. For example, would the assessment of a target car be influenced by a contextual cue that represented a clothing store?

While empirical work is needed to resolve this issue, two outcomes seem plausible. One possibility is that consumers will view as irrelevant a contextual cue that holds membership in a different basic level category from the target product. In this case, neither assimilation nor contrast effects should occur on judgments. Alternatively, the contextual cue might operate in the same manner as has been found previously when there is little overlap between the associations to the contextual cue and the target object (e.g., Herr 1989). In this event, a contrast effect might emerge, provided that the consumer devotes sufficient resources to the low overlap. We investigate these alternative possibilities in the present research.

Operationally, this issue was examined by presenting subjects with an advertising message for a new restaurant that they would later evaluate. The message described various features of the restaurant. In addition, it specified the previous occupant of the building that currently housed the new restaurant. This information represented the contextual cue, which served as one independent variable.

Contextual cues that possessed different types of associations were used to enable assimilation and contrast effects to be detected. Specifically, the contextual cues we selected varied according to whether they represented a casual or an elegant establishment. The influence of the cues' casual or elegant implications on the new restaurant judgments was assessed on several establishment judgment scales. The contextual cues also differed in how favorably they were perceived. Pretest subjects indicated that the more casual establishment was regarded less favorably than the elegant one. The impact of this difference in contextual cue favorableness on new restaurant judgments was assessed by administering several overall evaluation measures. Evidence for assimilation would occur if establishment judgments and overall evaluations reflected more elegant/positive associations when the contextual cue was elegant rather than casual, whereas the reverse outcome would imply contrast.

The second independent variable represented the extent to which there was overlap between the category in which the contextual cue held membership and that of the new restaurant. In the high category overlap condition, another restaurant that was likely to be perceived as either elegant and favorable or casual and relatively unfavorable was identified as the prior occupant of the space. In the low overlap condition, the prior occupant was a clothing store that varied in how elegant and favorable people were likely to perceive it. Thus, evidence for assimilation would occur if judgments of the target restaurant were positively related to the associations of the prior occupant. A negative relation would imply contrast.[1]

The third independent variable was introduced to examine how variations in cognitive resources affect the incidence of assimilation and contrast. For this purpose, a cognitive style measure was administered, because this type of measure is thought to capture the level of processing effort that individuals are likely to devote to tasks involving discrepant elements, such as those represented by low category overlap conditions (Kelman and Cohler 1959).

Some people, called *clarifiers*, have been found to react to such discrepancy or incongruity by effortfully reexamining their beliefs and performing processing that helps clarify the situation (Cox 1967). Thus, clarifiers are prone to expend considerable cognitive resources to address discrepancies. On the other hand, *simplifiers* appear to expend little cognitive effort in such situations. Instead, these individuals prefer to simplify discrepancies and keep out incongruous elements by avoiding, denying, or perhaps distorting them.

Simplifiers' and clarifiers' responses to variations in contextual cue overlap were examined on several measures. Included in these were the establishment judgment

[1]As is normal practice, we assessed whether and which context effects occurred by examining whether associations to the contextual cue and subjects' responses to the dependent measures were positively (assimilation) or negatively (contrast) related. Theoretically, context effects also could be identified if subjects' responses to the target restaurant were assessed in the absence of any contextual cue. If in relation to these "context-free" responses, subjects' context-dependent responses moved toward (away from) the contextual cue ratings, an assimilation (contrast) effect would be implied. However, because subjects may invoke a mental context when making their "context-free" responses that renders these responses context-dependent, this procedure is infeasible operationally.

and overall evaluation measures mentioned earlier. Subjects' thoughts also were measured using the procedure developed by Greenwald (1968), which was intended to provide additional insight into the nature of the associations that prompt assimilation and contrast.

文獻二

Brand Familiarity and Advertising Repetition Effects

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The influence of repetition on communication effectiveness is an important issue that has generated a considerable body of research. Consumer researchers, psychologists, and marketers have attempted to understand the relationship between repetition and an audience's reception of a message. The leading theory is that there is a nonmonotonic relationship between message repetition and message effectiveness (cf. Anand and Sternthal 1990; Vakratsas and Ambler 1999). Message effectiveness is believed to increase at low levels of repetition and then to decrease as message repetition increases (cf. Berlyne 1970; Cacioppo and Petty 1979). There is strong evidence in support of such a curvilinear relationship (cf. Anand and Sternthal 1990; Batra and Ray 1986; Pechmann and Stewart 1989). There is also, however, substantial research that shows no relationship between ad repetition and message effectiveness (Belch 1982; Mitchell and Olson 1977; Rethans, Swasy, and Marks 1986) or mixed effects in terms of the curvilinear relationship (Calder and Sternthal 1980; Messmer 1979).

A review of the literature on repetition effects suggests that there is no simple answer to the question of how repetition affects message effectiveness. Several researchers have called for and turned their attention to factors that moderate the relationship between repetition and message effectiveness. For example, research has identified several message factors that influence the effects of repetition, including message complexity (Cox and Cox 1988), "grabber versus nongrabber" ads (Ray and Sawyer 1971), and ease of processing of the message (Anand and Sternthal 1990).

We propose an important source factor as a moderator of repetition effects. Specifically, we propose that the familiarity of the brand sponsor of an ad will moderate the way in which repetition influences consumer response to that ad. Additionally, we contribute to existing research by describing more completely the mechanism by which a decrease in attitudes with an increase in repetition may occur. We begin by describing the two-factor theory of repetition effects. We then apply the two-factor theory to examine how familiarity with the brand sponsor might influence the effectiveness of repeated exposure to an ad. Two experiments demonstrate that brand familiarity is an important moderator of repetition effects and provide insight to the process by which this moderation occurs.

REPETITION EFFECTS

The leading explanation of repetition effects is based on Berlyne's (1970) two-factor theory. This theory proposes a two-part process by which repetition influences message response. The first phase, sometimes called "wearin," is one of habituation. In this phase, there may be a certain amount of what is called hostility or uncertainty about an unfamiliar message. Initial levels of message repetition serve to increase positive habituation by reducing negative responses

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to the novel stimulus, thus increasing effectiveness at lower levels of repetition (Cox and Cox 1988). The second phase, sometimes called "wearout," is when continued repetition results in the onset of tedium such that the message decreases in effectiveness (Anand and Sternthal 1990; Blair and Rabuck 1998; Calder and Sternthal 1980). Tedium arises because of boredom, less opportunity to learn, and reactance against the repeated message.

Two important conceptual contributions have been made to the two-factor theory of repetition effects. First, Cacioppo and Petty (1979) examined the processing and memory effects underlying Berlyne's theorizing. They demonstrated that cognitive responses to the message appear to mediate the effects of repetition on the overall evaluations engendered by an ad: support arguments first increase and then decrease with repetition; counterarguments, by contrast, may first decrease and then increase with repetition. Cacioppo and Petty (1979) show that repetition has its greatest effect at moderate levels of repetition. It appears that under low levels of repetition resources are not sufficient for complete processing but that high levels of repetition prompt counterargumentation. Second, Anand and Sternthal (1990) show that, in addition to the important effects of resource availability, resource requirements for processing influence the effect of repetition. They show that the ease of processing moderates the influence of repetition on brand attitude. Greater processing difficulty slows the habituation and tedium experienced by the consumer so that the point at which ad wearout occurs is delayed, while low processing difficulty speeds up the point at which wearout occurs. Anand and Sternthal (1990) conclude that both resource availability and resource requirements influence when repetition effects will be greatest.

Brand Familiarity

We draw on this theorizing to propose that brand familiarity is an important variable that can influence consumer processing and the stages of habituation and tedium. Brand familiarity reflects the extent of a consumer's direct and indirect experience with a brand (Alba and Hutchinson 1987; Kent and Allen 1994). Brand familiarity captures consumers' brand knowledge structures, that is, the brand associations that exist within a consumer's memory. Although many advertised products are familiar to consumers, many others are unfamiliar, either because they are new to the marketplace or because consumers have not yet been exposed to the brand (Stewart 1992).

Familiar and unfamiliar brands differ in terms of the knowledge regarding the brand that a consumer has stored in memory. Consumers tend to have a variety of different types of associations for familiar brands. Consumers may have tried or may use a familiar brand, they may have family or friends who have used the brand and told them something about it, they may have seen prior ads or marketing communications for the brand, or they may know how the brand is positioned, packaged, and so on, from the press. Consumers lack many associations for unfamiliar brands because they have not had any of these types of experiences with them.

Processing and Brand Familiarity. One possibility might be that consumers would have negative reactions to the repetition of ads for familiar brands more quickly than they would to ads for unfamiliar brands. Because consumers already know something about familiar brands, ads for these brands might seem less interesting than ads for novel brands that consumers do not know. Following this line of reasoning, ads for unfamiliar brands might seem less boring than those for familiar brands, such that wearout would be postponed for unfamiliar brands. However, consideration of the processing engendered by unfamiliar versus familiar brands actually suggests the hypothesis that ads for unfamiliar brands can wearout more quickly than ads for familiar brands, as follows.

Because of knowledge differences, consumers are likely to have different processing goals when exposed to ads sponsored by unfamiliar and familiar brands. People tend to attempt to learn about and evaluate novel stimuli (e.g., Sujan 1985). Thus, when consumers are exposed to an ad for an unfamiliar brand, they are more likely to have a goal of learning about and forming an accurate impression of the brand (Hilton and Darley 1991). To put it another way, if ads for unfamiliar brands appear more novel and interesting, they will therefore elicit more extensive processing.

When exposed to an ad for a familiar brand, by contrast, consumers already have some knowledge about the brand and, therefore, are more likely to update their existing knowledge (Snyder and Stukas 1999). Since consumers already know something about familiar brands, they are likely to engage in relatively less extensive, more confirmation-based processing when exposed to an ad for a familiar brand (Keller 1991; MacKenzie and Spreng 1992). In fact, familiarity can itself use cognitive capacity such that processing of a familiar, relative to an unfamiliar, stimulus is diminished (Britton and Tesser 1982), although it should be recognized that consumers may not always engage in highly involved processing, in an absolute sense, in either case. The more extensive processing elicited by ads for unfamiliar brands increases the resource availability; since, as noted above, excess resource availability leads to wearout (Cacioppo and Petty 1979; Calder and Sternthal 1980), these ads should show decreased repetition effectiveness at a lower number of ad exposures relative to ads for familiar brands.

Effects of Habituation and Tedium. Habituation is the process by which initial uncertainty or negativity to an unfamiliar stimulus is attenuated (Berlyne 1970; Vakratsas and Ambler 1999). When a consumer first sees an ad for an unfamiliar brand, there are two sources of unfamiliarity to which the consumer could respond negatively: the ad itself is novel, and the brand is also novel. The first time that a consumer sees a new ad for a familiar brand, there is only one source of unfamiliarity—the ad. Thus, negative uncertainty created by unfamiliarity should be higher for a new

ad from an unfamiliar as compared with a familiar brand sponsor.

Tedium arises from boredom and reactance or annoyance to the repeated message (Anand and Sternthal 1990; Berlyne 1970). When consumers are repeatedly exposed to an ad for an unfamiliar brand, they process primarily in order to learn about the brand, and once they have been exposed to the same ad several times, there is very little left to process or learn (Krugman 1972). As noted above, consumers have stored knowledge in memory for familiar, but not unfamiliar, brands and thus are likely to process ads for familiar brands less extensively than those for unfamiliar brands. In addition, the stored knowledge provides processing material for familiar brands that does not exist for unfamiliar brands. Thus, to the extent that consumers continue to process an ad for a familiar brand over repeated exposures to the ad, in addition to the material presented in the ad itself, the brand knowledge that exists in memory provides context for continued processing (Britton and Tesser 1982). Since no such additional knowledge exists for unfamiliar brands, consumers are likely to "run out" of material to process with repeated exposure to the same ad. In other words, because of a lack of stored knowledge, the processing requirements are much lower for the same ad for an unfamiliar than for a familiar brand, which is likely to hasten the onset of wearout (Anand and Sternthal 1990).

Effects on Cognitive Responses. As noted above, earlier research suggests that consumers' cognitive responses to repeated messages may mediate the effects of repetition on attitudinal response (Cacioppo and Petty 1979). This work showed that support arguments first increase and then decrease with message repetition, whereas counterarguments show the opposite pattern. More extensive processing should increase the rate at which these patterns of support and counterargumentation occur relative to less extensive processing. A consumer who engages in more extensive processing of an ad should deplete support arguments and therefore generate counterarguments at a lower level of repetition than a consumer who engages in less extensive processing. This adds support to our proposition that ads for unfamiliar brands will wear out more quickly than ads for familiar brands.

In addition, we propose that a specific type of thought is likely to arise with ad repetition, contributing to wearout effects. Recently, there has been growing interest in how consumers' thoughts about marketers' persuasion tactics affect their responses to marketing activities (see Friestad and Wright 1994; Kirmani and Wright 1989). Consumers have been shown to consider the inappropriateness of advertising tactics sometimes (Campbell 1995; Sagarin et al. 2002). Research has shown that cognitive capacity is necessary for consumers to access and use thoughts about marketers' persuasion tactics (Campbell and Kirmani 2000). Importantly, prior research indicates that consumers are likely to focus on message content at low levels of processing but are more likely to access "negative tactics-related thoughts" when processing is more extensive (Shiv, Edell, and Payne 1997, p. 290).

As noted above, consumers are likely to process an ad more extensively when it is for an unfamiliar rather than a familiar brand. Additionally, because of the lack of stored knowledge, consumers are likely to deplete possible brand-related processing at a lower level of repetition of ads for unfamiliar rather than familiar brands. Because of these processing differences, consumers should be more likely to have the cognitive capacity to think about the appropriateness of advertising tactics at comparatively lower levels of repetition of an ad for an unfamiliar brand as compared with a familiar brand (Campbell and Kirmani 2000; Shiv et al. 1997). Moreover, in general, brand reputation has been shown to decrease the extent to which consumers consider persuasion inappropriateness (Campbell 1999). It follows that consideration of tactic inappropriateness should increase to a greater extent with repetition of an ad for an unfamiliar rather than a familiar brand.

Effects of Ad Attitudes on Brand Attitudes. Finally, the extent of consumer processing elicited by a message should also affect the relation between attitude toward the ad and brand evaluations. Specifically, when consumers are unfamiliar with an advertised brand, they lack prior knowledge on which to base attitudes toward the brand. Thus, they are more likely to rely on attitudes toward the ad in forming attitudes toward the brand. Consumers with prior brand familiarity, by contrast, are more likely to draw on their existing brand knowledge, attenuating the influence of attitude toward the specific ad on attitude toward the brand. Thus, the effect of attitude toward the ad on brand evaluations should be greater when the ad is for an unfamiliar rather than a familiar brand (Machleit, Allen, and Madden 1993; Machleit and Wilson 1988). That is, ad and brand attitudes may be expected to be more divergent in the case of familiar versus unfamiliar brands.

Prior Research. Although the impact of brand familiarity on repetition effects has not been systematically studied, there is some research that is consistent with the notion that brand familiarity will attenuate advertising wearout (e.g., Edell and Burke 1986; Kardes 1994; Kent and Allen 1994; Lodish et al. 1995). An earlier study that examined advertising repetition effectiveness used two products as replicates: one product was "relatively unfamiliar to participants," whereas the other was "well known to the research participants" (Calder and Sternthal 1980, p. 176). Interestingly, while brand familiarity was not a focus of the research and was not discussed, there were different patterns of results for the two brands. Although there was support for wearout for the relatively unfamiliar brand, there was limited evidence of wearout for the more familiar brand.

Likewise, as noted above, there have been mixed findings on the relationship between repetition and advertising effectiveness. Although brand familiarity cannot fully account for differing effects, it is interesting to note that several of the studies that fail to support the curvilinear relationship

between repetition and effectiveness have used familiar brands (e.g., Messmer 1979; Rethans et al. 1986). Relatedly, research on other communication issues has shown that brand familiarity can be an important variable that moderates advertising interference (Kent and Allen 1994), humor in advertising (Stewart and Furse 1986), and comparison advertising (Pechmann and Stewart 1990). All of this research is consistent with the notion that brand familiarity will moderate the effects of ad repetition.

Summary

In short, we propose that consumers will respond differently to the repetition of an ad sponsored by a familiar as compared with an unfamiliar brand. Consumers will process an ad with an unfamiliar brand sponsor more extensively than an ad with a familiar brand sponsor. Because of the processing differences, consumers will be more likely to consider advertising (in)appropriateness for unfamiliar rather than familiar brands. As a result, the number of exposures at which wearout occurs and advertising effectiveness begins to decrease will be lower when the ad comes from an unfamiliar as compared with a familiar brand. Additionally, attitudes engendered by an ad are less likely to influence attitudes toward familiar than toward unfamiliar brands.

We report results from two experiments that examine advertising repetition effects for familiar and unfamiliar brands in terms of both attitude toward the ad and attitude toward the brand. In study 1, we demonstrate that advertising wearout occurs with fewer repetitions of an ad for unfamiliar rather than familiar brands and begin exploring the types of thoughts that underlie this effect. In study 2, we replicate these effects and specifically measure perceptions of advertising inappropriateness and demonstrate the mediation of the effects of repetition and brand familiarity on ad effectiveness.

STUDY 1

Subjects and Design

Ninety-four adult staff members at a West Coast university participated in an hour-long study in exchange for $5.00 and a chance for a cash prize. Subjects were randomly assigned to a 2 (brand familiarity: familiar or unfamiliar) × 3 (ad repetition: 1, 2, or 3 exposures) × 3 (product: bank, women's clothing, or health-care plan) factorial design. Brand familiarity was a between-subject factor, and ad repetition and product were within-subject factors.

Stimuli

All subjects watched a half-hour local news show from a different state. The news program included three ad breaks. Each break included three ads: the first break showed two filler ads and one test ad, the second break showed one filler and two test ads, and the third break had three test ads. The test ad shown in the first break also appeared in the second and third breaks (repetition level of three). The test ad first shown in the second break was also in the third (repetition level of two). The ad that first appeared in the third break was seen only once (repetition level of one). The ads were rotated and counterbalanced for order and repetition level; each ad appeared in each position in each ad break.

Test ads were selected from compilation videos of "good" advertising, that is, either the advertising agency or an outside judge considered the commercials to represent effective advertising. Ads were selected that had aired in regions different from the study locale. A familiar and a fictitious brand name were chosen for each product category. Pretests indicated that people drawn from the same subject pool as the actual study had (1) not seen the ads, (2) were familiar with the familiar brand, but (3) were unfamiliar with the fictitious brand. A professional video editor replaced the original brand name frames in each ad with either the familiar or the unfamiliar brand name frames to create two ads from each original ad. A final pretest indicated that subjects felt that the test ads were typical and of good quality. No one in the pretest suggested that the ads were not real.

Procedure

Subjects were asked to watch a television news program and then to answer questions about the programming. After watching for a half-hour, subjects completed filler questions about the news show. They then completed measures of uncued recall, brand recall cued by product category, open-ended thought listing, and brand and ad attitudes. Brand attitudes (Ab) were measured with a four-item, seven-point differential scale, anchored by bad–good, low quality–high quality, unappealing–appealing, and unpleasant–pleasant, and the items were averaged (Cronbach's alpha = .88). Attitude toward the ad (Aad) was measured with a four-item scale with the same anchors (Cronbach's alpha = .91). After completing these measures for the test ads, subjects completed manipulation checks and covariate measures. Subjects indicated how familiar they were with each brand prior to seeing the ads and how many times they remembered seeing an ad for each brand. Subjects then indicated product category involvement, gender, age, and education level.

Results

A full model that included interactions among the product category, ad order, brand type, and ad repetition factors was analyzed to determine whether the data could be pooled. The lack of any significant interactions with product category or ad order indicated that the pattern of effects of the experimental factors did not depend on the particular product category or the order in which the ads were seen. Thus, the data were collapsed across the three product categories

and three different ad orders.[1] Analyses were conducted with a model that included brand familiarity as a between-subject factor and ad repetition as a within-subject factor.

Manipulation Checks. Consistent with pretest results, analysis of the measure of prior brand familiarity revealed only a significant main effect of brand type ($F(1, 87) = 94.6$, $p < .0001$): ratings for familiar brands ($M = 5.05$) were substantially higher than for unfamiliar brands ($M = 1.95$). Analysis of recall of message content revealed a significant effect of repetition ($F(2, 184) = 81.1$, $p < .0001$) and no other significant effects; recall increased with repetition. Similarly, there was a main effect of repetition on self-reports of ad repetition ($F(2, 172) = 365.1$, $p < .0001$) and no other significant effects. Subjects demonstrated quite accurate memory for the number of times they had seen each ad ($M_1 = 1.02$, $M_2 = 2.16$, $M_3 = 2.90$). The results suggest a successful manipulation of both the brand-familiarity and ad-repetition variables.

Attitude Effects. We examined the effects of ad repetition on message effectiveness by exploring both attitude toward the ad (Aad) and attitude toward the brand (Ab). An ANOVA of Aad revealed a significant main effect of repetition ($F(2, 157) = 4.1$, $p < .02$), qualified by a significant interaction effect between brand familiarity and ad repetition ($F(2, 157) = 3.5$, $p < .03$). A follow-up analysis revealed a significant increasing linear trend in Aad for familiar brands ($F(1, 32) = 4.4$, $p < .04$). The Aad for unfamiliar brands, as expected, showed a significant quadratic trend ($F(1, 36) = 5.0$, $p < .03$), first increasing ($F(1, 158) = 10.3$, $p < .002$) and then decreasing ($F(1, 158) = 5.3$, $p < .02$; see fig. 1). These results show that, over this repetition schedule, ads for unfamiliar brands exhibited a decline in ad attitudes, but ads for familiar brands did not. This supports the idea that ads for unfamiliar brands show wearout more quickly than do ads for familiar brands.

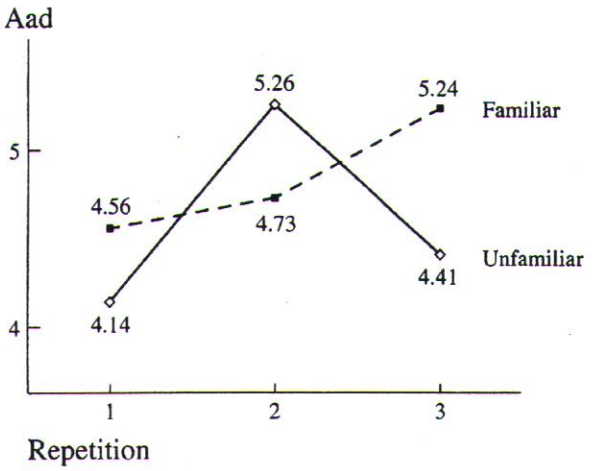
Analysis of Ab showed significant effects of brand familiarity ($F(1, 90) = 4.5$, $p < .04$) and ad repetition ($F(2, 158) = 3.76$, $p < .03$), qualified by a significant interaction effect between brand familiarity and ad repetition ($F(2, 158) = 4.1$, $p < .02$). The Ab showed a directional increasing linear trend for familiar brands ($F(1, 32) = 1.9$, $p < .17$). When the brand was unfamiliar, there was a significant quadratic trend ($F(2, 37) = 8.7$, $p < .005$): Ab increased from one to two exposures ($F(1, 158) = 11.8$, $p < .001$) and decreased from two to three exposures ($F(1, 158) = 5.2$, $p < .03$).

As discussed above, because consumers are likely to update existing attitudes toward a familiar brand but to form an attitude toward an unfamiliar brand, the extent to which attitudes toward the ad affect brand attitudes should vary by

[1] One of the three ads, the ad for the health-care plan, was liked better than the others. While the well-liked ad resulted in higher attitudes toward the ad (5.77 vs. 3.90 and 4.52; $F(2, 147) = 34.0$, $p < .001$) and the brand (5.02 vs. 4.26 and 4.42; $F(2, 147) = 8.2$, $p < .001$) than the two moderately liked ads, these were main effects. There were no significant interactions, showing that the pattern of effects was not affected by ad likability.

FIGURE 1

STUDY 1: ATTITUDE TOWARD THE AD



brand familiarity. To test this, we conducted a regression of Aad, brand familiarity, and their interaction on Ab. Not surprisingly, Aad was a significant predictor of Ab ($\beta = .40$, $t = 7.6$, $p < .0001$), as was brand familiarity ($\beta = -.97$, $t = -2.63$, $p < .01$). Importantly, the interaction was also significant ($\beta = .14$, $t = 2.0$, $p < .05$). The significance and direction of the interaction parameter estimate show that, as predicted, Aad had a significantly greater influence on Ab when the brand was unfamiliar than when it was familiar.

These results indicate that ads for unfamiliar brands show declines in attitudinal response—that is, they show wearout—more quickly than do ads for familiar brands. This also shows that attitude toward the ad has a more powerful impact on brand attitudes for unfamiliar than for familiar brands. We next explore the respondents' thoughts in response to the ads in order to gain a better understanding of the processing that people engage in when messages are repeated.

Processing Effects. Thoughts were coded in terms of support arguments, counterarguments, negative tactic-related thoughts, and irrelevant thoughts. Following the literature, support arguments were thoughts that agreed with or bolstered the message advocacy, while counterarguments were those thoughts that disagreed with or countered the advocacy position (Wright 1973). Negative tactic-related thoughts were defined as "thoughts that indicate that the subject is considering the persuasive, tactical nature of the ad; thoughts about the advertiser's strategy and the appropriateness of the strategy." Thus, negative tactic-related thoughts were a separate category, not just a subset of counterarguments. Examples of negative tactic-related thoughts from the data include, "I thought poorly of the company's marketing folks for advertising like that," "it was very obvious that they were trying to promote this ad by using sex," and "ad ploy to get one to recall ad over those of another

company based on number of times shown." Two independent coders, blind to experimental conditions, coded subjects' listed thoughts with 93% agreement; differences were resolved through discussion.

Analysis of the total number of thoughts showed main effects of brand familiarity ($F(1, 89) = 5.6, p < .02$) and ad repetition ($F(2, 182) = 34.7, p < .0001$), qualified by a significant interaction between brand familiarity and ad repetition ($F(2, 182) = 4.4, p < .01$). Total thoughts increased with repetition both when the advertised brand was familiar and when it was unfamiliar, but the patterns differed (see table 1). Trend analysis revealed a significant quadratic trend over ad repetition for the unfamiliar brands ($F(1, 54) = 9.4, p < .005$) and showed only a significant increasing linear trend, but no quadratic trend, for the familiar brands (linear: $F(1, 45) = 23.4, p < .0001$; quadratic: $F(1, 45) < 1$). Interestingly, there was no significant difference between the total thoughts for familiar versus unfamiliar brands at the first ad exposure ($M_F = 1.33$, $M_U = 1.52$; $F(2, 182) < 1, p > .65$). Total thoughts for the unfamiliar brands were significantly higher at the second ($M_F = 1.93$, $M_U = 3.06$; $F(1, 182) = 21.7$, $p < .0001$) and third ($M_F = 2.55$, $M_U = 3.17$; $F(1, 182) = 5.8$, $p < .01$) exposures than for familiar brands. Given that total thoughts indicate more extensive processing (Sujan 1985), these analyses are consistent with the proposition that ads for unfamiliar brands are processed more extensively with repetition than are ads for familiar brands.

Consistent with prior research, we examined subjects' thoughts more specifically (Anand and Sternthal 1990; Cacioppo and Petty 1979). Support and counterarguments were negatively correlated ($r = -.25$, $p < .0001$). Support arguments and negative tactic-related thoughts were not strongly related in the data ($r = -.08$, $p < .02$). However, not unexpectedly, negative tactic-related thoughts showed some positive correlation with counterarguments ($r = .15$, $p < .02$).

An ANOVA of support arguments showed a significant interaction effect between brand familiarity and ad repetition ($F(2, 182) = 6.07$, $p < .003$). Repetition did not significantly affect support arguments for familiar brands ($F(1, 138) = 1.45$, $p > .24$), but when the brand was unfamiliar, support arguments first increased ($M_1 = .76$, $M_2 = 1.40$; $F(1, 138) = 6.0$, $p < .01$) and then decreased ($M_3 = .64$; $F(1, 138) = 8.6$, $p < .004$). Counterarguments also showed an interaction effect between brand familiarity and ad repetition ($F(2, 182) = 2.9$, $p < .05$). Counterarguments did not show a significant change with repetition for familiar brands ($F(2, 138) < 1, p > .54$) but significantly increased with repetition for unfamiliar brands ($F(1, 138) = 3.3$, $p < .04$).

The difference between support and counterarguments was examined to understand the overall tenor of subjects' thoughts (Greenwald 1968). This analysis showed only a significant interaction effect between brand familiarity and ad repetition ($F(2, 182) = 5.24, p < .006$). Follow-up analyses revealed no effect of repetition for familiar brands ($F(2, 90) = 1.2, p > .3$), but a significant effect for unfamiliar brands ($F(2, 90) = 4.8$, $p < .01$). For unfamiliar brands there was a quadratic trend ($F(1, 45) = 5.2$, $p < .03$) such that the difference score first increased ($M_1 = .24$, $M_2 = .68$; $F(1, 182) = 1.3, p > .25$) and then significantly decreased ($M_3 = -.52$; $F(1, 182) = 9.8$, $p < .002$), showing that with repetition, counterarguments outnumbered support arguments for unfamiliar brands.

Finally, negative tactic-related thoughts were examined. An ANOVA revealed significant main effects of brand familiarity ($F(1, 91) = 5.86$, $p < .02$) and ad repetition ($F(2, 177) = 34.1$, $p < .0001$), as well as a significant interaction effect between brand familiarity and ad repetition

TABLE 1

STUDY 1—ATTITUDES AND THOUGHTS: MEANS AND STANDARD DEVIATIONS

	Level of repetition					
	Familiar			Unfamiliar		
Dependent measure	1	2	3	1	2	3
Attitude toward the ad	4.56	4.73	5.24	4.14	5.26	4.41
	(1.71)	(1.87)	(1.66)	(1.93)	(1.60)	(1.82)
Attitude toward the brand	4.67	4.65	5.06	3.94	4.79	4.26
	(1.16)	(1.46)	(1.16)	(1.39)	(1.22)	(1.42)
Total thoughts	1.33	1.93	2.55	1.52	3.06	3.17
	(1.63)	(1.42)	(1.52)	(1.64)	(2.16)	(1.59)
Support arguments	.63	.67	.98	.76	1.40	.64
	(.94)	(1.05)	(1.25)	(1.30)	(1.52)	(.85)
Counter arguments	.54	.70	.49	.52	.75	1.14
	(1.17)	(.89)	(.69)	(.91)	(1.21)	(1.40)
Difference score: Support—counter	.08	−.02	.49	.24	.65	−.51
	(1.56)	(1.61)	(1.65)	(1.75)	(2.11)	(1.94)
Negative tactic-related thoughts	.14	.33	.55	.19	.36	1.02
	(.36)	(.47)	(.62)	(.45)	(.48)	(.83)

($F(2, 177) = 5.05$, $p < .007$). When the advertised brand was familiar, negative tactic-related thoughts showed a linear trend ($F(1, 45) = 15.25$, $p < .0003$). When the advertised brand was unfamiliar, negative tactic-related thoughts showed a linear trend ($F(1, 41) = 39.27$, $p < .0001$), qualified by a quadratic trend ($F(1, 41) = 5.47$, $p < .02$) caused by a sharp increase in negative tactic-related thoughts at the third ad exposure.

These results suggest that repetition of the same ad induces somewhat greater processing when the advertised brand is unfamiliar than when it is familiar. Repetition of ads for unfamiliar brands results in a decline in support arguments but an increase in both counterarguments and negative tactic-related thoughts. It thus appears that the greater processing of ads for unfamiliar brands results in more negative thoughts that then lead to advertising wearout. In particular, this suggests that a higher repetition of an ad for an unfamiliar brand results in cognitive capacity that allows the consumer to consider the (in)appropriateness of the advertiser's tactics. We examine this process more directly in study 2.

Summary and Discussion

Overall, the results of study 1 support our conceptualization. Ad repetition in a television news program produced wearout when the advertised brand was unfamiliar—both Aad and Ab showed similar patterns in that they first increased and then decreased with repetition of an ad. For a familiar brand, wearout did not appear over three repetitions—Aad showed an increasing linear trend, and Ab showed a directional increase. When the brand was familiar, neither Aad nor Ab showed any decrease over the repetition schedule, whereas both Aad and Ab showed definite decreases when the brand was unfamiliar. Analysis also demonstrated that Aad has a greater influence on Ab for unfamiliar than for familiar brands.

The results of study 1 also suggest that consumers' cognitions while viewing ads may drive the effects of repetition on advertising effectiveness. An increase in counterarguments and a decrease in support arguments with ad repetition led to a decrease in overall ad effectiveness in terms of both Aad and Ab. Importantly, this also shows that negative tactic-related thoughts increased with repetition and that these thoughts increased more rapidly for unfamiliar than for familiar ads. The largest number of negative tactic-related thoughts coincided with the wearout seen for the unfamiliar brands.

Study 1 provided basic support for the idea that brand familiarity moderates the attitudinal effects of repetition. This also provides some initial exploration of the processing that gives rise to advertising wearout and to the differential effects of repetition on processing of ads for familiar and unfamiliar brands. Study 1 demonstrated that there was a greater increase in the level of processing with repetition of an ad for an unfamiliar brand and suggested that, as proposed, the respondents were more likely to think about the (in)appropriateness of advertising tactics at comparatively lower levels of repetition with an ad for an unfamiliar as compared with one for a familiar brand. A second study was designed to explore in more detail the consumer processing evoked with repetition. In particular, this study was designed to measure specifically consumers' perceptions of tactic inappropriateness and to assess the role that perceived tactic inappropriateness plays in the different wearout patterns for familiar and unfamiliar brands. This second study also allows replication of the moderating role of brand familiarity with a different advertising medium, and with different brands, ads, and repetition schedules. Showing the same important role of brand familiarity under different conditions will provide greater confidence in the generalizability of the results.

STUDY 2

Subjects and Design

One hundred and four adult staff members at a private, eastern university participated in a study in exchange for $10 and a chance for a cash prize. Subjects were randomly assigned to a 2 (brand familiarity: familiar or unfamiliar) × 4 (ad repetition: 1, 2, 3, or 5 exposures) × 4 (product: cereal, laundry detergent, pain reliever, toothpaste) factorial design. Higher repetition was used in study 2 than in study 1 because of the different repetition requirements of static (e.g., print) versus dynamic (e.g., television) advertising (Belch and Belch 2001). Brand familiarity was a between-subject factor, and ad repetition and product were within-subject factors.

Stimuli and Procedure

All subjects read a cover story about a new service whereby consumers could get free Internet access by agreeing to view a set of ads prior to accessing the Internet. Each participant individually started a computer-controlled program that displayed a series of ads on a personal computer screen. The program began with a filler ad and then showed the test ads and another filler ad at different levels of repetition, ending with a repeat of the first filler ad and a new filler ad. Thus, subjects saw three filler ads, one of which was repeated once, and four test ads, with each test ad appearing at a different level of repetition. The first test ad to appear was seen five times during the course of the program, the second was seen three times, the third was seen twice, and the fourth was seen once. All ads had at least two other ads in between any repetition of the ad, and ads were rotated and counterbalanced for order and repetition levels such that each ad appeared in each position and at each repetition level for different subjects. Each test ad was displayed for 13 seconds (a pretest revealed that this was long enough for subjects to read the entire ad without feeling rushed). All ads were created by a professional designer to include a relevant, high-quality graphic (e.g., a photo of a couple at a breakfast table with a bowl of cereal, newspaper, etc., for the cereal ad), a headline, and copy that stressed product benefits (e.g., nutrition and taste for the cereal ad).

Two versions of each ad were created with either a familiar or a fictitious brand name (names were pretested to verify that the familiar brands were well known and that the fictitious brands were not).

After the ads ended, subjects completed a questionnaire, beginning with several filler questions about the Internet service. Next, they completed thought protocols of what they thought and felt the last time that they viewed each ad. Subjects completed the same measures of Ab (Cronbach's alpha = .95) and Aad (Cronbach's alpha = .95) used in study 1. Next, subjects were asked to indicate perceived tactic inappropriateness on two seven-point agree–disagree scales: (1) "I thought that the way BRAND tried to persuade people seemed acceptable," and (2) "I felt that this advertising for BRAND was fair in what was said and shown" ($r = .61$, $p < .0001$). The second measure was similar to the negative tactic-related thought measure used by Shiv et al. (1997). Higher numbers reflect greater perceived tactic inappropriateness. After completing these measures for all test ads, subjects indicated prior brand familiarity, product category involvement, gender, age, and education level.

Results

A full model with the experimental factors, product category, involvement, and ad order was analyzed. The lack of significant interactions between experimental factors and the other variables indicated that the data could be pooled across these variables. Unless otherwise stated, the following analyses were conducted with a 2 (brand familiarity) × 4 (repetition) ANOVA. Table 2 contains cell means.

Manipulation Checks. Analysis of prior brand familiarity revealed a significant main effect of brand type on prior brand familiarity ($F(1, 102) = 1500.6, p < .0001$) and no other significant effects. Prior familiarity was higher for familiar brands than for unfamiliar brands ($M_F = 5.82$, $M_U = 1.09$). Analysis of subjects' self-report of how many times they remembered seeing each ad showed a significant main effect of ad repetition ($F(3, 303) = 254.1, p < .0001$) and no other significant effects. As in study 1, subjects demonstrated good memory for the number of times they viewed an ad ($M_1 = 1.41$, $M_2 = 2.24$, $M_3 = 2.85$, $M_5 = 4.66$).

Attitude Effects. An ANOVA was used to examine the effects of brand familiarity and ad repetition on Aad and Ab. Analysis of Aad showed a significant main effect of ad repetition ($F(3, 295) = 5.01, p < .002$) and no other significant effects. We next conducted a series of planned contrasts and trend analyses, as recommended by Rosenthal, Rosnow, and Rubin (2000), among others, to test for planned differences. For familiar brands, examination of Aad revealed no effect of ad repetition (exposure 1 was contrasted with exposure 2, and exposure 2 was contrasted with exposure 3, F's < 1; contrasts of exposure 3 to exposure 5 showed a marginal decrease, $F(1, 295) = 3.14$, $p < .08$; linear and quadratic trends: $F(1, 46) < 1$). For unfamiliar brands, there was a significant quadratic trend ($F(1, 50) = 7.1$, $p < .01$) for Aad. This trend was driven by a sharp decrease in Aad from three ($M = 5.05$) to five exposures ($M = 4.16$; $F(1, 295) = 12.63$, $p < .0004$).

An analysis of Ab showed main effects of brand familiarity ($F(1, 102) = 7.83$, $p < .006$) and of ad repetition ($F(3, 299) = 2.8$, $p < .05$), and it indicated a significant interaction effect ($F(3, 299) = 3.7$, $p < .01$). Follow-up analysis showed no significant effect of repetition on Ab for familiar brands (contrast F's < 1.1). For unfamiliar brands, Ab showed a significant linear trend ($F(1, 50) = 9.4$, $p < .001$) and a quadratic trend that approached significance ($F(1, 50) = 2.5$, $p < .11$). Importantly, Ab significantly decreased from three ($M = 5.05$) to five ($M = 4.34$) exposures for unfamiliar ($F(1, 299) = 10.14$, $p < .002$), but not for familiar ($F < 1$), brands. Both of these analyses provide some support for a differential effect of repetition as a function of the familiarity of the sponsoring brand. There was no evidence of wearout for familiar brands, either in terms of Aad or Ab,

TABLE 2

MEANS AND STANDARD DEVIATIONS FOR EVALUATION AND PROCESSING MEASURES (STUDY 2)

	Level of repetition							
	Familiar				Unfamiliar			
Dependent measures	1	2	3	5	1	2	3	5
Attitude toward the ad	4.70	4.74	5.07	4.61	4.83	4.95	5.07	4.16
	(1.69)	(1.31)	(1.44)	(1.37)	(1.47)	(1.47)	(1.41)	(1.74)
Attitude toward the brand	5.62	5.29	5.39	5.52	5.13	5.01	5.05	4.34
	(1.48)	(1.54)	(1.40)	(1.37)	(1.28)	(1.28)	(1.28)	(1.40)
Total thoughts	2.41	2.49	2.88	2.71	2.04	2.45	2.36	3.12
	(1.49)	(1.14)	(1.42)	(1.27)	(1.34)	(1.17)	(1.40)	(1.78)
Negative tactic-related thoughts	.14	.31	.29	.76	.08	.12	.27	1.18
	(.40)	(.55)	(.50)	(.81)	(.34)	(.45)	(.77)	(1.01)
Tactic inappropriateness	3.53	3.20	3.35	3.42	2.80	2.55	2.99	3.87
	(1.95)	(1.66)	(1.73)	(1.79)	(1.37)	(1.24)	(1.45)	(1.85)

but there were decreases in both Aad and Ab after three exposures for unfamiliar brands.

Regression analysis was conducted to examine whether the influence of Aad on Ab depended on prior brand familiarity. Regression of Aad, brand familiarity, and their interaction on Ab replicated the results found in study 1. All three variables were significant ($ß = .44_{Aad}$, $t = 7.7$, $p < .0001$; $ß = -1.26_{familiarity}$, $t = -3.28$, $p < .001$; $ß = .16_{interaction}$, $t = 2.01$, $p < .05$). Importantly, the significant interaction revealed that Aad had a significantly greater influence on Ab when the brand was unfamiliar than when it was familiar.

Processing Effects. Thoughts were coded and analyzed to explore the process underlying the different wearout effects observed for unfamiliar and familiar brands. The total number of thoughts was analyzed to provide insight as to whether consumers processed ads for unfamiliar brands more than for familiar brands. The total number of thoughts reported by subjects showed a significant main effect of repetition ($F(3, 300) = 6.72$, $p < .0002$), qualified by a significant interaction effect ($F(3, 300) = 3.54$, $p < .02$). Total thoughts showed a significant linear increase for both familiar brands ($F(1, 55) = 5.38$, $p < .02$) as well as unfamiliar brands ($F(1, 55) = 28.15$, $p < .0001$). For unfamiliar brands, however, this was qualified by a significant cubic trend ($F(1, 55) = 5.72$, $p < .02$), with a large increase in total thoughts from the third ($M = 2.35$) to the fifth exposure ($M = 3.12$; $F(1, 300) = 11.94$, $p < .0006$). Because of this sharp increase, there were more thoughts at the fifth exposure when the brand was unfamiliar than when it was familiar ($M_U = 3.12$, $M_F = 2.71$; $F(1, 300) = 3.5$, $p < .06$). It is possible that the main effect of repetition merely reflects that ads' thoughts are better recalled with more ad repetition. The interaction results, by contrast, are suggestive of greater processing with repetition of ads for unfamiliar relative to familiar brands.

Negative tactic-related thoughts were coded as described in study 1. In addition, as described above, perceived tactic inappropriateness was explicitly measured. Consistent with expectations, the perceived tactic inappropriateness scale was significantly correlated with the negative tactic-related thoughts coded from the open-ended protocols ($r = .20$, $p < .0001$). Given this positive correlation and the conceptual connection between the two, MANOVA was utilized to examine the effects of repetition and brand familiarity. This revealed main effects of repetition (Wilks's lambda = .66; $F(6, 582) = 22.79$, $p < .0001$) and familiarity (Wilks's lambda = .97; $F(2, 291) = 3.85$, $p = .02$) and an interaction effect (Wilks's lambda = .93; $F(6, 582) = 3.81$, $p = .001$). The ANOVA results of subjects' coded negative tactic-related thoughts revealed a main effect of ad repetition ($F(3, 292) = 47.48$, $p < .0001$), as well as an interaction effect ($F(3, 292) = 5.22$, $p < .001$). While tactic-related thoughts increased with repetition for both familiar and unfamiliar brands, there was a larger increase for unfamiliar brands. Although tactic-related thoughts were the same for unfamiliar and familiar brands at the first exposure to the ad ($F < 1$), they were significantly higher at the fifth exposure to the ad for an unfamiliar than for a familiar brand ($M_U = 1.18$, $M_F = .76$; $F(1, 292) = 12.90$, $p < .0004$). There was a significant linear ($F(1, 55) = 63.65$, $p < .0001$) and quadratic ($F(1, 55) = 15.91$, $p < .0002$) trend in negative tactic-related thoughts for unfamiliar brands.

Similarly, an ANOVA of perceived tactic inappropriateness revealed a significant main effect of repetition ($F(3, 292) = 4.91$, $p < .002$) and a significant interaction effect ($F(3, 292) = 3.31$, $p < .02$). There was no effect of repetition on perceived tactic inappropriateness for familiar brands ($F < 1$). For an unfamiliar brand, perceived tactic inappropriateness significantly increased with repetition of an ad ($F(3, 220) = 6.74$, $p < .0002$). There was a linear ($F(1, 52) = 8.76$, $p < .005$) and a cubic trend ($F(1, 52) = 16.70$, $p < .0002$) for unfamiliar brands with a sharp increase in perceived tactic inappropriateness between three and five exposures.

Mediation. Analysis showed significant experimental effects on Aad and Ab. Likewise, significant effects were revealed for total thoughts, negative tactic-related thoughts, and perceived tactic inappropriateness. These analyses fulfill the first two steps for potential mediation of the experimental effects on attitudes by these variables (Baron and Kenny 1986). Thus, the last step examining potential mediation by these variables of the effects of brand familiarity and repetition on attitudes was conducted by including each of them separately as a covariate in the standard ANOVA model for Aad and Ab.

Total thoughts did not appear to mediate the experimental effects. Total thoughts did not achieve significance as a covariate in the analysis of either Aad or Ab, suggesting that it is not the amount of thought itself that is driving the different effects of repetition for familiar and unfamiliar brands.

Negative tactic-related thoughts were also examined for mediation of the effects of ad repetition and brand familiarity. Tactic-related thoughts was a marginally significant covariate for Aad ($F(1, 288) = 2.51$, $p < .11$) and reduced the effect of repetition on Aad (from $F(3, 295) = 5.01$, $p < .002$ to $F(3, 288) = 2.37$, $p < .07$). Tactic-related thoughts was a significant covariate for Ab ($F(1, 292) = 4.74$, $p < .03$), eliminated the significant effect of repetition on Ab ($F(3, 292) = .65$, $p > .58$), and significantly reduced the interaction effect ($F(3, 292) = 2.23$, $p < .09$) but not the effect of brand familiarity on Ab ($F(1, 100) = 8.37$, $p < .005$). This suggests that negative tactic-related thoughts partially mediate the differing wearout effects for familiar versus unfamiliar brands.

Finally, perceived tactic inappropriateness was examined as a potential mediator. Perceived tactic inappropriateness was a significant covariate for Aad ($F(1, 293) = 62.7$, $p < .0001$) and reduced the effect of repetition on Aad (from $F(3, 295) = 5.01$, $p < .002$ to $F(3, 293) = 3.03$, $p < .03$). Perceived tactic inappropriateness was also a significant covariate for Ab ($F(1, 295) = 20.58$, $p < .0001$) and eliminated the significant effect of repetition on Ab ($F(3, 295) = 2.1$,

$p > .1$) and the interaction effect ($F(3, 295) = 2.48$, $p < .06$).

These analyses demonstrate that negative tactic-related thoughts and perceived tactic inappropriateness provide some mediation of the effect of ad repetition on Aad and mediate the effects of repetition and the interaction of brand familiarity and ad repetition on Aad and Ab. Combined, these results support the notion that thoughts about the inappropriateness of advertising tactics are one important type of the consumer thoughts that underlie ad wearout.

Summary and Discussion

Study 2 replicates the findings from study 1 that ads for unfamiliar brands can wearout more quickly than ads for familiar brands. As with study 1, study 2 also provides results that suggest that processing of the ad is different when the brand is unfamiliar versus when it is familiar. Additionally, study 2 suggests that the greater processing accorded during ad repetition for an unfamiliar brand may give rise to consideration of the appropriateness of advertisers' tactics.

GENERAL DISCUSSION