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Proper identification of event sponsors is a key concern in sponsorship communication. Although practitioners have assumed that event sponsors are identified primarily through pure recollection, the authors show that sponsor identification involves a substantial degree of construction. Results from three experiments indicate that sponsor identification is biased toward brands that are prominent in the marketplace and semantically related to the event. These biases appear to emanate from constructive processes whereby, during identification, respondents use the prominence and relatedness of available brands as heuristics to verify their recollection of event-sponsor associations. The effects of relatedness on sponsor identification seem stronger and more robust than those of prominence, which appears to be invoked only for large events. Both effects are robust across methods of identification assessment though less pronounced when the accuracy threshold is high.

Relatedness, Prominence, and Constructive Sponsor Identification

A recent survey about the 1998 Winter Olympics sponsors yielded alarming results (*The Wall Street Journal* 1998). Eleven of the 20 brands most often identified as worldwide sponsors of the event were not in fact sponsors. For example, whereas 50% of the respondents correctly identified United Parcel Service (UPS) as an Olympic sponsor, 40% mistakenly credited Federal Express. These results are far from unusual (e.g., Crimmins and Horn 1996). Event sponsors have expressed concern about public confusion regarding event sponsorship. This concern is evident in the increasing number of commercial studies that track sponsor identification (e.g., Millman 1995), published recommendations on how to increase the chances of proper identification (e.g., Meenaghan 1994), and advertisements warning consumers against "ambush marketing" tactics by which consumers are led to believe incorrectly that some brands are actual sponsors. Proper identification usually is perceived as a necessary condition for achieving the image objectives

that most sponsors assign to sponsorship activities (e.g., Stipp and Schiavone 1996).

The processes underlying sponsor identification, surprisingly, are poorly understood. It is assumed widely by practitioners that sponsors are identified through pure recollection, that is, access to a memory record of the event-sponsor association (e.g., Crimmins and Horn 1996). However, extant theorizing on constructive memory processes suggests that there may be more to sponsor identification than sheer retrieval of the original event-sponsor association (e.g., Loftus, Feldman, and Dashiell 1995; Schacter, Norman, and Koutstaal 1998). As with other types of marketing communications (Pham and Johar 1997), sponsor identification may involve a substantial degree of construction. In this article, we examine, across three experiments, how two major heuristics—brand-event relatedness and market prominence—operate in constructive sponsor identification.

HEURISTICS OF SPONSOR IDENTIFICATION

Retrieval, Relatedness, and Prominence

On the surface, sponsor identification resembles cued retrieval. For example, respondents may be asked, "Which delivery company sponsored the 1998 Winter Olympics in Nagano?" to which they are expected to answer "UPS." Whether the actual sponsor of an event will be identified correctly depends on the respondents' ability to retrieve the original event-sponsor association, which is dictated largely by how well the association was encoded. What is perhaps less obvious is that the sponsor's identification or misidentification also depends on constructive processes the respondents might invoke in attempting to infer the sponsor

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of an event. We suggest that these constructive processes are likely to include two major heuristics: brand–event relatedness and market prominence.

Consumers who are asked to identify the sponsor of an event may assess the likely association between the event and alternative sponsors. Various streams of research indicate that such associative judgments tend to be based on a heuristic of relatedness. Categorization research suggests that instances are assigned to categories on the basis of the overlap between the attributes of the instance and those of the category (e.g., Rosch and Mervis 1975). Research on the representativeness heuristic (e.g., Kahneman and Tversky 1973) indicates that judgments about the probability that an object (e.g., a movie) belongs to a certain population (e.g., movies that a person likes) often are based on the similarity between the attributes of the object (e.g., features of a given actor) and salient characteristics or exemplars (well-liked movies previously viewed) of the population (e.g., Glass and Waterman 1988). Likewise, research on clinical decision making suggests that diagnoses may be misled by the semantic similarity between symptoms and stereotypes about illnesses (Chapman and Chapman 1967). It is therefore probable that, in sponsor identification tasks, consumers similarly rely on the semantic overlap between features of the event and those of potential sponsors. The higher the degree of feature overlap, the higher is the likelihood that the event will be attributed to a particular sponsor.

Sponsor identification also may involve a heuristic of market prominence. An important characteristic of the marketplace is that it comprises brands differing in prominence (e.g., market share, share of voice). Research on information economics suggests that consumers may draw various inferences from such variations in the marketplace (cf. Nelson 1974). For example, perceived brand advertising expenditures may influence consumers' expectations about overall brand quality (Kirmani and Wright 1989) and their inferences about brand attribute levels (Kirmani 1990). Because attributes, such as market prominence, that vary widely across alternatives often acquire subjective diagnostic value (Slovic and Lichtenstein 1971), consumers may use market prominence similarly to infer a brand's likelihood of sponsoring an event. Market prominence, for example, may signal resource availability. As a result, prominent companies could be perceived as more likely to spend large sums of money on sponsorship activities. Such a reasoning process is likely to result in prominent brands getting disproportionate credit for event sponsorship, even if less prominent brands also are retrievable from memory.

Process Operations

If sponsor identification is based on heuristics of relatedness and prominence, how do these heuristics operate? Two sets of issues are of particular interest: (1) the contingencies affecting consumers' reliance on these heuristics and (2) the interplay between these heuristics and between these and other processes of sponsor identification, such as direct retrieval.

Principles of contingent source identification suggest that constructive reliance on relatedness and prominence should be less likely when the memory record of the event–sponsor association is readily accessible (Pham and Johar 1997). This is because memory records generally are perceived to be more accurate than constructed inferences. In a related

study (Pham and Johar 1999), we test this proposition by manipulating the salience of event–sponsor associations during encoding. Consistent with our predictions, we find that when the associations are easy to encode, subjects tend to identify sponsors through direct retrieval rather than through heuristics such as market prominence. A corollary prediction is that constructive reliance on relatedness and prominence should decrease when the criterion for accuracy is high. We examine this issue in Experiment 3.

Although recollective and constructive processes of sponsor identification are conceptually distinct, there is a theoretical possibility that the two types of processes interact (Johnson, Hashtroudi, and Lindsay 1993). Consumers may perform sponsor identification judgments by combining their memory records of event–sponsor associations with heuristics such as relatedness and prominence. In a combined strategy, relatedness and prominence would serve as cues that verify or invalidate people's (possibly vague) recollection of the actual associations. This strategy would be analogous to an hypothesis testing strategy (cf. Hoch and Ha 1986), whereby sponsors hinted at by one type of process (construction or recollection) would serve as hypotheses to be tested against data from another type of process (recollection or construction). Alternatively, it is possible that constructive processes of sponsor identification are used independently of recollection. Relatedness and prominence may convey information that is perceived as valid on its own and therefore does not need to be checked. We explore these issues in Experiments 1 and 3.

Finally, it is theoretically and substantively interesting to assess the relative strength of the two heuristics. Experiment 2 addresses this issue. The fundamental nature of categorization (Mervis and Rosch 1981) suggests that relatedness may be a more dominant heuristic of sponsor identification than prominence. Consumers making identification judgments first may categorize the event on the basis of its meaning and then search for brands along related meaning dimensions. Brands that are perceived as unrelated would be eliminated from consideration. Prominence then may be invoked to discriminate among several related brands. Dominance of relatedness over prominence would be consistent with the finding that consumers' evaluations of brand extensions are determined primarily by the semantic fit between the meaning of the brand in its original category and the meaning of the potential extension (Broniarczyk and Alba 1994). We describe three experiments that test different aspects of our theorizing.

EXPERIMENT 1

The purpose of this experiment is to (1) document that sponsor identification is subject to a prominence bias and (2) explore the underlying process. To examine these issues, we exposed subjects to a series of event–sponsor associations and then asked them to identify the sponsor of each event. We predicted that identification accuracy would exhibit a prominence bias, so that accuracy would be higher for events sponsored by prominent brands than for those sponsored by less prominent brands. Should such a prominence bias be uncovered, it becomes important to determine the locus of this effect. The effect may occur primarily during initial learning of the event–sponsor association, because event associations to prominent brands are easier to

encode than event associations to less prominent brands. Alternatively, the prominence effect may occur primarily at the time of sponsor identification. Consumers may invoke the relative prominence of a brand only when they are asked to determine whether it is a sponsor. We examine this issue by manipulating the distinctiveness of the potential sponsors presented at test.

This experiment also explores whether sponsorship inferences based on prominence are strategic or more spontaneous (e.g., Johar 1995). Although the notion of constructive sponsor identification suggests a consciously invoked heuristic, the underlying process may be primarily nonreflective. Consumers' intuitions about the market prominence of various brands is likely to be related to their familiarity with these brands (cf. Bazerman 1994; Hoyer and Brown 1990; Rindfleisch and Inman 1998). Research in psychology indicates that feelings of familiarity may be used spontaneously to make various judgments, including fame (Jacoby et al. 1989), liking (Mandler, Nakamura, and Van Zandt 1987), and truth (Hawkins and Hoch 1992). It therefore is possible that a market prominence bias in sponsor identification may be driven by a similar nonreflective reliance on the relative familiarity of the brands. To explore this issue, we assessed subjects' confidence in their sponsor identification responses, judgment by judgment, along with their confidence in the relative market prominence of the stimulus brands.

Design and Procedure

Forty-four subjects were assigned to a 2 (sponsor's market prominence) \times 2 (foil distinctiveness) mixed design. The experiment was administered in two phases, separated by an unrelated ten-minute filler task. In the first phase, subjects were exposed to press releases about different sporting events, each of which was sponsored by a different brand. Subjects then were tested in the second phase for their abil-

ity to identify the sponsors of the events. The first phase manipulated within subjects the prominence of the actual sponsors of the events. The second phase manipulated between subjects the distinctiveness, in terms of prominence, of the pairs of brands from which subjects had to identify the actual sponsors. We illustrate these manipulations in Table 1 and further explain them subsequently.

The first phase was conducted under the guise of a study about the World Wide Web as a communication medium. Subjects were asked to read and rate the clarity of eight press releases about sporting events around the world (e.g., the Rugby Currie Cup in South Africa) that purportedly were downloaded from the World Wide Web. Each press release mentioned four brand names from the same product category (e.g., Nike, Reebok, Converse, Puma). One of the four brands was described as the actual sponsor of the event. The other brands were mentioned as competitors that did not sponsor the event. Mentioning both the sponsor and non-sponsor brands in the press releases controls for the number of within-experiment presentations and, therefore, for the possibility that subjects could identify the sponsor by recalling which brand they had seen in the context of the study. Half the events (e.g., Rugby Currie Cup) were sponsored by a prominent brand (e.g., Reebok rather than Converse); the other half (e.g., Olympic Track and Field) were sponsored by a less prominent brand (e.g., DHL rather than UPS). More prominent brands were those that pretest subjects accurately believed were larger and rated as more familiar than less prominent brands ($M_s = 6.23$ versus 5.03 ; $t(15) = 11.7$, $p < .01$). Two matched sets of eight brands were created with four prominent and four less prominent brands (see Table 1). For any given event, prominence of the sponsor was counterbalanced across subjects.

In the second phase, subjects were asked to match each event with one of two possible sponsors (the actual sponsor and one foil) whose names were provided. For each ques-

Table 1
STIMULI USED IN EXPERIMENT 1 AT TEST

	Distinctive Foils		Nondistinctive Foils	
	Target	Foil	Target	Foil
Prominent sponsors				
Set 1	Reebok Microsoft Canon Budweiser	Converse Lotus Pentax Coors	Reebok Microsoft Canon Budweiser	Nike Netscape Nikon Miller
Prominent sponsors				
Set 2	Evian Panasonic UPS Delta Airlines	Spa Sanyo DHL Tower Air	Evian Panasonic UPS Delta Airlines	Perrier Sony Federal Express United Airlines
Less prominent sponsors				
Set 1	Spa Sanyo DHL Tower Air	Evian Panasonic UPS Delta Airlines	Spa Sanyo DHL Tower Air	Volvic Hitachi Emery America West
Less prominent sponsors				
Set 2	Converse Lotus Pentax Coors	Reebok Microsoft Canon Budweiser	Converse Lotus Pentax Coors	Puma Borland Yashica Stroh's

Notes: The eight events (sponsor category) described in the press releases were Le Tour de France (mineral water), Rugby Currie Cup (athletic shoes), European Men's Judo Championship (electronics), Olympic Track and Field (overnight delivery services), World Cup Soccer (airlines), Super Classic Professional Chess Association (software), Asian Games Women's Gymnastics (cameras), and World Boxing Super Championship (beer).

tion, the foil was one of the nonsponsor brands that was in the same product category and mentioned in the press release. In the distinctive foils condition, the actual sponsor and the foil had distinct degrees of prominence, as determined in a pretest. If the actual sponsor was a prominent brand (e.g., Reebok), the matched foil was a less prominent brand (e.g., Converse); if the actual sponsor was a less prominent brand (e.g., Coors), the matched foil was a prominent brand (e.g., Budweiser). In the nondistinctive foil condition, the actual sponsor and the foil were paired on the basis of a pretest that suggested similar degrees of prominence. If the actual sponsor was a prominent brand (e.g., Reebok), the matched foil was also a prominent brand (e.g., Nike); if the actual sponsor was a less prominent brand (e.g., Coors), the matched foil was also a less prominent brand (e.g., Stroh's). After identifying the sponsors of the eight events, subjects were asked to rate their confidence in each of their sponsor identification responses using a five-point scale anchored at "not at all confident" and "absolutely certain." Finally, as a manipulation check of relative prominence, subjects were asked to identify, for each pair of brands, which of the two companies was "bigger" and "larger" and rate how certain they were of each response on a five-point scale.

Predictions

If consumers use market prominence as a cue to determine whether a brand is a sponsor, identification accuracy should be higher when the actual sponsor is more (versus less) prominent. If the prominence effect occurs primarily at encoding, identification accuracy should depend on the prominence of the sponsors during initial exposure to the sponsorship information but not on their relative prominence compared with a foil during the test. If, however, the prominence effect is driven primarily by processes that occur at the time of sponsor identification, identification accuracy should be affected significantly by the relative prominence of the target during the test. Finally, if reliance on prominence is primarily reflective (nonreflective), subjects' confidence in their sponsor identification judgments should be related significantly (weakly) to their confidence in the prominence of the brands.

Results

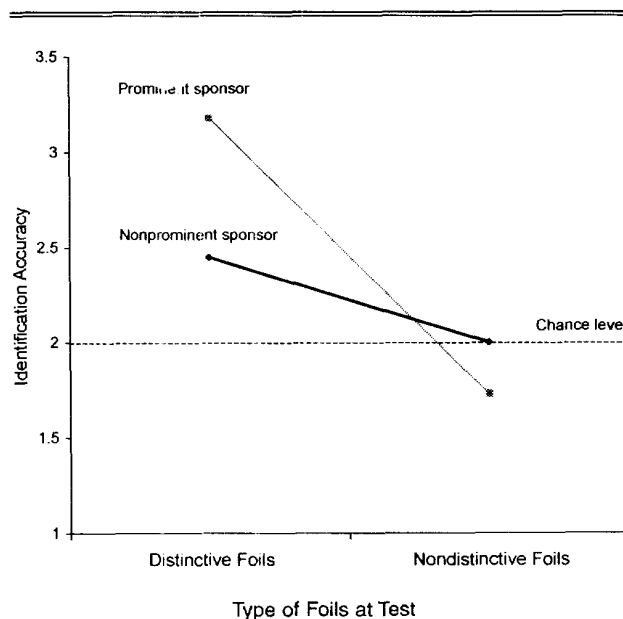
Foil distinctiveness manipulation check. We computed how many times the prominent sponsors were perceived as bigger than their respective foils and how many times the less prominent sponsors were perceived as bigger than their respective foils. These scores were submitted to a three-way ANOVA with size as a repeated factor and foil distinctiveness and counterbalancing set as between-subjects factors. There was a main effect of prominence ($F(1,40) = 111.15$, $p < .001$), showing prominent brands were perceived as bigger ($M = 3.02$) than were less prominent brands ($M = 1.48$). More important, the analysis revealed a strong prominence \times foil distinctiveness interaction ($F(1,40) = 153.85$, $p < .001$, $\omega^2 = .78$). As expected, in the distinctive foil condition, the prominent sponsors were much more likely to be identified as bigger than their foils ($M = 3.64$) than were the less prominent brands ($M = .27$; $F(1,20) = 304.22$, $p < .001$). However, in the nondistinctive foil condition, prominent sponsors were no more likely to be identified as

bigger than their foils ($M = 2.41$) than were the less prominent brands ($M = 2.68$; $F(1,20) = 1.53$, $p = .23$). The strong interaction between prominence and foil distinctiveness was qualified by a smaller interaction with set ($F(1, 40) = 7.79$, $p < .01$, $\omega^2 = .14$). This interaction suggests that the two sets were not calibrated equally. However, the set factor did not moderate the main results of the study. Subjects presented with the distinctive foils were also more confident in their assessments of which brand was larger ($M = 3.94$) than were subjects presented with the nondistinctive foils ($M = 3.57$), and this effect was marginally significant ($F(1, 39) = 3.66$, $p = .06$).

Sponsor identification accuracy. Recall that each subject was exposed to eight press releases, half sponsored by more prominent brands and half by less prominent brands. Therefore, sponsor identification accuracy for the prominent and less prominent sponsors was scored out of a possible four correct responses. These scores served as a within-subject factor in a 2 (sponsor prominence) \times 2 (distinctiveness of foils) \times 2 (counterbalancing set) mixed ANOVA. As we depict in Figure 1, the main effect of prominence was not significant ($F(1,40) = 1.79$, $p = .19$). The analysis revealed only a significant sponsor prominence \times distinctiveness of foils interaction ($F(1,40) = 8.64$, $p < .01$).

Planned comparisons show that, in the distinctive foil condition, accuracy was higher when the sponsor was a prominent brand ($M = 3.18$) than when it was a less prominent brand ($M = 2.45$; $F(1, 21) = 7.55$, $p < .05$). This simple effect indicates that sponsor identification is subject to a market prominence bias. In the nondistinctive foil condition, accuracy was not affected by the prominence of the actual sponsor ($F(1,21) = 1.69$, $p = .21$; $M_{\text{prominent}} = 1.73$, $M_{\text{nonprominent}} = 2.00$). This finding suggests that the prominence bias is driven largely by processes occurring at the time of sponsor identification. Had the bias operated solely

Figure 1
EXPERIMENT 1: SPONSOR IDENTIFICATION ACCURACY



through differential encoding of the event–sponsor associations, identification accuracy should have been greater for prominent sponsors than for less prominent sponsors, regardless of the type of foils used during the test. This is because prominent brand sponsorships presumably should be easier to encode and retrieve, irrespective of which brand it is paired with at test.

Although the findings cannot be explained uniquely in terms of differential encoding, further examination of the results suggests that encoding processes played some role in the prominence bias. Had subjects made their identification judgments only on the basis of the differential prominence of the brands during the test, identification accuracy for the less prominent brands should have been significantly less than chance in the distinctive foil condition, because the foils in this condition were significantly more prominent. However, as depicted in Figure 1, identification accuracy for the less prominent sponsors was marginally higher than chance levels in the distinctive foil condition ($t(22) = 1.74$, $p = .10$). We return to this issue in the “Discussion” section.

Confidence. We reasoned that, if reliance on prominence was strategic, a subject’s confidence in a given sponsor identification judgment, controlling for actual sponsorship, should be related significantly to the subject’s confidence that the identified brand was larger than the other brand. If, conversely, reliance on prominence was nonreflective, there would be little relation between the two confidence measures. This prediction was tested for all the observations for which, in the distinctive foil condition, there was a match between the brand identified as the sponsor and the brand believed to be larger. A regression equation was estimated across subjects and judgments, with confidence in the brand’s size and actual sponsorship as predictors and confidence in source identification as the dependent variable. The analysis revealed a marginally significant effect of actual sponsorship ($b = .50$, $t(105) = 1.72$, $p < .10$), which indicated that subjects were slightly more confident in their source identification judgments when they had identified the actual sponsor. There was also a positive effect of confidence in the brand’s relative size ($b = .43$, $t(105) = 3.21$, $p < .01$). Subjects’ confidence in a prominent brand being a sponsor therefore was linked to their confidence that this brand was actually larger in the marketplace. This finding is consistent with a strategic, as opposed to nonreflective, reliance on market prominence information in sponsor identification.

Discussion

The results support the proposition that sponsor identification involves more than direct retrieval of the actual sponsor or pure random guessing. Sponsor identification also seems to involve a reliance on the relative market prominence of potential sponsors. Consistent with this proposition, we find that, in the distinctive foil condition, identification accuracy was significantly higher for prominent sponsors than for less prominent sponsors. Although, in the exposure phase, prominent and less prominent brands sponsored an equal number of events, the former were more likely to receive proper credit than the latter. This bias disappeared when a prominent brand was paired with another prominent brand during the test, which suggests that, rather than encoding prominent brands better at exposure, subjects used the prominence of brands during the test to construct their sponsor identification judgments.

However, the findings do not rule out the presence of some encoding effects in the prominence bias, nor do they indicate that heuristic reliance on prominence at the time of test is absolute. Although, in the distinctive foil condition, identification accuracy was significantly greater for prominent brands than for less prominent ones, identification accuracy for the latter was still marginally higher than chance. Had reliance on relative prominence during the test been absolute, identification accuracy for the less prominent brands should have been less than chance, because there should have been a significant tendency to credit the more prominent foils incorrectly. A possible explanation for the overall pattern of results may be that the prominence bias arises from the combined use of encoding-dependent processes and constructive processes at the time of retrieval. It is plausible that encoding of prominent sponsors was superior to encoding of less prominent sponsors. When the actual sponsor was prominent and pit at test against a less prominent brand, the differential prominence of the two brands may have acted as a cue that further “supported” subjects’ (possibly vague) recollection. In this situation, subjects therefore performed significantly higher than chance. In contrast, when the actual sponsor was less prominent and pit at test against a more prominent brand, the differential prominence of the brands was in conflict with subjects’ recollection. Confused, subjects performed near, but not less than, chance. In the nondistinctive foil condition, subjects’ recollections of the sponsor brand were neither supported nor contradicted by the relative prominence of the brands at test. Subjects again performed near chance levels.

The results also provide some tentative insight into the amount of reflection underlying subjects’ reliance on the relative prominence of the brands. It was observed that, after controlling for actual sponsorship, confidence in a given sponsor identification judgment was related significantly to subjects’ confidence that the identified brand was large. This relationship seems to indicate that subjects’ tendency to favor the more prominent brand was driven by something deeper than a mere feeling of familiarity. This prominence bias appears to resemble the type of market-related inference that Kirmani and Wright (1989) allude to, rather than the more automatic processes discussed in the literature on perceptual fluency (e.g., Jacoby 1983; Mandler, Nakamura, and Van Zandt 1987). This interpretation, however, is still speculative. We could argue, for example, that feelings of familiarity may have been invoked spontaneously both to complete the confidence in sponsor identification task and to assess confidence in the relative size of the brands.

Are less prominent brands always at a disadvantage in terms of sponsorship identification? To answer this question, we examine the pervasiveness of reliance on prominence when other heuristics, such as relatedness, also can be invoked. It is also important to examine people’s reliance on these heuristics in conjunction with other likely processes, such as pure guessing and direct retrieval. These issues are addressed in Experiment 2.

EXPERIMENT 2

In Experiment 1, subjects identified which of two brands from the same product category was the sponsor of each event. The alternatives therefore were equated largely in terms of their semantic relatedness to the event. The purpose

of Experiment 2 was to examine the relative magnitude of reliance on prominence and relatedness when both heuristics of sponsor identification were applicable. On the basis of the pervasiveness of relatedness processes in associative judgments (e.g., Chapman and Chapman 1967; Kahneman and Tversky 1973), we predicted strong reliance on the relatedness between events and alternative sponsors. A second objective of this experiment was to assess the relative magnitude of reliance on the prominence and relatedness heuristics compared with two obvious alternative processes of sponsor identification: direct retrieval and pure guessing.

Design and Procedure

Sixty-five subjects were assigned randomly to a 2×2 within-subjects design¹ that manipulated (1) the semantic relatedness between events and their sponsors and (2) the relative prominence of the event sponsors. The procedure closely followed that used in the previous experiment. Subjects were asked to rate the clarity of four press releases about sporting events.² Each press release manipulated the relatedness and prominence of the sponsoring brand and

¹A third factor attempted to manipulate between-subjects motivation for identification accuracy. This factor is ignored because the manipulation was not successful. It did not have any substantive effects on the results.

²Subjects actually were exposed to eight press releases, four for the contact events described in Table 2 and four for noncontact events, such as chess. Because of concerns regarding the event-sponsor relatedness manipulation for the noncontact events, we discuss results from contact events only. Experiment 3 uses a better calibrated relatedness manipulation for noncontact events, and results from both contact and noncontact events are reported.

Table 2
STIMULI USED IN EXPERIMENT 2

Sporting Event	Set 1 Sponsors	Set 2 Sponsors
World Cup Soccer	UP: Hewlett-Packard	UP: Microsoft
Olympic Track and Field	RP: Gatorade	RP: Reebok
Rugby Currie Cup	RN: Powerade	RN: Converse
Euro Basketball League	UN: Epson	UN: Lotus

Notes: U = unrelated, R = related, P = prominent, and N = nonprominent.

featured two brands from the same category. For half the events, there was high relatedness between the event (e.g., track and field) and the product category of its sponsor (e.g., sports drinks); for the other half, there was little relatedness (e.g., basketball and laser printers). Relatedness was operationalized on the basis of a pretest measuring the likelihood, on seven-point scales, that each product category would sponsor that event ($M_{\text{related}} = 6.53$, $M_{\text{unrelated}} = 3.30$; $t(18) = 9.21$, $p < .001$). The relatedness manipulation was completely crossed with the manipulation of relative prominence. Half the events were sponsored by prominent (large share) brands; the other half were sponsored by less prominent (small share) brands. The two stimuli sets are summarized in Table 2.

After completing a filler task, subjects were asked to identify, among all eight potential sponsors, which brands sponsored two of the four events to which they had been exposed. The subset of events to be paired was counterbalanced across subjects. Testing subjects on a subset of the events reduced the possibility that subject would rely on a "one brand per event" rule. Because half the brands were prominent and half were nonprominent, reliance on such a rule necessarily would prevent observation of a prominence bias.

Results

Response frequencies. The response frequencies aggregated across brand replicates are reported in Table 3. Note that the frequencies in the main diagonal were low (29%, close to a chance rate of 25%). This suggests that, as in Experiment 1, subjects were not able to recollect the actual sponsor. These frequencies were analyzed through a four-way loglinear model, in which the crossed factors were (1) relatedness of the actual sponsor, (2) prominence of the actual sponsor, (3) relatedness of the identified (response) brand, and (4) prominence of the identified (response) brand. The analysis revealed a strong main effect of relatedness of the identified brand ($\chi^2(1) = 17.41$, $p < .001$). Related brands were more likely to be identified as sponsors (70.5%) than were unrelated brands (29.5%). This effect did not depend on whether

Table 3
EXPERIMENT 2: MARGINAL PROBABILITIES

	Observed Response				Total
	Related/ Prominent	Related/ Nonprominent	Unrelated/ Prominent	Unrelated/ Nonprominent	
<i>Actual Sponsor</i>					
Related/Prominent	18 (.62)	5 (.17)	3 (.10)	3 (.10)	29
Related/Nonprominent	8 (.28)	9 (.31)	8 (.28)	4 (.14)	29
Unrelated/Prominent	10 (.33)	10 (.33)	7 (.23)	3 (.10)	30
Unrelated/Nonprominent	12 (.39)	12 (.39)	6 (.19)	1 (.03)	31
Total	48 (.40)	36 (.30)	24 (.20)	11 (.09)	119

Notes: Each cell entry contains the number (proportion) of subjects who selected that type of brand as the response. For example, the first entry should be read as "62% of subjects selected a related/prominent brand as a sponsor when the correct answer was related/prominent."

the actual sponsor was related ($\chi^2(1) = .75$, ns) or prominent ($\chi^2(1) = 0$). Therefore, independent of whether the actual sponsor was related or prominent, there was a strong tendency to credit brands that were related semantically to the event.

The analysis also revealed a smaller but significant main effect of prominence of the identified brand ($\chi^2(1) = 5.71$, $p < .05$). Subjects were more likely to identify prominent brands (60.5%) than less prominent brands (39.5%) as sponsors. Again, this tendency was not moderated by the prominence of the actual sponsor ($\chi^2(1) = .02$, $p = .90$) or by its relatedness ($\chi^2(1) = .17$, $p = .68$). The market prominence bias uncovered in Experiment 1 thus was replicated in a setting in which potential sponsors varied in terms of both relatedness and prominence. No other effects were significant.

Results thus indicate that both the prominence and the relatedness of a brand are used during sponsor identification. Of the two heuristics, the latter appears more potent in situations in which both are applicable. However, one drawback of this analysis is that it does not allow estimation of the magnitude of people's reliance on relatedness and prominence compared with other likely processes, such as direct retrieval and pure random guessing. Some (rough) estimate of the relative magnitude of these four processes can be obtained using the process decomposition methodology that we recently developed (Pham and Johar 1997).

Process decomposition. Let us assume that subjects were relying on one of four processes for making each sponsor identification judgment: (1) direct retrieval (2) brand prominence, (3) brand-event relatedness, or (4) pure guessing. We are interested in the probability of reliance on each of these four processes. We know from the response frequencies reported in Table 3 that there were variations in the probability of providing different types of responses. For example, when the actual sponsor was related and prominent, subjects had a 62% probability of identifying a related and prominent brand as the sponsor, compared with a 10% probability of identifying an unrelated but prominent brand. We refer to these response probabilities as *marginal* probabilities.

We know that each response (and its associated marginal probability) may be produced by multiple processes. For example, when the actual sponsor was related and prominent, subjects could have identified a related and prominent brand for multiple reasons, such as they could have (1) retrieved the actual sponsor, (2) inferred it on the basis of relatedness, (3) inferred it on the basis of prominence, or (4) guessed randomly. However, the conditional probability of providing a certain response (here, identifying a related prominent brand), given that the subject has used a certain process (e.g., random guessing), differs across processes. These conditional probabilities can be specified using the actual sponsor as a basis and are given in the Appendix. If we assume that only one of the four processes is used for each sponsorship judgment, the relationship between the marginal response probabilities (e.g., $p(\text{responding A})$) and the conditional probabilities (e.g., $p(\text{responding A/guessing})$) is in the form of Equation 1, as follows:

$$(1) \quad p(\text{responding A}) = p(\text{responding A/direct retrieval}) \\ + p(\text{direct retrieval}) + \\ + p(\text{responding A/relatedness})$$

$$+ p(\text{relatedness}) + \\ + p(\text{responding A/prominence}) \\ + p(\text{prominence}) + \\ + p(\text{responding A/guessing}) + p(\text{guessing}).$$

Note that Equation 1 is akin to a regression equation of the form $Y = \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4$. In this equation, the X s stand for the conditional probabilities (e.g., $p(\text{responding A/direct retrieval})$ is equivalent to X_1). The dependent variable (Y) in the regressions (through the origin) would be the marginal probabilities of responding. The unstandardized β s represent the desired process probabilities (e.g., $p(\text{direct retrieval})$) and can be estimated using least squares regression. Note that these probabilities reflect both individual differences in terms of sponsor identification strategies and differences of strategies across trials. The magnitude of these process probabilities should be interpreted relative to one another rather than as exact probabilities.

Consistent with the frequency results, the estimated probability of reliance on direct retrieval was generally low (process probability = .06). The estimated probability of reliance on prominence was more pronounced (process probability = .21). The most likely process, however, was relatedness, with a probability (process probability = .41) twice as large as that of prominence. The estimated probability of reliance on pure guessing was also substantial (process probability = .31). This latter result underscores the importance of disentangling multiple processes using such a process decomposition method.³

Discussion

The results show that, in sponsor identification, people rely on not only the market prominence of the brands, but also the semantic relatedness between brands and events. The latter process is articulated in statements such as "track and field requires lots of liquid, thus Gatorade was the choice." Strong reliance on relatedness and prominence was indicated in both the raw (marginal) response frequencies and the process decomposition estimates. The two types of analyses were also consistent in suggesting that reliance on relatedness was more significant than reliance on prominence. The magnitude of the reliance on relatedness indicates a strong intuition among subjects that, in the marketplace, there is (or should be) a fit between events and their sponsors' product

³Note that the method makes specific assumptions about the conditional probabilities of providing different responses under different processes. For example, it is assumed that the use of direct retrieval would lead to the correct response (see the Appendix). It is possible, however, that subjects using direct retrieval provide an incorrect response because, for example, of incorrect encoding of the sponsor-event association. If this were the case, a more appropriate specification of the conditional probabilities would place less weight on the correct answer (e.g., .7 instead of 1.0) and reallocate the weight to the other three answers (e.g., .1 for each answer). For similar reasons, we could argue that a more appropriate specification of the conditional probabilities for relatedness would be .4, .4, .1, and .1, whereas a more appropriate specification of the conditional probabilities for prominence would be .4, .1, .4, and .1. Additional analyses show that changing the structure of the conditional probabilities in this manner does not alter the nature of the results significantly. The revised process estimate of direct retrieval would increase only marginally. The process estimates of prominence and relatedness would increase even further, primarily at the expense of the estimates of pure guessing. The process estimates of prominence and relatedness reported in the text are, in this respect, conservative.

categories. The response frequencies also indicate that people's reliance on relatedness and prominence may occur independently of who the actual sponsor is.

A clear limitation of this experiment is that it cannot establish the absolute magnitude of the four processes of source identification examined. This is because the source identification responses undoubtedly were driven partly by processes other than the four examined (e.g., prior brand evaluations could drive sponsorship attributions; cf. Johar 1996).⁴ Nevertheless, the process decomposition estimates provide important insights about the relative magnitude of these four processes, such as the finding that reliance on constructive processes (namely, relatedness and prominence) dominates reliance on direct retrieval and pure guessing. These results highlight the importance of studying systematic constructive biases in sponsor identification. However, the process decomposition results are limited, in that they do not disentangle the combined use of prominence and relatedness.⁵ Another limitation of Experiment 2 pertains to the forced choice nature of the sponsor identification task. The close-ended format of the task may have artificially increased the salience of relatedness and prominence as identification heuristics. We could argue that, in open-ended tasks, consumers do not rely spontaneously on these heuristics to make sponsorship judgments. Experiment 3 addresses these issues.

EXPERIMENT 3

The primary advantage of the forced choice measure used in Experiments 1 and 2 is that, in addition to reducing nuisance factors, it controls for differences in the recallability of potential sponsors, thereby providing a more powerful examination of the constructive processes of sponsor identification. The main drawback of this measure is that the suggestion of alternative brands at test may artificially increase the salience of relatedness and prominence as potential cues for sponsor identification. The forced choice task therefore may overestimate people's ecological reliance on the two heuristics.

This experiment addresses this issue in two ways. First, three different measures of sponsor identification are examined: (1) an open-ended "sure recall" measure, for which the accuracy criterion was set high (listing the sponsors of

which subjects were sure); (2) an open-ended "hesitation" task, for which the accuracy criterion was lower (listing several sponsors among which subjects were hesitating); and (3) a close-ended likelihood rating measure (assessing the likelihood that each brand was the actual sponsor). Principles of contingent source identification predict that, because the criterion for accuracy is set high, the sure recall measure should show little reliance on constructive processes of relatedness and prominence and greater reliance on direct retrieval (Pham and Johar 1997). In contrast, the open-ended hesitation measure and the likelihood rating measure, with their lower accuracy criteria, should show significant reliance on relatedness and prominence.

Second, to examine further the extent to which the salience of heuristic-relevant cues contribute to people's reliance on relatedness and prominence, one group of subjects reported their likelihood ratings one event at a time (across potential sponsors), with all the brands listed in a random order on the same page. In this condition, the relatedness and prominence of the different brands was presumably salient. The other subjects reported their likelihood ratings one brand at a time (across events), with each brand appearing in a random order on a separate page. In this latter condition, the relatedness and prominence of the different brands was presumably less salient. If reliance on relatedness and prominence is dictated primarily by the salience of heuristic-relevant cues, we should observe greater reliance on these two processes in the event-by-event condition than in the brand-by-brand condition. In the interest of generalizability, the experiment includes both physical events, such as soccer, and mental events, such as chess.

Design and Procedure

A total of 78 subjects participated in the experiment. As in Experiment 2, all subjects were exposed to press releases that manipulated within subjects whether the sponsor was (1) related to the event (physical or mental) and (2) a prominent brand. Forty-eight subjects then were asked to identify sponsors both in an open- (sure recall and hesitation) and a close-ended likelihood rating format, structured event by event. Sixteen subjects were asked to identify the sponsors only in a likelihood rating format structured brand by brand. They did not complete the open-ended task because the event-by-event structure of this task might interfere with their brand-by-brand likelihood ratings. Instead, another group of 14 subjects completed the open-ended task only.

Subjects first read four press releases and rated them on clarity. Each press release featured the names of four brands in the same product category, one of which was described as the sponsor. Two of these brands were relatively prominent and two were less prominent. Two events were physical sports (World Cup Soccer and Olympic Track and Field) and two events were mental sports (Super Classic Professional Chess Association Tournament and Classic Grand Slam Bridge Tournament). Eight stimulus sets were used to counterbalance, for each event, the relatedness and prominence of its sponsor (see Table 4). Relatedness was based on pretest results, as in Experiment 2 ($M_{\text{related}} = 5.94$, $M_{\text{unrelated}} = 2.30$; $t(18) = 7.95$, $p < .001$).

After a filler task, subjects completed the source identification tasks, which differed across the two response task conditions. In the event-by-event response task condition,

⁴We also could argue that the identification responses were not independent because subjects probably guessed that each event had a different sponsor and allocated their responses accordingly. Two precautions were taken to address this possibility. First, subjects were asked to pair only half the events with the sponsors. This reduced the salience of the one-to-one mapping of events and sponsors. Second, we assessed subjects' awareness of the event-sponsor distribution by asking them to guess how many brands sponsored more than one event. If subjects were aware of the actual distribution, they should have replied 0. A majority of the subjects (74.5%) answered 1 or more (median = 2).

⁵Conceptually, the method could be extended to estimate the combined use of multiple processes by including conditional probabilities specific to these combined process strategies. A greater number of response levels would be needed for identification purposes. Note also that adding combined processes may result in multicollinearity in the conditional probabilities that serve as independent variables in the regression. Because our data only included four response levels (related/prominent, unrelated/prominent, related/less prominent, unrelated/less prominent), we could only estimate four processes and had to assume that one process was used for each trial, an assumption akin to the exclusivity assumption that recently has been criticized in the memory literature (Jones 1987; Joordens and Merkle 1993).

Table 4
STIMULI USED IN EXPERIMENT 3

Set	World Cup Soccer	Olympic Track and Field	Classic Grand Slam Bridge Tournament	Super Classic Professional Chess
1	RP: Nike	UN: Lotus	UP: Gatorade	RN: Books-a-Million
2	UP: Microsoft	RN: Converse	RP: Border's Books	UN: Allsport
3	RN: Converse	UP: Microsoft	UN: Allsport	RP: Border's Books
4	UN: Lotus	RP: Nike	RU: Books-a-Million	UP: Gatorade
5	RP: Gatorade	UN: Books-a-Million	UP: Nike	RN: Lotus
6	UP: Border's Books	RN: Allsport	RP: Microsoft	UN: Converse
7	RN: Allsport	UP: Border's Books	UN: Converse	RP: Microsoft
8	UN: Books-a-Million	RP: Gatorade	RU: Lotus	UP: Nike

Notes: U= unrelated, R = related, P = prominent, and N = nonprominent.

48 subjects first completed an open-ended task in which they were given the name of the event and asked to recall which brand was the actual sponsor. If they were "absolutely sure about which company was the actual sponsor," subjects were to write a single company's name in a box labeled "Sure that it is: ____." These sure recall data were coded in terms of accuracy, relatedness of the brand mentioned to the event, and prominence of the brand mentioned. If subjects were hesitating among several brands, subjects were asked to fill in the brands' names in a box labeled "Hesitating among: ____." These hesitation brands were coded similarly.

Subjects then were presented, for each of the four events, the list of 16 potential sponsors and asked to rate (event by event) on a 0–100 scale the likelihood that each of the 16 brands—listed in random order—was the actual sponsor of the event. Each event was listed on a separate page. Subjects received detailed instructions on how to use the scale, and a rating key was provided on each page. The ratings did not need to add up to 100 for one event. In the brand-by-brand response task condition, 16 subjects were presented, for each of the 16 brands, with the list of four events (listed in a single random order) that they actually could sponsor. Subjects were asked to rate (brand by brand) the likelihood that each of the four events actually was sponsored by that particular brand on a 0–100 scale.

Results

Open-ended sure recall. Across the four events, subjects reported that they were sure of the actual sponsor in only 32.3% (80 of 248) of their potential responses. This low response rate indicates that the sure recall data are very selective. Consistent with the expectation that the sure recall responses would meet a high accuracy criterion, 56.3% of the brands mentioned were the actual sponsors of those events. If chance accuracy is defined as 25%—subjects could provide 4 sure recall responses (1 per event) and they were exposed to 16 brands in total—subjects' accuracy rate was significantly higher than chance ($z = 6.46, p < .0001$). This high accuracy suggests that direct retrieval probably played a greater role in these responses than it did in Experiment 2. However, some degree of construction still can be detected in the 43.7% of inaccurate responses, which followed a systematic pattern. A vast majority of these responses (91%) were incorrect mentions of related as opposed to unrelated sponsors. Because the stimuli involved an equal number of related and unrelated brands, this tendency to report related brands incorrectly was significantly higher than a chance

level of 50% ($z = 4.87, p < .001$). The tendency to mention prominent (60%) rather than less prominent brands incorrectly was marginally significant ($z = 1.30, p = .10$).

The sure recall data (both correct and incorrect responses) also were analyzed using a four-way loglinear model similar to that used in Experiment 2, with four predictors: (1) relatedness of the actual sponsor, (2) prominence of the actual sponsor, (3) relatedness of the identified (response) brand, and (4) prominence of the identified (response) brand.⁶ The response frequencies are reported in Table 5.

Unlike in Experiment 2, there were no main effects of the relatedness or prominence of the response brand (both $\chi^2(1) < 1$). This suggests that, when both correct and incorrect responses are considered, reliance on relatedness and prominence has little bearing on the sure recall results. Instead, the analysis uncovered a four-way interaction ($\chi^2(1) = 12.1, p < .001$). As we exhibit in Table 5, the interaction was driven primarily by the response frequencies being concentrated largely in the main diagonal cells (67.5%), in which actual sponsor and identified brand matched in terms of relatedness and prominence compared with the off-diagonal cells (32.5%).

The analysis also revealed main effects of the relatedness and prominence of the actual sponsor. Subjects were more likely to provide a response, accurate or inaccurate, when the actual sponsor was related (71.3%) than when it was unrelated (28.5%, $\chi^2(1) = 8.76, p < .01$) and when the actual sponsor was prominent (63.7%) than when it was less prominent (36.3%, $\chi^2(1) = 3.87, p < .05$). Alternative explanations of these main effects are examined in the "Discussion" section. No other effects were significant. In summary, the sure recall data were very selective and exhibited a substantial degree of identification accuracy, which suggests that subjects submitted their responses to a high accuracy criterion. The substantial degree of identification accuracy suggests that the primary process underlying the sure recall responses was a direct retrieval of the sponsor from subjects' recollection of the exposure phase, with limited reliance on relatedness and prominence.

Open-ended hesitation. Subjects mentioned 178 brands that they were hesitating among across 98 instances (1.81 brands per event for which they were hesitating). Because approximately two brands were mentioned per instance, response accuracy, at best, could be close to 50% rather than

⁶For estimation purpose, a small constant of .5 was added to each cell count because of the significant number of cells with zero frequencies (see Agresti 1996).

Table 5
EXPERIMENT 3: SURE RECALL AND HESITATION RESULTS

	Observed Response				
	Related/ Prominent	Related/ Nonprominent	Unrelated/ Prominent	Unrelated/ Nonprominent	Total
SURE RECALL					
Actual Sponsor					
Related/Prominent	19 (.58)	3 (.09)	3 (.09)	8 (.24)	33
Related/Nonprominent	1 (.04)	15 (.63)	7 (.29)	1 (.04)	24
Unrelated/Prominent	1 (.06)	1 (.06)	15 (.83)	1 (.06)	18
Unrelated/Nonprominent	0 (0)	0 (0)	0 (0)	5 (1.0)	5
Total	21 (.26)	19 (.24)	25 (.31)	15 (.19)	80
HESITATION					
Actual Sponsor					
Related/ Prominent	14 (.56)	5 (.20)	5 (.20)	1 (.04)	25
Related/ Nonprominent	26 (.52)	12 (.24)	9 (.18)	3 (.06)	50
Unrelated/ Prominent	11 (.34)	4 (.13)	12 (.38)	5 (.16)	32
Unrelated/ Nonprominent	19 (.54)	5 (.14)	9 (.26)	2 (.06)	35
Total	70 (.49)	26 (.18)	35 (.25)	11 (.08)	142

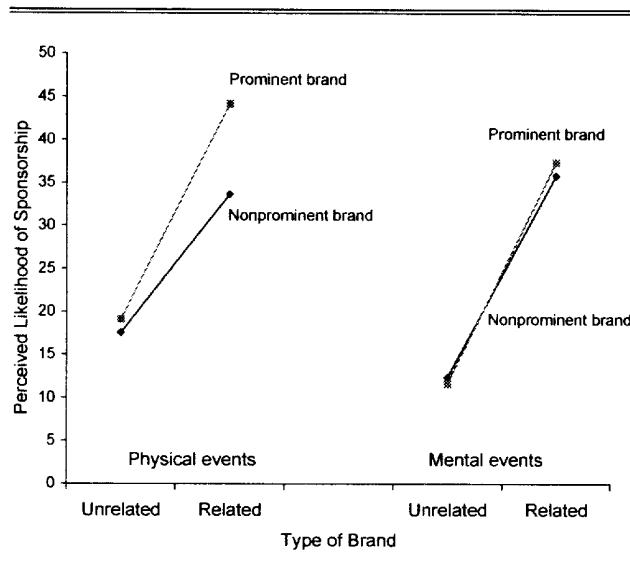
Notes: Each cell entry contains the number (proportion) of subjects who selected that type of brand as the response.

100%. In comparison with this more forgiving 50% baseline, the observed response accuracy was still noticeably low (6.7%). Most of the brands inaccurately mentioned (79.8%) were those to which subjects had been exposed in the press releases. The distribution of this subset of brands appears in Table 5. These responses again were submitted to a four-way loglinear model and revealed a main effect of the relatedness of the response brand ($\chi^2(1) = 11.76, p < .001$), which indicates that most of the identified brands (67.6%) were related to the event. However, this effect was qualified by an interaction with the relatedness of the actual sponsor ($\chi^2(1) = 3.95, p < .05$). The relatedness bias in the identified brand was more pronounced when the actual sponsor was related (76% versus 24%) than when it was unrelated (58% versus 42%). Given subjects' low level of accuracy, this interaction cannot be explained by subjects' ability to recall the actual sponsor correctly. Instead, subjects may have been more willing to rely on the relatedness of the brands constructively when this cue actually matched their recollection. The analysis also revealed a strong main effect of prominence of the identified brand ($\chi^2(1) = 24.20, p < .0001$), such that subjects' hesitations were much more likely to involve prominent brands (73.9%) than less prominent brands (26.1%). Two processes jointly may explain the magnitude of this effect. Not only might prominent brands have been perceived as more likely sponsors, they also might have been easier to retrieve from memory.

Ratings. The likelihood ratings were submitted to a $2 \times 2 \times 2$ mixed ANOVA, with type of brand (physical ver-

sus mental), brand prominence (high versus low), and type of event (physical versus mental) as repeated factors and response task (event-by-event versus brand-by-brand) as a between-subjects factor. The analysis did not reveal any main or interaction effects of the response task, which suggests that the findings discussed subsequently were not moderated by the relative salience of brand-related cues. There was a main effect of brand prominence, which indicates that more prominent brands were perceived as more likely sponsors ($M = 28.09$) than less prominent brands ($M = 24.87$; $F(1,62) = 10.47$). However, this effect was qualified by an interaction with event type, which shows that the effect of brand prominence occurred for physical events ($M_{\text{large}} = 31.65$ versus $M_{\text{small}} = 25.60$; $F(1,62) = 18.77, p < .001$) but not for mental events ($M_{\text{large}} = 25.52$ versus $M_{\text{small}} = 24.13$; $F < 1$). Consistent with a relatedness process, the analysis also uncovered a strong type of event \times type of brand interaction ($F(1, 62) = 50.27, p < .001$). Ratings of likelihood were much higher when events and brands were related ($M = 37.78$) than when they were not related ($M = 15.17$). There was also a significant three-way interaction among event type, brand type, and brand prominence ($F(1,62) = 13.88, p < .001$). As we depict in Figure 2, a simple two-way interaction between the relatedness and the prominence of the brands ($F(1,62) = 13.45, p < .001$) was obtained for physical events but not for mental events ($F < 1$). Contrasts show that, for the physical events, related (i.e., physical) prominent brands were rated as more likely sponsors than less prominent brands ($F(1,62) = 22.75, p < .0001$).

Figure 2
EXPERIMENT 3: LIKELIHOOD RATINGS



However, when the brands were unrelated (i.e., mental), prominence did not have an effect ($F(1,62) = 1.72, p > .15$). This pattern of findings suggests that reliance on relative prominence may be contingent on the relatedness of the brands, at least for physical events. If the brand is related to the event, its relative prominence is invoked; otherwise, the brand may be screened out, and its prominence matters little. This pattern did not hold for the mental events, for which only relatedness mattered.

Discussion

The findings suggest that relatedness and prominence biases in sponsor identification are robust phenomena. The two biases arise not only in forced choices, but also in closed-ended likelihood ratings and open-ended responses. The biases were replicated with the open-ended hesitation measure, which suggests that they are genuine and not merely artifacts of the sponsor identification methods used in the first two experiments. The robustness of these biases is supported further by the finding that reliance on relatedness and prominence in the likelihood ratings does not depend on the salience of heuristic-relevant cues, as operationalized by event-by-event versus brand-by-brand ratings.

Although the effects of relatedness and prominence are robust, their magnitude depends on how sponsor identification is assessed. These effects were evident in the hesitation data and the likelihood ratings but not in the sure recall data. This contingency is consistent with the proposition that reliance on constructive processes of source identification decreases when motivation for accuracy is high, as was presumably the case for the sure recall data. It should be noted, however, that the magnitude of the prominence bias in the open-ended hesitation data could have been inflated because prominent brands are probably easier to retrieve than less prominent brands.

Additional results provide further insights into how the biases operate. Sure recall was more likely when the actual sponsor was related and/or prominent than when it was nei-

ther related nor prominent. One explanation for this is that event-sponsor associations that involve related and prominent brands are easier to encode than are associations that involve unrelated and less prominent brands. Another explanation may be that subjects recollecting unrelated and less prominent brands tend to edit out these responses during identification because the lack of confirmatory relatedness and prominence cues make the subjects less sure of their responses. This latter explanation implies a verification strategy in which both retrieval and constructive processes are used to generate an identification response. This double-checking strategy also would account for the finding that reliance on relatedness in the hesitation data was more pronounced when the actual sponsor was related.

A mixed process strategy was also suggested by the likelihood ratings. For the physical events, prominence increases the perceived likelihood of sponsorship for the related brands but not for the unrelated brands. This finding is consistent with the thesis that relatedness is a dominant process of constructive sponsor identification. Prominence may be invoked more as a "tiebreaker" among potential sponsors that pass a primary relatedness screening. However, these results do not prove the sequential nature of the use of relatedness and prominence. Further research using more sensitive measures, such as response times, may be needed. Subjects used relatively effortful combined processes for the likelihood ratings, though motivation for accuracy was presumably low. Perhaps motivation for accuracy was still significant for this task, albeit lower than for the open-ended tasks. Alternatively, providing subjects with 16 brands to assess for each event may have increased their need to discriminate (accurately or inaccurately) among potential sponsors, which may have been captured by this more sensitive continuous measure.

The interplay between relatedness and prominence was not observed for the mental events in which only relatedness mattered. It is possible that these events (chess and bridge tournaments) were perceived as less prominent than the physical events (World Cup Soccer and Olympic Track and Field) and therefore less likely to involve prominent sponsors. This explanation lends further credence to the strategic rather than spontaneous use of prominence in sponsor identification.

GENERAL DISCUSSION

The *raison d'être* of event sponsorship is to promote an association between the event and the sponsoring brand or company, so it is disconcerting that event sponsors often are misidentified. Practitioners long have expressed an understandable concern about this issue. However, as with other aspects of the sponsorship communication process (for example, see Pham 1992; Pracejus 1998), a thorough understanding of the processes of sponsor identification has been missing. Practitioners have assumed, for example, that sponsor identification was essentially a matter of retrieving the actual sponsor from memory. Consistent with other work on constructive memory processes (Schacter, Norman, and Koustaal 1998), this research suggests that sponsor identification also involves a substantial degree of construction that ranges from pure guessing to more strategic inferencing using relatedness and prominence cues.

Sponsor identification appears to be biased strongly toward brands that are related semantically to the event. Con-

sumers may find a relatedness heuristic especially seductive because it is easy to generate an intuitive explanation of why there should be a semantic fit between events and sponsors (cf. Nisbett and Wilson 1977). Sponsor identification also is biased toward brands that are prominent. Prominent brands are not only more accessible in memory, they are also perceived as more plausible sponsors of events that require significant resources. The tendency to credit related brands appears to be more pronounced than the tendency to credit prominent brands. Reliance on these two cues is based on reasoning processes used at the time of judgment, which may be enhanced by superior encoding of sponsors that are related and/or prominent.

Across the three experiments, the results appear consistent with a hypothesis testing process of sponsor identification, whereby recollections are tested and verified against heuristic cues available during the test, and vice versa. If the two types of inputs are in agreement, the implied hypothesis about the sponsor's identity is likely to be converted into an identification response. If the two types of input are in disagreement, the tentative response may be edited out. In this hypothesis testing process, the relative weight placed on retrieval versus construction seems to depend on the criteria for accuracy. When demands for accuracy are high, reliance on heuristics, such as relatedness and prominence, decreases significantly. However, when these demands are moderate, both heuristics may be invoked, such that prominence serves as a tiebreaker between similarly related brands.

These results demonstrate that source identification is a general theoretical problem of marketing communication. The source identification framework that we have proposed (Pham and Johar 1997) applies not only to advertising, but to other modes of communication as well, including event sponsorship. For example, the results support the framework's prediction that reliance on constructive processes of source identification, as opposed to direct retrieval processes, depends on the accuracy criterion. This criterion can be self-imposed (e.g., the source identification judgment is instrumental to an important decision) or externally suggested (e.g., through instructions). The results also provide one of the first empirical demonstrations of Johnson, Hashtroudi, and Lindsay's (1993) proposition that people use combined constructive and retrieval processes in source identification.

Substantive implications of this research also deserve mention. The observed degree of proper identification versus misidentification may depend on how identification is assessed. For example, tasks that set a high accuracy criterion are likely to produce significant response editing, resulting in low response rates that are relatively free of constructed identification. However, tasks that set a lower accuracy criterion are likely to be contaminated with constructed identification. Whether the observed responses over- or underestimate the true level of accurate identification—that is, the level of identification among nontested members of the target audience—will depend on the relatedness and prominence of the actual sponsors relative to the foils against which they are tested. High (low) relative relatedness and prominence of the actual sponsors will result in an overestimation (underestimation) of the true level of proper identification.

The malleability of sponsor identification judgments may raise questions as to whether identification accuracy is an

appropriate measure of the effectiveness of sponsorship communication. Specifically, is proper identification really necessary for achieving the image enhancement objectives that most sponsors pursue? This question requires further investigations. On the one hand, many practitioners believe that proper identification is necessary. On the other hand, recent studies suggest that learning from sponsorship-type communication may take a more implicit form (e.g., Pham and Vanhuele 1997; Pracejus 1998).

If identification with an event is a sponsor's primary objective, our research suggests the following: Always keep in mind that there is more than one road to being identified with an event. First, repeated exposure of the event-sponsor association will assist retrieval-based identification. Second, careful selection of the event in terms of its semantic meaning and relatedness to the brand will assist relatedness-based identification. Relatedness need not be restricted to a semantic association between the event and the sponsor's product features; it also may capitalize on other semantic associations between the event and the sponsor's image and personality. Third, any activity that enhances a brand's market prominence (e.g., advertising, new product launches) also will help its chance of being identified, especially if the event is prestigious. When a sponsor is at a disadvantage because of one process of identification (e.g., less prominent brands), it may opt for tactics that enhance its chance of identification through the other processes (e.g., sponsoring incongruent events to enhance encoding of the sponsor-event association). Cynics also will recognize that the existence of relatedness and prominence heuristics may provide additional ammunition to ambush marketers who seek improper identification.

Although we have examined miscredit for sponsorship in terms of related and prominent brands, sponsors also are concerned about providing credit to a direct competitor. To examine this issue, we reanalyzed the recall and hesitation data from Experiment 3, aggregated across events at the individual brand rather than brand prominence level.⁷ The recall data show no evidence of such within-category confusion. This is not surprising because the recall data are selective and, presumably, relatively free from construction. The hesitation data reveal a slight but significant ($z = 2.98$, $p < .01$) tendency to make such within-category cross credit errors, which suggests some memory trace for the sponsoring brand's category. Thirty-five percent of incorrect responses were in the same category as the actual sponsor, compared with a 25% baseline if these errors were attributable to chance (4 of 16 brands in the exposure phase were in the same category). Mistakenly benefiting a competitor with a sponsorship is therefore a real possibility.

Limitations of the experiments reported here suggest several avenues for additional research. Confidence in our general findings would benefit from replications using other operationalizations of the relatedness and prominence constructs as well as between-subject manipulations of these two constructs. Further research also should examine other possible processes of sponsor identification, such as reliance on base rate knowledge of prior sponsorship, and explore the perceived diagnosticity of different processes. Finally, research is needed to examine further the simultaneous use

⁷We thank an anonymous reviewer for this suggestion.

Appendix
EXPERIMENT 2: CONDITIONAL PROBABILITIES

Actual Sponsor	Process	Observed Response			
		Related/ Prominent	Related/ Nonprominent	Unrelated/ Prominent	Unrelated/ Nonprominent
Related/ Prominent	Retrieval	1	0	0	0
	Relatedness	.5	.5	0	0
	Prominence	.5	0	.5	0
	Guessing	.25	.25	.25	.25
Related/ Nonprominent	Retrieval	0	1	0	0
	Relatedness	.5	.5	0	0
	Prominence	.5	0	.5	0
	Guessing	.25	.25	.25	.25
Unrelated/ Prominent	Retrieval	0	0	1	0
	Relatedness	.5	.5	0	0
	Prominence	.5	0	.5	0
	Guessing	.25	.25	.25	.25
Unrelated/ Nonprominent	Retrieval	0	0	0	1
	Relatedness	.5	.5	0	0
	Prominence	.5	0	.5	0
	Guessing	.25	.25	.25	.25

Notes: Entries in the table reflect the probability of observing the response in that column if the process in that row was used. For example, the entry .5 in the second row, first column, is the probability of responding with a related/prominent brand when the relatedness process is used.

of two or more processes of sponsor identification and the conditions in which such combination processes are used. These research opportunities may require further development of the process decomposition model used here.

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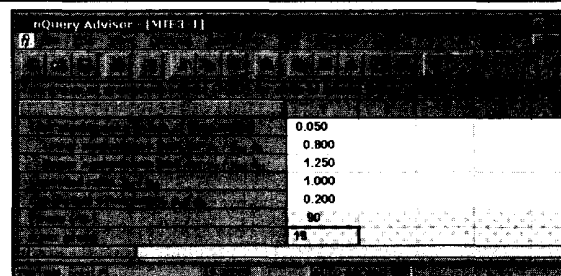


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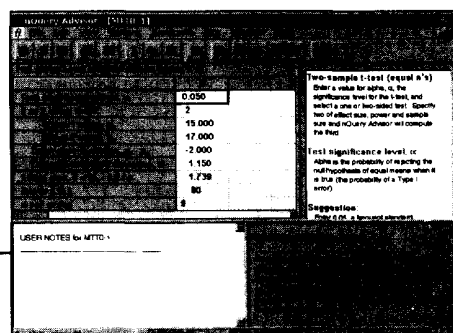
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