SPORTS SPONSORSHIP EFFECTS:
The Role of Logo Visual Fluency, Familiarity, and Sponsor-Event Congruence for
Audience Recall of Team Sponsors

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ABSTRACT

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Using qualitative and quantitative methods, this research examined how sports sponsorship effects, recall and sponsor attitude, are influenced by logo fluency, familiarity, and congruence between a sponsor and the team sponsored. Ethnographic research observed how event attendees interact with sponsors, other audience members, and the basketball event. In-depth interviews generated insights on how people viewed visual fluency of logos and perceived "fit" with the basketball event. The quantitative experiment examined how consumers responded to logos under different conceptual fluency, familiarity, and congruence levels. The results suggested that when under medium and low congruence condition, participants were more likely to remember medium conceptual logos, whereas under high congruence condition, participants intended to recall high conceptual fluent logos better. Implications for sports sponsorship are discussed.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

It is widely recognized that sponsorship has become one of the major tools in marketing. Sponsorship is regarded as one of "the most commonly utilized marketing strategies" (Maxwell and Lough 2009, p.188) that perhaps can generate more "money than all media advertising combined"(Harvey 2001, p.59). Broadly speaking, the definition of sponsorship typically includes two activities: (1) Sponsor pays fee or provides in-kind supports to the sponsee and (2) acquires the right to link itself with the activity in order to achieve marketing and commercial purposes (Cornwell and Maignan 1998; Meenaghan 1983; IEG 2000). Cornwell et al. (2005) coined the term *sponsorship linked-marketing* emphasizing the necessity of leveraging the sponsorship with other promotional activities. According to IEG's report in 2011, sponsorship-linked marketing expenditures increased 3.9% with reaching $17.2 billion in 2010 in North America. As the value of traditional advertising increasingly draws doubt, sponsorship is thought to be its savior (Lardinoit and Derbaiz 2001).

Sports sponsorship garners the most attention for being "one of the most legitimate and cost-effective modes of marketing communication" (Dees et al. 2008, p.80). Presently, sports sponsorship is considered the" dominant sponsorship context" (Olsen 2010) with two-thirds of expenditures dedicated to sports teams, events, and players (Crompton 2004; Verity 2002). Sponsors of sporting events often pay fees or provide in-kind support to have their logos and brand names posted at the scene (Fullerton and Merz, 2008; Lardinoit and Quester 2001). They may hang banners with logos around the court or arena, provide print or cheer props related to the games, or display logos on the scoreboard while hosting audience participation events at break time. By doing this, sponsors show their legitimate relationships with the event.

Logos are an important but understudied component of the sports sponsorship context. Logos serve a communicative and representative function. How quickly and accurately people

recognize and process a logo is called visual fluency (Jacoby, Kelley & Dywan 1989). Research shows that when people are exposed to a high visual fluency logo, the logo is more readily recognized at a later exposure when compared to low fluency logos. What makes a logo attention-getting, memorable, and communicative about a brand is not well understood. Since logos are a frequent sponsorship cue to consumers, how people view, interact with, and perceive sponsor logos within the event sponsorship context are important outcomes that are, however, rarely discussed.

The concept of congruence, or relatedness between a sponsor and the event or cause sponsored, has dominated the academic literature on sports sponsorship effectiveness (e.g., Keller , 1993; d'Astous & Bitz, 1995; Johar & Pham, 1999; Rifon et al., 2004; Rodgers, 2004; Grohs,Wagner, & Vstecka, 2004; Cornwell et al., 2006; Simmons & Becker-Olsen, 2006; Weeks et al., 2008) Previous studies on congruence effects have limited their tests to the extreme ranges of high and low levels of congruence. However, in reality the middle level of congruence may exist and even dominate the actual applications in the field. Familiarity is another active component affecting people's recall of a sponsor logo. According to Soderlund (2002), because the prior product experience is stored in memory, brand familiarity should enhance recognition and other cognitive processes. Indeed, it is not clear if fluency and familiary are truly independent constructs

The research presented in this paper used qualitative and quantitative methods to better understand the interactions among sponsor logo visual fluency, familiarity and congruence with an event/ basketball team influences the effectiveness of sports sponsorship. The first phase of the research included ethnography and in-depth interviews. Through attending men's and women's basketball game, relations and interactions among audiences, basketball games, and

sponsors were observed and analyzed. The personal interviews explored consumer perceptions

of logo characteristics, specifically visual fluency, as effective communicators of brand

sponsorship. The second phase of the research applied quantitative, experimental examination

with the manipulation of visual fluency, familiarity and three levels of congruence, providing a

bigger picture of how to make sponsorship work.

LITERATURE REVIEW

Sports Sponsorship

Applying the definition of sponsorship to sports sponsorship, sponsors pay fees or provide

equipment or in-kind related items to the event/game, in order to have logos or "few words

summarizing the brand's positioning platform" (Pham & Vanguele, 1997, p.407), and exposures

at the scene or on TV (Lardinoit and Quester 2001; Fullerton and Merz, 2008), depending on the

sponsorship types and packages. Just like other sponsorship, sports sponsors are recognized by

the sponsee as official supporters of the event. In big sports event like Olympics, sponsors are

categorized into different levels of sponsors. Take the 2008 Beijing Olympics as an example,

sponsors were divided into five levels: worldwide partners, Beijing Olympics partners, sponsors,

exclusive suppliers, and suppliers. Each level has its obligations and benefits for using Olympics

names.

For companies, keeping a favorable image and reputation would help increase purchase

intentions (Pope and Voges, 2000). Through sponsoring sporting events, sponsors hope to

translate brand awareness into purchase intentions (Maxwell and Lough, 2009). Therefore,

understanding the factors influencing sponsor recall is paramount.

Factors that are thought to influence recall and recognition of sports sponsors include:

1. Visual Fluency: For most sports sponsors, logo display is the most common way of showing the legitimate relationship with the event. The accuracy and speed with which consumers recognize the visual stimulus is called visual fluency (Jacoby, Kelley & Dywan, 1989; Winkelman et al., 2007). If the logo has higher visual fluency, then people would more easily and accurately recall the sponsor. Research has shown that mere exposure can positively influence brand awareness and preference. (Bornstein, Leone, and Galley 1986; Janiszewski 1993; Wakefield et al., 2007)

2. Familiarity: A few researchers included prior attitude toward a sponsor as an important stimuli to affect recall (Stuart, Shimp, and Engle 1987; Speed and Thompson, 2000; Meenaghan, 2001). Results indicates that heuristics play a crucial role in influencing recall when people are not certain about which brand served as a sponsor (Johar and Pham ,1999; Turley and Shannon,2000; Wakefield et al., 2007). They tend to call out the industry leader assuming it may be the sponsor. Prior attitude and heuristics are derived from the knowledge people know about the brand and the industry, and familiarity is the major factor establishing one's heuristics and attitude.

3. Congruence: How people perceive "fit" and "relatedness" between sponsor and the event may be the most studied factor influencing sponsor recall and recognition. (Shimp 1991; Mitchell, Kahn, and Knasko 1995;Crimmins and Horn 1996; Stipp and Schiavone 1996; Johar and Pham 1999; Speed and Thompson 2000; Rifon et al., 2004; Wakefield et al., 2007). If people could see some kinds of relationship between the sponsor and sponsee, whether it is functional or image-based, they are more easily to recall the sponsor.

4. Fan involvement: According to Meenaghan (2001), fan involvement "refers specifically to the extent to which consumers identify with, and are motivated by, their engagement and affiliation with particular leisure activities" (p.106). The "fans" who are more involved and identify with a

4

sporting event are more likely to respond positively to a sponsorship (Speed and Thompson, 2000; Alexandris et al., 2007; Wakefield et al., 2007)

Sporting events with passionate and loyal fans arouse sponsors' attention. Big league and association like NFL, NBA, NCAA, FIFA, and Olympics have already established well-developed sponsorship activities and engagements to attract audiences. Companies could benefit from sports sponsorship not only achieving marketing objective but also increasing brand equity in the long run. (Aaker, 1991; Marshall & Cook, 1992; Dees et al., 2008)

Fan Involvement

Fan involvement is an important factor influencing effective sponsorship (Crimmins & Horn, 1996; Bennett, 1999; Meenaghan, 2001; Kostas et al. 2007). According to Meenaghan (2001), involvement is regarded as "the extent to which consumers identify with, and are motivated by, their engagement and affiliation with particular leisure activities" (p.106). In sports sponsorship context, the leisure activities are sporting events. Fan engagement and affiliation is reflected in how often a fan attends the game and the behaviors and attitudes about the event. Simply put, involvement explains the extent to which people are "into" something (Bennet et al., 2009; p.15).

How fans interact with the game is important to examine; however, fans may not only attach to the sporting event but also an advocate for specific sponsor which may influence how they perceive the relationship between the sponsor and event. For example, a Detroit Tigers fan may also be a cola fan, and may have brand loyalties. As a result, evaluating sponsorship effects should also include measures of product category interest and prior brand attitudes. How people are addicted and "into" a product is called product involvement. Product involvement is described as "how connected or engaged a product class is to an individual's values" (Traylor,

1981, p. 51). In the sports sponsorship setting, however, sports fan involvement would appear more explicit and have more power than product involvement since people attend the game for the team not for the sponsor products.

High involved fans are defined as those who know the team and players well (Meenaghan, 2001). Gwinner and Bennet (2008) proposed that high involved fans would view sponsors more compatible with the event then low involvement fans, because they try to solve the conflicts between the sponsor and the event in mind. In doing so, those high involved fans would establish a logical relationship to soothe the tension and therefore perceive the sponsor and the event congruent. According to the research by Lascu, Giese, Toolan, et al. (1995), they reported that people who regarded themselves as highly involved golfers remembered more sponsors than the one who regarded themselves low involved in golf. It may due to the high involved ones are paying more attention and time at the event; as a result, they are essentially exposed more to the sponsor information hence could acquire more details (Hawkins and Hoch, 1992)

Above all, because those fans are highly involved and attached themselves to the sporting event, they would hold more positive attitudes toward sponsors, and therefore increasing purchase intentions (Dees et. al,2008; Meenaghan, 2001). In addition, other research also suggested the possible link and relations between involvement and brand loyalty (Traylor, 1981)

Visual Fluency

Logos are very important corporate assets since they represent a company's identity, reputation and spirit. In sponsorship marketing situations, companies usually use logos as stimuli to communicate their sponsorship on-site and through media broadcast. How people recognize and perceive a logo is influenced by visual fluency. Visual fluency is "based on simple observation that the processing of any visual stimulus requires cognitive work" (Winkielman et

al. 2007, p. 3). When a logo possesses high visual fluency, people process and recognize its meaning with greater automaticity, that is, faster and with more elaborate and deeper comprehension, than when exposed to a visual stimulus with low fluency (Jacoby, Kelley & Dywan 1989). Thus, logos with greater visual fluency are more efficient and effective for the communication of brand or corporate identity, and possibly product offerings and characteristics as well. Visual fluency has been conceptualized has having two dimensions, perceptual fluency and conceptual fluency.

Conceptual and Perceptual Fluency

Conceptual fluency is a characteristic of a visual stimulus that influences the efficiency or automaticity of the cognitive processes that activate and associate relative concepts from memory when an individual is exposed to that stimulus (Janiszewski and Meyvis 2001; Winkielman et al. 2007; Lee and Labroo 2004).   In the case of logos, people recognize the stimulus more readily and quickly and can have brand awareness, brand thoughts and other related schema activated when viewing the logo. This characteristic is not the same as familiarity, however, conceptual fluency and familiarity may have a reciprocal determinism. The more conceptually fluent a logo, the more readily it will be meaningfully encoded and stored. The greater the familiarity with a company, brand and its logo, the more information will already exist in memory to be activated by the logos triggering presence. Simply put, conceptual fluency includes some mental operation when viewing a stimulus that would form a special trace in mind that enhances the processing of the stimulus during the next exposure.

Since conceptual fluency is encoded and stored meaningfully in memory, it has more variability across different exposure conditions (Janiszewski and Meyvis 2001). First, conceptual fluency is unlikely to be affected of the surface feature changes, such as modality and

presentation context shift (Whittlesea 1993, Shapiro 1999, and Jacoby and Dallas 1981). For example, people may still recognize a logo even if the color and the font size are different than the first time they viewed the logo, when the logo possesses high conceptual fluency. It is because those people can trace back the conceptual meaning and knowledge stored, and not through or with the outside context and surface features. In addition, conceptual fluency could benefit more via elaboration and repeated exposure (Bornstein 1989; Janiszewski and Meyvis 2001). Elaboration and repeated exposure would help add more meaning and descriptions and create somewhat deeper learning process to reinforce the stimulus in memory. Overall, conceptual fluency occurs schematically with meaning encoded and not just visual features allowing for more person to person variability of the logo's meaning.

For the characteristics of conceptual fluency, it's logical to suppose people would recall a sponsor more easily under high conceptual conditions than low conceptual one.

H1: Logos with low conceptual visual fluency will be more difficult to recall than logos with high conceptual visual fluency.

Perceptual fluency, on the other hand, is the ease with which people recognize a visual stimulus based on physical characteristics upon subsequent encounters (Shapiro, 1999; Lee and Labroo, 2004; Reber et al., 2004). Physical characteristics which enhance perceptual fluency include shape, brightness, figure-ground contrast, clarity, presentation duration, previous exposure, and laws of Gestalt psychology like symmetry (Shapiro, 1999; Reber et al., 2004; Winkielman et al., 2007). Perceptual fluency occurs when processing physical characteristics of the stimulus when encountered at a later time; the higher the perceptual fluency, the faster and more accurate people may recognize the stimulus. Since perceptual fluency does not need exact memory to "remember seeing" the stimulus, it is sometimes misattributed into feeling familiarity

or arousing preference (Shapiro 1999; Labroo et al. 2008; Bornstein 1989; Mandler, Nakamua, and Van Zandt 1987). It is very difficult to partition perceptual fluency from familiarity and even more difficult to actually assess the perceptual fluency of a logo. In addition, the study used real brand and logos, which makes it harder to manipulate perceptual fluency since all most all logos selected carried characteristics of high perceptual fluency. Thus, only conceptual fluency was manipulated and studied in this research (See further explanation on Phase 1).

Familiarity

Alba and Hutchinson (1987) found that customers would remember brand and product information when they are familiar with the brand. Brand familiarity usually derives from past experience and brand exposure (Pope and Voges, 2000). When people use or are exposed to a brand, they create some perceptions with the brand and store it in mind. These past experiences with the brand, whether good or bad, will enhance brand familiarity.

Increasing brand familiarity would elaborate cognitive stages due to the product-experiences stored in memory (Soderlund, 2002). In addition, familiarity also positively influences how people perceive relations between new stimuli and existing perception. For instance, if customers have some prior experiences or knowledge about a brand, then when they are exposed to some new information about the brand, they are more easily to remember it than unfamiliar brand (Cornwell et al., 2005).

H2: Logos of the brands with low familiarity will be more difficult to recall than logos of the brands with high familiarity.

Congruence in Sponsorship

When speaking of sponsorship, congruence has generated a great deal of research interest and has been shown to be a very important factor influencing recall and recognition of sponsors

(Cornwell et al. 2005; Clark et al. 2009). Congruence is usually defined as the "fit" of the event and the sponsor (Becker-Olsen and Hill 2006; Gwinner 1997; Poon and Prendergast 2006; Roy & Cornwell 2004). The perception of "fit" between the sponsor and sporting event is based on a logical relationship and connections between the two (Meenaghan 2001; Weeks et al. 2008). This logical relation enables people to transfer the image of the event to the products, vice versa. People could therefore store the products in mind more easily for those elaborative information and linkages created due to the highly fit between the event and sponsor.

There are two kinds of congruence or fit most often mentioned. According to Gwinner and Eaton (1999), fit can be derived into functional or image dimensions. Functional congruence between a sponsor and sporting event is typically a function of the likelihood that sponsor's products are actually used on the field. For example, Gatorade is drunk and Nike shirts are worn by players. Image congruence, on the other hand, needs more time to be established in people's mind than functional congruence. It is the perception people "feel" the sponsor's image is compatible with the sporting event. For example, though players do not drink beer, many people may think beer is a good match with the sporting event because a lot of beer companies have a history of sponsoring various sporting events. Trimble and Rifon (2006) elaborate on the concept for its use across domains and suggest the differentiation of the consumer's acceptance of the sponsor/event/cause pairing from the nature of the match itself. They refer to consumer acceptance of the match as compatibility, and suggest that functional and image congruence can both influence compatibility. Since image congruence is comparatively hard to manipulate, this research will mainly focus on manipulating functional congruence.

The effects of sponsorship are varied. They include image transfer (Gwinner and Eaton 1999; Rifon et al. 2004), sponsor recall (Keller 1993; Johar and Pham 1999), and positive

attitude toward sponsor (d'Astous & Bitz 1995; McDaniel 1999; Rodgers 2004). A strong linkage between the sponsor and the event is thought to facilitate the transfer of image from event to sponsor. In addition, congruence is thought to enhance recall of the sponsor. Others posit that people may still remember the sponsor based on their prior experience with the brand. In short, high level of congruence may help produce positive reactions toward the sponsor; on the other hand, low congruence may confuse people of the position and character sponsors play at the event. (Becker-Olsen & Simmons 2002)

There are some researchers who argue that an incongruent match between the sponsor and events facilitates sponsor recall. Since low congruence creates a high conflict and disturbance of the perception, people would need more processing time to rationalize the relationship between the sponsor and the event (Hastie 1980; Dahlen et al. 2008). As a result, people may be more certain about the sponsor because they "think" about the relationships and hence create a new and more deeply encoded memory specifically about the sponsor and the event.

Previous studies only focused on manipulating high and low congruence. However, the middle ground does exist. For example, a swimming apparel brand sponsors basketball games. They are all in the category of sports but not the same sports. As a result, this study looked at high, low, and middle level of congruence to examine their effectiveness on sponsor recall. Based on the logic of previous study, the hypotheses were assumed as follows:

H3a: Logos of the brand with low congruence will be easier to recall than logos of the brand with high congruence

H3b: Logos of the brand with low congruence will be easier to recall than logos of the brand with middle congruence

H3c: Logos of the brand with middle congruence will be easier to recall than logos of the brand with high congruence.

Interactions between visual fluency, familiarity and congruence

There are no previous studies putting visual fluency, familiarity, and congruence together to examine their interaction and influence on recall. Based on the definition of each factor, familiarity may affect and confound with visual fluency, and even congruence. In addition, many studies suggested that prior knowledge and attitudes with the sponsors would enhance recall (Bennett, 1999; Keller, 1993; Stuart, Shimp, and Engle, 1987). As a result, it is reasonable to hypothesize that familiarity would moderate the effects of logo fluency and congruence.

H4: The effects of logo fluency will be moderated by the familiarity with the brands

H4a: Under low familiarity conditions, logos with high visual fluency will be easier to recall than logos with low visual fluency

H5: Congruence between the sponsor and the event will be moderated by familiarity with the brand.

H5a: Under low familiarity condition, logos of the brand with low congruence with the event will be easier to recall than logos of the brand with high congruence with the event.

There was no study examining the effects of logo fluency on sports sponsorship, however, the importance of congruence on recalling and recognizing sponsors has been proved many times. Therefore, it is expected that logo fluency would be moderated by congruence.

H6: The effects of logo fluency will be moderated by congruence between the sponsor and the basketball team.

H6a: Under low congruence conditions, logos with high conceptual fluency will be easier to recall than logos with low conceptual fluency.

METHODS OVERVIEW

Basketball was selected to be the sport across the study. First, basketball has wide appeal and is commonly broadcast to audiences in addition to its attracting thousands of fans to a venue for each event. Second, Basketball arenas offer a variety of sponsorship options such as banners and jumbotrons as well as food areas and paraphernalia. In addition, basketball is a very popular NCAA event and the authors took advantage of the fact that they had access to games and audiences at Michigan State University with relatively successful basketball teams, both men's and women's. Though convenience samples of students were used, a real school basketball team was selected to add some external validity to the study; that is, the interaction and chemistry between students and the team could be regarded as the same as adult fans relating to professional teams. Moreover, NCAA basketball is professionally sponsored; thus, the study provides realistic context allowing generalizability of the findings to other teams and situations.

In phase one of the qualitative research, an ethnographic study examined some characteristics of the onsite exposure setting with an emphasis on logo placement and audience exposure. In addition, personal interviews were used to examine the qualities of specific logos and how they may be manipulated bearing in mind issues of internal and external validity. Based on the observation and findings of the qualitative research, an experimental quantitative research was conducted, looking at the interaction and effects of logo fluency, familiarity, and congruence on sponsor recall.

PHASE I: QUALITATIVE RESEARCH

Ethnography

Method

The author attended two basketball games. Given the timing of the study, the games happened to be final home games for the Division I men's and Division I women's basketball teams' at a Michigan State university. The author examined fan interactions, sponsor involvement, fan involvement and sponsor logo placements. The ethnography was documented with digital photographs and note taking. The authors noted fan characteristics using gender, perceived age and group composition like family and friends. Sponsored activities for fans and their engagement with fans were used as evidence of level of sponsor involvement. As for fan involvement, how fans interacted with the event and how they reacted when teams scored were observed.

Findings

Both men's and women's games attracted various forms of sponsorship. In women's games, sponsors aimed to create specific memories and moments with audience through holding activities during the break time. On the other hand, sponsors in men's games provided informative ads and cheering paraphernalia to show supports for the team. Informative ads of team players' information were found acquiring the most attentions.

Regardless of the form of the sponsorship activities, logos were prominent reminders of the sponsor. This was true on cheering paraphernalia, on the jumbotron, and on arena signage. The specific props and activities served to highlight the logos and sponsorship.

In-depth Interviews

Subjects and Procedures

Seven (two males, five females) undergraduate and graduate students in Michigan State university were interviewed, ages ranging from 20 to 35 years old.

Twenty-six logos were shown separately to participants. Participants were asked to look at the logos one at a time with follow-up questions. Participants were first asked to identify the brand name of the logo, what products the company sells to see how familiar participants had with the brand of the logo. What did the logo communicate about the brand and what did the graph and texts mean to participants were asked to examine the conceptual fluency. Last, participants were asked if they thought the logos of the brand were compatible to basketball events to see how they perceived and judged congruence. Follow-up questions were asked due to different responses to probe more and make sure the authors understood thoroughly of participants' mindsets and perceptions.

Findings

The research provided some insights of how people viewing logos. If participants were familiar with the logos, they referred to their past experiences of what were the brand and products of the logos. When exposed to an unfamiliar brand, participants referred to graphic and texts to find and create meanings for the logo. For example, when viewing a logo for a company that is relatively unknown in the US that displayed a graphic of a woman with a basketball, the participants inferred that the company sold basketball apparel for women. When viewing logos that used the words Paris or London in their logos, participants used the words boutique and high-end to describe the products the company might sell. Participants applied those traits to determine if the company of the logo had a "fit" with an event.

The interaction between familiarity and conceptual fluency was worth noting. Familiarity seemed to enhance conceptual fluency since participants could trace back the prior experience with the brand to rationalize the meaning of the logo. As a result, familiarity should be controlled and handled with care when examining conceptual fluency.

The existence of middle congruence was also confirmed during the in-depth interview. When asking about the congruence with basketball events, participants took more time to think of the relationship when viewing sports brands that were more salient in other sports field, such as tennis and soccer. Participants tended regard the brands as "not so congruent" with basketball events, suggesting the middle ground or recognizing congruence.

PHASE TWO: THE ONLINE EXPERIMENT

Subjects

Undergraduate students between the ages of 18-30 at Michigan State University participated in the study. Of the 664 participants, 339 (51%) were men and 325 (49%) were women. Students were recruited from introductory advertising, public relations, and packaging courses. Students were asked to offer their thoughts on the MSU men's basketball team and were given extra credits for participation.

Design

The study was a 2 X 2 X 3 post-test only, between subjects design. The dependant variables were the recall of logos and the independent variables were high/ low conceptual fluency, high/ low familiarity, and high /medium/ low congruence. Subjects were randomly assigned to one condition, and viewed the same advertisement but with a different logo embedded. Real company logos were used in order to ensure external validity. Though real logos may confound the study due to participants' different prior experiences and knowledge with the brands, the author measured participants' familiarity and involvement with the brands to statistically control for prior experiences and reduce the threats to internal validity. The companies selected were varied in their fluency, popularity and match to a basketball team.

Logos Selection and Validity Issues

Prior to the main study, a pretest was conducted to identify logos that would fit into cells with different levels of perceptual fluency, conceptual fluency, familiarity and congruence. The wide variations in logo design were minimized to reduce the likelihood that design elements would threaten internal validity. In addition, the product category was held constant across all cells. Apparel brands were used as they allowed for a wide range of congruence, familiarity and fluency values. Thus, thirty real apparel brand logos were identified that were square or rectangular in shape and contained both graphic and text elements. With controls of apparel brands and logos' shapes and styles, different product categories and logo characteristics' effects on recall were minimized, enhancing internal validity.

A total of 202 participants (115 males (57%) and 87 females (43%)), ranging in age from 18-27 participated in the pretest study. Participants were first shown a logo, and then asked to respond to items measuring perceptual/conceptual fluency, familiarity, and congruence. Measures were created for perceptual fluency, conceptual fluency, and congruence and the pretest also served for the development of reliable and valid scales. Manipulation of perceptual fluency failed in the pretest. Possible reasons may due to the use of real logos that all carry high perceptual fluency. As a result, perceptual fluency was not tested in the main study.

Eleven logos were selected for the main study (See Table 1). Based on the pretest data, no logo could accurately represent the cell of low conceptual fluency/ low familiarity/ high congruence. It is not surprising, since it is likely that when familiarity is low, and conceptual fluency cues are scarce, a congruence assessment could be difficult or impossible. In order to maintain the integrity/balance of cells in the study, ball claw was selected for the cell. Noting the possible threat to the study, the cell was examined and analyzed with care in the main study.

TABLE 1
Logos' Scores (Pretest)

High Congruence		High Conceptual	Low Conceptual
High Familiarity		Air Jordan	Adidas
	Conceptual	5.4	4.13
	Familiarity	6.0	7.0
	Congruence	6.19	4.41
Low Familiarity		And 1	
	Conceptual	4.5	
	Familiarity	3.83	
	Congruence	5.04	

Medium Congruence		High Conceptual	Low Conceptual
High Familiarity		Columbia	Fruit of the Loom
	Conceptual	5.33	3.20
	Familiarity	6.83	6.20
	Congruence	3.65	4.05
Low Familiarity		Alleson	Ellesse
	Conceptual	4.38	2.29
	Familiarity	3.13	2.58
	Congruence	3.66	3.53

Low Congruence		High Conceptual	Low Conceptual
High Familiarity		Dockers	Levi's
	Conceptual	4.25	3.67
	Familiarity	5.88	6.67
	Congruence	2.63	2.67
Low Familiarity		Ballher	Aquascutum
	Conceptual	4.43	2.0
	Familiarity	2.29	2.36
	Congruence	2.93	2.25

*Scores were based on a seven-point scale

Stimulus Materials Development

Based on the observation from ethnography study in phase one, the authors found that an informative ad, one that introduces players and offers a schedule, would be viewed longer and receive more interest than other forms of interaction between sponsors and audiences. As a result,

a fictitious sponsored ad with team and coach introduction with players' pictures was created in order to attract subjects to pay more attentions to the stimulus. Twelve mock ads with real information about the MSU men's basketball team displayed the sponsor logo associated with each treatment cell. In each condition, one real logo was embedded on the right bottom of the ad without any explicit statement of sponsorship; in addition, the size of each logo was approximately the same. On one hand, external validity was enhanced through providing real information with real logo to the participants; on the other hand, internal validity was guaranteed by eliminating the effects of articulation of the relations on the sponsorship (Cornwell et al., 2006) and logo sizes on recall.

Data Collection Procedures

Participants were asked to express their perceptions on MSU men's basketball team. As a result, they were not aware that they would be asked to recall the sponsor in the ad, which enhanced internal validity. Participants were randomly assigned an online questionnaire link which directed them to one of the twelve mock ads. Each mock ad included one real logo selected from the pretest, varied with different levels of conceptual fluency, familiarity and match with the basketball team. Participants were asked to read through the ad first, and then they were instructed to finish the questionnaire starting on the next page; only next button was shown on each page of the questionnaire. As a distraction task, items measuring participants' involvement with the basketball team were first used. Then, on a new page, participants were asked to think about the ad they just viewed a few minutes ago and to write down the sponsor name of the ad based on their recollection, an open ended measure. Items measuring conceptual fluency, familiarity, congruence, attitudes towards sponsor, involvement with sponsor products, and purchase intentions were followed after the recall. Additional instructions were provided to

help participants better indicate their perceptions on each factor. After submitting the questionnaire, a debriefing page was shown to participants explaining the main purpose of the study, and the fictitious relation between the brands in the ad and the basketball team.

Measures

Scales, the items included for their measurement, and Cronbach's alpha reliability indices are displayed in Table 2. Since there is no established measure of conceptual fluency of a logo, one was developed for this study. The items were first tested in the pretest, and was modified and applied in the main study. Conceptual fluency was tested using five seven-point Likert scales constructed by the authors with skewness less than -0.2 (I can imagine the sponsor's products when I view the logo; the logo reminds me of the sponsor's products; the logo makes me think of how to use the sponsor's products; the logo communicates with me about the sponsor's products; I know the logo's meaning when I view it; α= 0.933, see Table 2). Familiarity with the sponsor brand was tested using one nine-point semantic differential item (familiar/ not familiar), and congruence was measured using three semantic differential items (Rifon et al., 2004; Compatible/ Not compatible; A good fit/Not a good fit; Relevant/ Irrelevant; α=0.825). Subjects were asked to write down the sponsor name without any aid to measure recall applying open-ended form, and were also asked to report their confidence in recalling the sponsor right using a seven-point Likert scale. Recall was coded into five levels in ranking order. Recalling a competitor was considered the worst recall outcome for the sponsor, inaccurate recall, the next worst outcome, perfect recall the best outcome, and partial recall the second best outcome. No recall was considered to be a neutral, though undesired outcome. Thus, the worst situation of recalling competitors was coded as a 1; recalling a wrong but not a competitor name was regarded as inaccurate recall and coded as 2; do not remember was coded as 3; recalling brand

name that could be recognized with small misspelling represented partially right and was coded as 4; and 100% recalling the sponsor right was coded as 5.

Levels of fan involvement were measured (α=0.952) using a seven seven-point Likert scale combined newly-constructed (I know the MSU men's basketball team players' names/ I care about the standing of the MSU men's basketball team) with existing items made by Heere and Dickson (2008) (I would still be committed to the MSU men's basketball team regardless of the lack of any star players/ I could never switch my loyalty from the MSU men's basketball team even if my close friends were fans of another team/I would still be committed to the MSU men's basketball team regardless of the lack of physical skill among the players/It would be difficult to change my beliefs about the MSU men's basketball team). Attitude toward the brand (α=0.960) was tested using three seven-point semantic differential items (good/bad, like/ dislike, favorable/ unfavorable; Mackenzie and Lutz 1989), and involvement with the sponsor products (α=0.942) was measured using ten seven-point PII items (Important/ unimportant, boring/ interesting, relevant/ irrelevant, means nothing/ means a lot to me, appealing/ unappealing, fascinating/ mundane, worthless/ valuable, involving/ uninvolving, not needed/ needed; Zaichkowsky 1994).

TABLE 2
Scale Items and Reliabilities

Measure	Item	Alpha
Conceptual Fluency	• I can imagine the sponsor's products when I view the logo • The logo reminds me of the sponsor's products • The logo makes me think of how to use the sponsor's products • the logo communicates with me about the sponsor's products • I know the logo's meaning when I view it	0.933
Congruence	How good a match do you think the brand is to the team? • Compatible/ Not compatible • A good fit/Not a good fit • Relevant/ Irrelevant	0.957
Fan Involvement	• I know the MSU men's basketball team players' names • I care about the standing of the MSU men's basketball team • I would still be committed to the MSU men's basketball team regardless of the lack of any star players • I could never switch my loyalty from the MSU men's basketball team even if my close friends were fans of another team • I would still be committed to the MSU men's basketball team regardless of the lack of physical skill among the players • It would be difficult to change my beliefs about the MSU men's basketball team	0.952
Attitude towards Sponsor Brands	What's your overall feeling about the sponsor brand? good/bad, like/ dislike, favorable/ unfavorable	0.960
Involvement with Sponsor Product	To me, the sponsor brand's products I viewed in the AD are: Important/ unimportant, Boring/ Interesting, Relevant/ Irrelevant, Means nothing/ Means a lot to me, Appealing/ Unappealing, Fascinating/ Mundane, Worthless/ Valuable, Involving/ Uninvolving, Not needed/ Needed	0.942

RESULTS

Manipulation Check

Cases that left the recall item blank were excluded from all analyses in the study for

several reasons. First, those people who did not report anything were likely to have exerted the

least amount of effort and attention during the data collection thus, may have not even looked at

the stimulus. Second, it is also likely that the same inattentiveness could have occurred with

respect to responding to the questionnaire items, and the subjects were removed as part of the

verification process. In addition, subjects who reported that they did not recall the brand, or inaccurately recalled the brand, were also excluded from the manipulation checks, since without accurate recall, congruence, conceptual fluency and familiarity assessments would be based on the wrong brands.

Three semantic differential items were used to measure perceived match between the sponsor and men's basketball team. The manipulation check used one-way ANOVA, confirming significant different perceptions of the match between sponsor and the basketball team at three levels ($F_{(2, 293)}$ = 69.073, p < .001; See table 3). The mean scores confirmed three levels that were high (M=5.54), medium (M=3.99), and low (M=3.05).

One seven-point semantic differential item was used to examine if participants were familiar with the sponsor brand; one-way ANOVA was applied. The results showed significant difference ($F_{(1, 303)}$ = 180.543; p<0.001) between the high (M=5.87) and low (M=3.09) familiarity conditions.

Conceptual fluency applied five seven-point Likert scales to examine people's perception on sponsor logos. One-way ANOVA showed the successful manipulation of conceptual fluency, ($F_{(1, 279)}$ = 4.210, p =0.041). The mean score suggested that high (M=4.51) and medium (M=4.1) condition were created.

TABLE 3
Manipulation Check

Fixed Factor	df	F	Sig.	Mean		
				High	*Medium*	*Low*
Congruence	(1, 295)	69.073	<0.001	5.5366	3.9871	3.0524
Familiarity	(1, 304)	180.543	<0.001	5.8719		3.0882
Conceptual Fluency	(1, 280)	4.210	0.041	4.5071	4.0979	

Logos and Recall

It's obvious that logos of famous brands were easier to recall than less famous ones (See Table 4). Air Jordan acquired the highest recall with a totally right rate of 74.2% and the lowest recall competitor rate of 11.3%. Fruit of the Loom, Columbia, Dockers, and And 1 shared similar patterns of high recall and low recall wrong rate. Adidas stood alone with a unique pattern. Some participants were not able to write down the brand name totally right. However, due to Adidas' market position there was a low rate of competitor recall.

Ellesse, ballclaw, ballher, Alleson, and Aquascutum suffered from the low recall right rates. Like Adidas, participants made small mistakes on reporting the brand names that were not composed with common words like Ellesse and Aquascutum; therefore, decreased the rate of recalling totally right. Ballher got the highest recall competitor rate. Participants remembered the brand was "related to sports" and they recalled more renowned brands in the field. Most people in ballher cell recalled Nike as the sponsor. This suggests that despite its high congruence with basketball, and its high fluency, the low familiarity opened the door for a major competitor with a strong market position. Nike was not chosen to represent the cell due to its strong market

position and because Nike is the official sponsor of Michigan State men's basketball. Thus, it should be expected that Nike would be reported.

TABLE 4
Recall on Brands

LOGO	Recall Competitor	Recall Wrong	Do not Recall	Partially Right	Totally Right
Air Jordan	11.3%	1.6%	12.9%	0%	74.2%
Fruit of the Loom	20.7%	1.7%	6.9%	3.4%	67.2%
Columbia	32.1%	5.7%	1.9%	7.5%	52.8%
Dockers	35.2%	3.7%	11.1%	0%	50.0%
And 1	38.3%	1.7%	10.0	0%	50.0%
Adidas	19.6%	0%	16.1%	17.9%	46.4%
Levi's	43.1%	2.0%	11.8%	0%	43.1%
Ellesse	38.5%	7.7%	13.5	21.2%	19.2%
Ballclaw	56.1%	3.5%	14%	8.8%	17.5%
Ballher	72.3%	8.5%	2.1%	0%	17.0%
Alleson	58.9%	10.7%	12.5%	1.8%	16.1%
Aquascutum	43.1%	10.3%	15.5%	17.2%	13.8%

Conceptual Fluency and Recall

A cross-tab analysis was conducted to test if conceptual fluency facilitated accurate recall of the sponsor. Results showed that recall of the high conceptual fluency sponsor logos (44.6%) was significantly higher (chi square= 32.953, $p<0.001$; See Table 5) than medium conceptual fluency ones (34.6%). Thus, H1 was confirmed. The combined (partially plus 100%) rightly recall sponsor rate was almost the same in both condition (46.1 % v.s 46%); nevertheless, high conceptual fluent logos enhanced perfect recall more so than partially correct recall (1.5%) when compared with low conceptually fluent logo (11.4%).

Since the recall wrong rates were almost the same under medium (36.7%) and high (40.1%) conceptual fluency conditions, the results suggests that conceptual fluency affects how accurately people recall sponsor logos.

TABLE 5
Conceptual Fluency Effects on Recall

	Correct Recall	Partially Recall	Do Not Remember	Incorrect Recall	Recall Competitor	Total
High Conceptual	44.6%	1.5%	8.7%	5.1%	40.1%	100%
Medium Conceptual	34.6%	11.4%	13.0%	4.2%	36.7%	100%

Chi Square=32.953 p<0.001

Familiarity and Recall

In order to test if familiarity did affect recall the sponsor logo, a cross-tab analysis was used. Results showed that high familiarity sponsor logos (56.3%) were significantly higher (chi square=83.299, p<0.001; See Table 6) than low familiarity sponsor logos (22.7%). Therefore, H2 was confirmed. In addition, participants were more likely to recall competitors when exposed to unfamiliar sponsor logos (50.6%) than familiar sponsor logos (26.3%). Therefore, familiarity not only influences accuracy of recalling sponsor, but lack of familiarity facilitates competitor recall. One-way ANOVA also confirmed the significant difference ($F_{(1, 591)}$ = 79.209, p<.001; See Table 7) of recalling the sponsor under high (M=3.6933) and medium familiarity (M=2.3836) conditions.

TABLE 6
Familiarity Effects on Recall

	Correct Recall	Partially Recall	Do Not Remember	Incorrect Recall	Recall Competitor	Total
High Familiarity	56.3%	4.8%	10.2%	2.4%	26.3%	100%
Low Familiarity	22.7%	8.2%	11.5%	7.0%	50.6%	100%

Chi Square=83.299 p<0.001

TABLE 7
One-Way ANOVA of Familiarity on Recall

Fixed Factor	SS	Df	MS	F	Sig.	Mean	
						High	*Low*
Familiarity	253.848	(1, 591)	253.848	79.209	<0.001	3.6933	2.3836

Congruence and Recall

A cross-tab was applied to examine if congruence affected recall of the sponsor. Under high congruence condition (47.7%), recall of the sponsor was significantly higher (chi square= 26.837, p=0.001; see Table 8) than medium (39.3%) and low (31.0%) congruence condition. As a result, H3a, H3b, and H3c were rejected. Results also indicated the likelihood of recalling sponsors incorrectly (recalled competitors and recalled wrong) was higher under lower congruence condition (53.8%) than medium (43.8%) and high congruence condition (32.8%). The results indicate that congruence does indeed affect sponsor recall but not in the hypothesized direction.

One-way ANOVA showed the significant difference ($F_{(2, 591)} = 9.434$, $p<0.001$; see Table 9) of recalling sponsor under high congruence (M=3.4363), medium (M=3.06) and low (M=2.6117) congruence as well.

TABLE 8
Congruence Effects on Recall

	Correct Recall	Partially Recall	Do Not Remember	Incorrect Recall	Recall Competitor	Total
High Congruence	47.7%	6.4%	13.2%	1.7%	31.1%	100%
Medium Congruence	39.3%	8.2%	8.7%	6.4%	37.4%	100%
Low Congruence	31.0%	4.8%	10.5%	6.2%	47.6%	100%

Chi Square=26.837 p=0.001

TABLE 9
One-Way ANOVA of Congruence on Recall

Fixed Factor	SS	df	MS	F	Sig.	Mean		
						High	*Medium*	*Low*
Congruence	66.570	(2, 591)	33.285	9.434	<0.001	3.4363	3.06	2.6117

Interaction between Fluency, Familiarity and Congruence on Recall

Interaction between fluency and familiarity on recall

The interaction effect between conceptual fluency and familiarity on recall is notable. In the high familiarity condition, there was no significant difference in accurately recall of the sponsor under high (59.8%) and medium (52.7%) conceptual fluency condition (chi square= 7.512, p>0.1; See Table 10).

Nevertheless, under the low familiarity condition, conceptual fluency mattered. The likelihood of recalling the sponsor 100% right was significant higher (chi square= 31.605, p<0.001) in high conceptual fluency condition (28.8%) than medium conceptual condition (16.8%). As mentioned before, conceptual fluency affected the accuracy of recalling sponsor right. Thus, H4a was confirmed.

TABLE 10
Interaction between Conceptual Fluency and Familiarity

Familiar	Conceptual	Correct Recall	Partial Recall	Do Not Remember	Recall Wrong	Recall Competitor	Total
High*	**High**	59.8%	2.4%	8.9%	3.6%	25.4%	100%
	Medium	52.7%	7.3%	11.5%	1.2%	27.3%	100%
Low**	**High**	28.8%	0.6%	8.6%	6.7%	55.2%	100%
	Medium	16.8%	15.6%	14.4%	7.2%	46.1%	100%

Chi Square=7.512 p=0.111; Not Significant
**Chi Square=31.605 P<0.001; Significant

Interaction between congruence and familiarity on recall

The difference between low, medium and high congruence under low familiarity was significant (chi square = 20.783, p=0.008; See Table 11). High congruent sponsors (34.2%) were easier to recall than medium congruent sponsors (17.6%) and low medium congruent sponsors (15.2%); in addition, high congruent brands (49.6%) were less likely to be recalled as competitors or wrong than medium congruent brands (58.4%) and low congruent brands (65.7%).

The results also showed that under high familiarity condition, differences between high, medium and low congruence was significantly supported (chi square= 30.620, p<0.001). High congruent sponsors (69.5%) were not only easier to recall (partially plus totally correct) than medium (65.9%) and low (46.7%) congruent sponsors, the likelihood to recall competitors were lower than medium and low congruent sponsors (15.3% /26.1%/ 39.0%). Thus, H5 was supported and H5a was rejected.

TABLE 11
Interaction between Congruence and Familiarity

Familiar	Cong.	Correct Recall	Partial Recall	Do Not Remember	Recall Wrong	Recall Competitor	Total
High*	**High**	61.0%	8.5%	14.4%	0.8%	15.3%	100%
	Medium	60.4%	5.4%	4.5%	3.6%	26.1%	100%
	Low	46.7%	0%	11.4%	2.9%	39.0%	100%
Low**	**High**	34.2%	4.3%	12.0%	2.6%	47.0%	100%
	Medium	17.6%	11.1%	13.0%	9.3%	49.1%	100%
	Low	15.2%	9.5%	9.5%	9.5%	56.2%	100%

*Chi Square=30.620 p<0.001; Significant
**Chi Square=20.783 P=0.008; Significant

Interaction between fluency and congruence on recall

Under high congruence condition, the difference in high and medium conceptual fluency was significant (chi square=31.593, p<0.001; See Table 12). High conceptual fluent logos (62.3%) were easier to recall than medium conceptual fluent logos (31.9%); moreover, medium conceptual fluent logos (38.1%) were more easily to recall competitors than high conceptual fluent ones (24.6%).

The situation became interesting under medium congruent condition. Medium conceptual fluent logos (44.5%) were significantly (chi square= 10.793, p=0.029) easier to recall right than high conceptual fluent logos (33.9%); in addition, participants exposed to high conceptual fluent logos (45.9%) were easier to mistakenly recall competitors than medium conceptual fluent logos

(29.1%). Similar pattern occurred under low congruence condition. Though High conceptual

fluent logos (34.7%) were significantly (chi square= 13.445, p=0.009) easier to recall right than

medium conceptual fluent logos (27.5%); nevertheless, if combined partially and totally right

recall, medium conceptual logos (36.5%) acquired slightly higher recall rate than high

conceptual logos (34.7%). In addition, high conceptual fluent logos (52.5%) were easier to recall

competitor than medium conceptual fluent (43.1%) ones. As a result, H6 and H6a were

supported.

TABLE 12
Interaction between Conceptual Fluency and Congruence

Cong.	Concept.	Correct Recall	Partial Recall	Do Not Remember	Recall Wrong	Recall Competitor	Total
High*	High	62.3%	0%	11.5%	1.6%	24.6%	100%
	Medium	31.9%	13.3%	15.0%	1.8%	38.1%	100%
Medium**	High	33.9%	4.6%	7.3%	8.3%	45.9%	100%
	Medium	44.5%	11.8%	10.0%	4.5%	29.1%	100%
Low***	High	34.7%	0%	6.9%	5.9%	52.5%	100%
	Medium	27.5%	9.2%	13.8%	6.4%	43.1%	100%

Chi Square=31.593 p<0.001; Significant
**Chi Square=10.793 P=0.029; Significant
*** Chi Square=13.445 p=0.009; Significant

Recall and Brand Attitude

Conceptual fluency, familiarity, and congruence on recall

Applying univariate analysis on the continuous measure of sponsor recall, there were main

effects of familiarity ($F_{(1, 591)}$ = 82.760, p<0.001) and congruence ($F_{(2, 591)}$ = 10.641, p<0.001) and

an interaction between conceptual fluency and congruence ($F_{(2, 591)}$ = 9.792, p<0.001) (see Table

13). People were more likely to recall the sponsor if they were familiar with the brand (M=3.668)

than less familiar ones (M=2.367). In addition, people would recall the sponsor more easily if

they perceived more match between the sponsor and the basketball (M= 3.420) team than the less

match ones (M=3.023 for medium, 2.633 for low). The interaction between conceptual fluency

and congruence provided interesting suggestion on how those two factors affecting recall (See Figure 1). When under low and medium congruence condition, participants were more likely to recall medium conceptual logos (M= 2.683 for low and 3.365 for medium) than high conceptual ones (M=2.537 for low and 2.680 for medium). On the other hand, when under high congruence condition, high conceptual fluent logos (M=3.833) were a lot easier to recall than medium ones (M=3.007). The result suggested that high conceptual fluent logos would enhance recall under high congruence condition.

TABLE 13
Univariate Analysis on Recall of the Sponsor

Fixed Factor	SS	df	MS	F	Sig.	Mean Recall		
						High	*Medium*	*Low*
Familiarity	249.252	(1, 591)	249.252	82.760	<.001	*3.67*		2.37
Congruence	64.096	(2, 591)	32.048	10.641	<.001	*3.42*	3.02	2.61
Congruence* Conceptual	58.984	(2, 591)	29.492	9.792	<.001	*High Conceptual*		
						3.83	2.68	2.54
						Medium Conceptual		
						3.00	3.37	2.68

Only significant factors reported

FIGURE 1
Interaction between Congruence and Conceptual Fluency on Recall
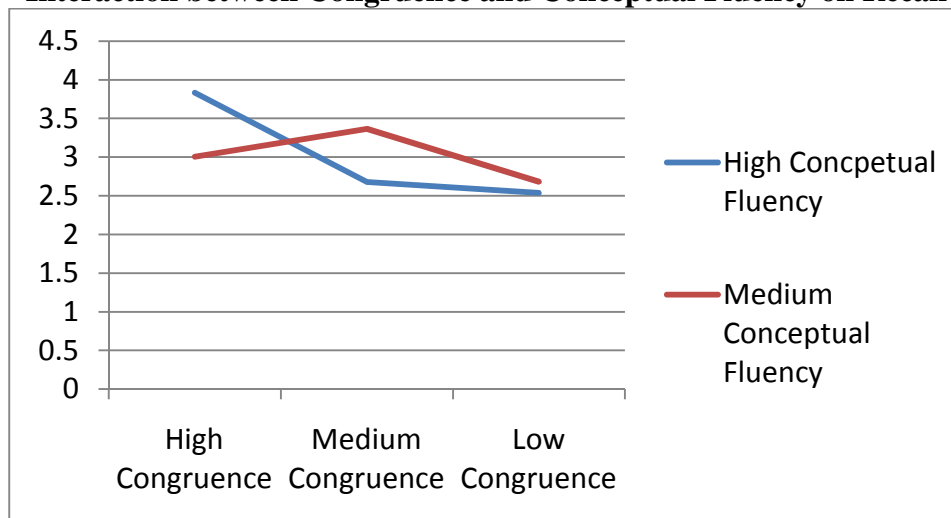
For interpretation of the references to color in this and all other figures, the reader is referred to the electronic version of this thesis
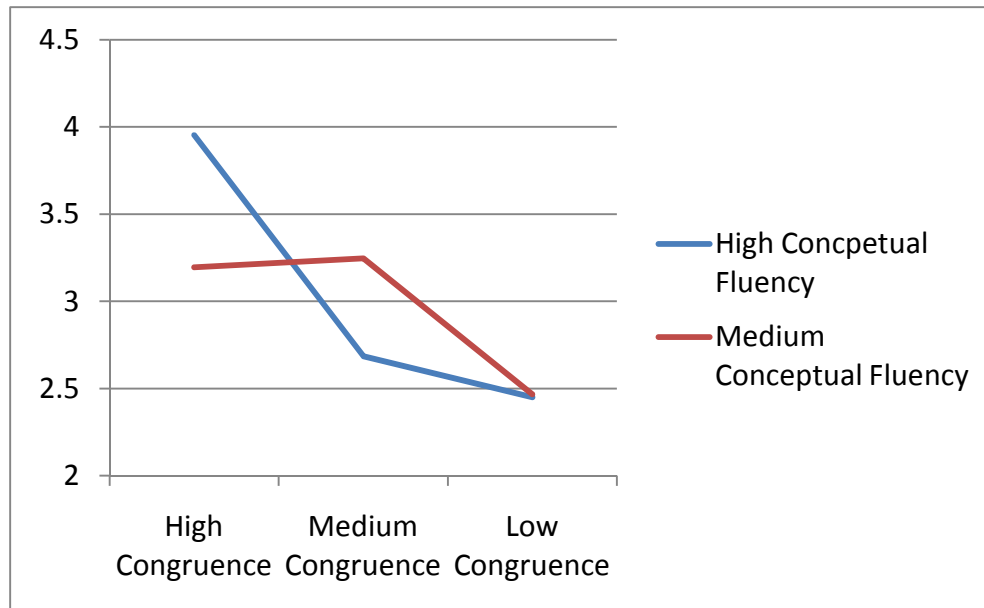
Controlling for fan and product involvement, the same main effects familiarity ($F_{(1, 525)}$ = 65.523, p<0.001), congruence ($F_{(2, 525)}$ = 19.462, p<0.001) and interaction between conceptual fluency and congruence ($F_{(2, 525)}$ = 7.114, p=0.001) remained significant (see Table 14). People were more likely to recall the sponsor if they were familiar with the brand (M=3.585) than less familiar ones (M=2.412). In addition, people would recall the sponsor more easily if they perceived more match (M= 3.573) between the sponsor and the basketball team than the less match ones (M=2.966 for medium, 2.457 for low). The interaction between conceptual fluency and congruence provided interesting suggestion on how those two factors affecting recall (See Figure 2). When under low congruent condition, people had similar recall rate when viewing medium conceptual logos (M=2.466) and high conceptual logos (M=2.449). However, when under medium congruence condition, medium conceptual logos (M= 3.247) were easier to recall than high conceptual ones (M=2.685). The results may due to the longer processing time for participants to comprehend the relations with limited information from logos (Hastie 1980; Dahlen et al. 2008). People were more likely to recall high conceptual logos (M= 3.952) than medium conceptual logos (M=3.194) when under high congruence condition. The image transfer effect was enhanced if the logos carried high conceptual fluency.

TABLE 14
Univariate Analysis on Recall of the Sponsor with
Control for Fan and Product Involvement

Fixed Factor	SS	df	MS	F	Sig.	Mean Recall		
						High	*Medium*	*Low*
Familiarity	179.255	(1, 525)	179.255	65.523	<.001	*3.59*		2.41
Congruence	106.484	(2, 525)	53.242	19.462	<.001	*3.53*	2.97	2.46
Congruence* Conceptual	38.926	(2, 525)	19.463	7.114	.001	*High Congruence*		
						3.95	3.19	
						Medium Congruence		
						2.69	3.25	
						Low Congruence		
						2.45	2.47	

Only significant factors reported

FIGURE 2
Interaction between Congruence and Conceptual Fluency on Recall with
Control for Fan and Product Involvement

* Controlled for fan involvement/ product involvement

A multiple linear regression was calculated and a significant regression equation was found ($F_{(5, 486)=}$ 10.653, p<0.001, R square=0.100; See Table 15) applying conceptual fluency, familiarity, congruence, fan involvement, and product involvement. The results suggested that fan involvement and product involvement had significant relationship with recall.

TABLE 15
Multiple Linear Regression of Recall

Dependent Variable	Predictor	Beta	t	Sig.
Sponsor Recall	Conceptual Fluency	0.082	1.516	0.130
	Familiarity	0.095	1.745	0.082
	Congruence	-0.079	-1.414	0.158
	Fan Involvement	0.101	2.216	0.027
	Product Involvement	-0.281	-4.807	<.001

* $F_{(5, 486)} = 10.653$, p<0.001; R Square= 0.100

Conceptual fluency, familiarity, and congruence on brand attitude

Univariate analysis was used to examine if conceptual fluency, familiarity and congruence affecting participants' attitude towards sponsor. Familiarity ($F_{(1, 585)} = 15.720$, p<0.001) and interaction between familiarity and congruence ($F_{(2, 585)} = 9.697$, p<0.001; See Table 16) significantly influenced attitude towards sponsor brand. On average, participants possessed positive brand attitude towards brand. It may due to the sponsoring which made participants feel good about the brand. Participants will have more positive attitude towards sponsor if they are familiar (M=5.198) than unfamiliar (M=4.744) with the brand. Interaction between familiarity and congruence suggested that participants would increase their positive attitude towards brands if they are familiar with the brand under high (M= 4.772 for low familiarity, M=5.457 for high familiarity; See Figure 3) or medium congruence condition (M=4.470 for low familiarity, M=5.402 for high familiarity). Nevertheless, participants would decrease their liking toward the brand under low congruence condition if they are familiar with the brand (M=4.989 for low familiarity, M=4.736 for high familiarity).

TABLE 16
Univariate Analysis on Attitude toward Sponsor

Fixed Factor	SS	df	MS	F	Sig.	Mean Attitude		
						High	*Medium*	*Low*
Familiarity	30.042	(1, 585)	30.042	15.720	<.001	*4.744*		5.198
Congruence *Familiarity	37.066	(2, 585)	18.533	9.697	<.001	*High Congruence*		
						5.457		4.772
						Medium Congruence		
						5.402		4.470
						Low Congruence		
						4.736		4.989

Only Significant factors reported

FIGURE 3
Interaction between Congruence and Familiarity on Attitude toward Sponsor
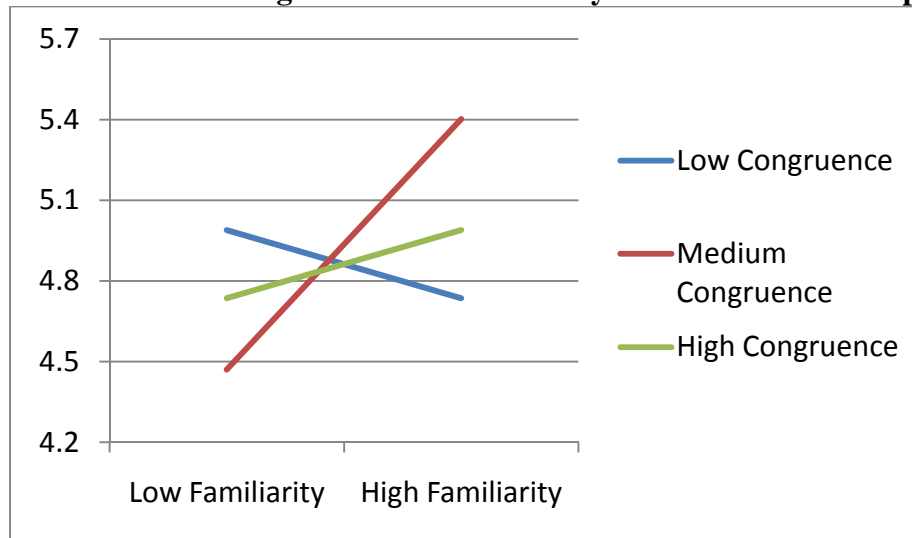
With the control for product involvement, familiarity ($F_{(1, 540)} = 16.598$, p<0.001), interaction between conceptual fluency and familiarity ($F_{(1, 540)} = 4.680$, p=0.031), and interaction between familiarity and congruence ($F_{(2, 540)} = 5.639$, p=0.004; See Table 17) significantly influenced attitude towards sponsor brand. Participants expressed more positive attitude towards sponsor they were familiar (M=5.163) with the brand than participants who were exposed to unfamiliar (M=4.765) ones. Participants reported more positive feeling about

sponsor brand under high (M=5.168 for high familiarity and M=4.667 for low familiarity; See

Figure 4) and medium (M=5.342 for high familiarity and M=4.597 for low familiarity)

congruence condition if they were familiar with the sponsor brand. Nevertheless, participants

reported less positive feeling if they were familiar with the brand when the brand was not a good

match (M=4.978 for high familiar and M=5.030 for low familiarity) to the sporting event or team.

The results indicated familiarity did not affect attitudes toward sponsor brand under low

congruence condition. Familiarity mattered if sponsor logos are low conceptual fluent.

Participants reported more positive attitude towards familiar (M=5.289) than unfamiliar

(M=4.680; See Figure 5) ones when viewing medium conceptual fluent logos; however, their

liking were closer when viewing high conceptual fluent logos (M=5.036 for high familiar,

M=4.849 for low familiar). The results indicated that familiarity did not affect attitudes toward

sponsor brand if sponsor logos are high conceptual.

TABLE 17
Univariate Analysis on Attitude towards Sponsor with
Control for Product Involvement

| Fixed Factor	SS	df	MS	F	Sig.	Mean Attitude		
						High	*Medium*	*Low*
Familiarity	21.300	(1, 540)	21.300	16.598	<.001	5.163		4.765
Conceptual* Familiarity	6.006	(1, 540)	6.006	4.680	0.031	*High Conceptual*		
						5.036		4.849
						Low Conceptual		
						5.289		4.680
Congruence* Familiarity	14.474	(2, 540)	7.237	5.639	.004	*High Congruence*		
						5.168		4.667
						Medium Congruence		
						5.342		4.597
						Low Congruence		
						4.978		5.030

Only Significant factors reported

FIGURE 4
Interaction between Familiarity and Congruence on Attitude towards Sponsor with Control for Product Involvement
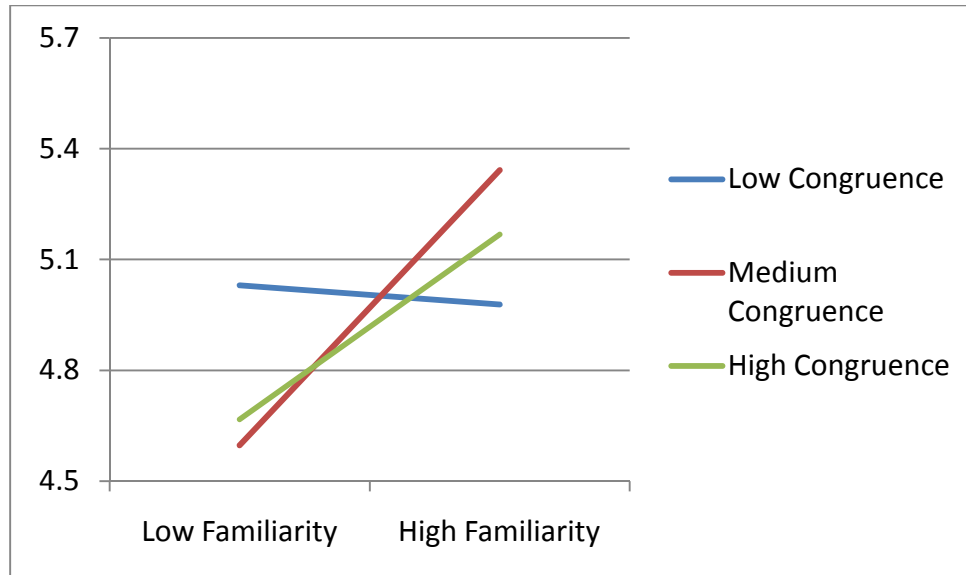
* Controlled for product involvement

FIGURE 5
Interaction between Conceptual Fluency and Familiarity on Attitude towards Sponsor with Control for Product Involvement
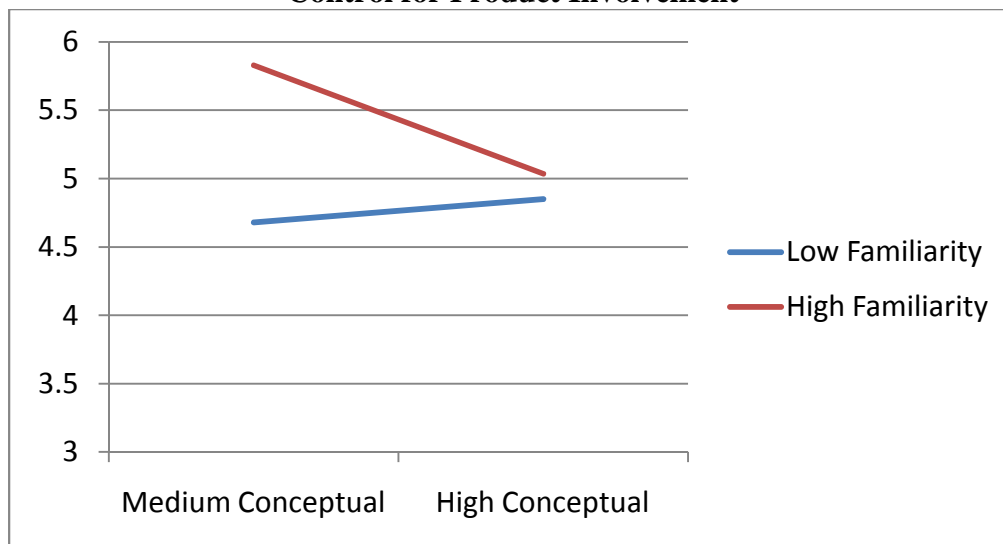
* Controlled for product involvement

A multiple linear regression was calculated and a significant regression equation was found ($F_{(5, 591)}$ 120.910, $p<0.001$, R square=0.559; See Table 18) applying conceptual fluency,

familiarity, congruence, fan involvement, and product involvement to predict recall of sponsor. The results suggested that familiarity, congruence, and product involvement have significant positive relationship with attitude toward sponsor brand.

TABLE 18
Multiple Linear Regression of Brand Attitude

Dependent Variable	Predictor	Beta	t	Sig.
Attitude towards Sponsor Brand	Conceptual Fluency	-0.012	-0.315	0.753
	Familiarity	0.511	13.453	<.001
	Congruence	0.170	4.306	<.001
	Fan Involvement	0.057	1.779	0.076
	Product Involvement	0.240	5.850	<.001

* $F_{(5, 591)} = 120.910$, $p<0.001$; R Square= 0.559

DISCUSSION

Sports sponsorship and the academic study of its effects appear to be growing at an exponential rate. However, little is known about the role of logos for the communication of sponsorship and the creation of positive image effects. Logos, as visual cues, inject a complex set of variables into the sponsorship equation. While congruence or fit has been one of the more widely studied sponsorship cues, the ability of a logo to be noticed, clearly communicate and to be recalled has largely been ignored. The study presented in this paper suggests that logo characteristics should be more extensively studied as they influence consumer sponsor recall, and interact with the congruence of the sponsor with the event.

First, logos are brand representations that communicate product meanings to consumers and offer a unique opportunity to marketers for the differentiation of the brand, consumer

comprehension of brand functions and benefits, and the communication of the sponsorship. The in-depth interview results illustrate the value of logos to communicating about the brand. In addition, the results showed how logo characteristics can communicate well or poorly. Consumers made inferences about product attributes based on logo visuals and sometimes they were accurate, but other times they were not. Thus, conceptual fluency of a logo is essential for consumers to accurately comprehend brands. The quantitative findings confirmed this. When viewing high conceptual logos, participants were able to recall the logos 100% right more compared to medium conceptual logos, even though the combined percentage of 100% and partially (70%) right recall in both conditions were almost the same. Therefore, the results suggested that if marketers hope for their consumers to remember the brand 100% correct, the brand logo should carry high conceptual fluency.

Congruence and familiarity also influenced recall. If participants are familiar with the sponsor and the sponsor is highly congruent with the sporting event/ team, it's more likely that participants would remember and recognize the sponsor.

The interaction between congruence and conceptual fluency was one of the highlights. Under medium congruence condition, participants were more easily to recall the sponsor of medium conceptual fluent logos than high conceptual logos. The possible explanation for the results of medium congruence condition may due to the longer processing time, confirming the propositions by Hastie (1980) and Dahlen et al. (2008). Participants spent more time figuring out the relations between sponsor and sporting event/team and sponsor logo's meaning; as a result, they were able to recall logos better than the ones viewing high conceptual logos. Under high congruence condition, high conceptual logos enhanced the high congruence condition, which led to higher recall than the medium conceptual logos. This result confirmed that for a sporting event,

image transfer is more likely to occur under conditions of high compatibility than low compatibility with the sporting event (Gwinner and Eaton 1999). Therefore, image transfer effects took place under high congruent condition, whereas longer processing time enhanced recall under medium congruence condition. In addition, conceptual fluency enhances transfer effects.

Another highlight was the interaction between familiarity with congruence on brand attitude. Even though they all reported positive attitude toward sponsors, participants possessed less positive attitude with familiar brands under low congruent condition than unfamiliar brands. Even though sports sponsorship is regarded as commercial activity, participants may still search the motives to attribute sponsors' roles in sponsoring the sporting event or team that affect attitude toward sponsor (Rifon et al., 2004).

Based on the findings, implications for new brands and existing brands should be discussed separately. The results suggested that if participants were familiar with the sponsor brand, they tended to report higher scores of conceptual fluency. It was their prior knowledge or experience with the brand instead of logo itself that enhanced their perception on conceptual fluency. Therefore, for the existing brands, marketers should look for the sporting events that are congruent with brand, which would lead to higher recall and more positive attitude toward the brand. On the other hand, for the new brands, marketers should pay attention to its logo conceptual fluency. With higher conceptual fluent logo, familiarity with the sponsor brand would not affect attitudes toward brand, whereas logos could enhance recall if they sponsor high congruent sporting event with the brand.

The use of real logos guaranteed external validity of the study; however, it led to the failed manipulation of conceptual fluency. In addition, different levels of knowledge/ experiences with

the brands of each participant may also affect results. Therefore, questions regarding to product involvement were included in the questionnaire in order to control for the effects. Use only apparel brands which eliminating the effects from different product category may influence the results as well. Some of the effects may only apply to apparel brands due to the specific interaction between apparel brands and sporting event/team. Last, but not least, the use of online questionnaire decreased group effects since participants filled out the questionnaire on their own; in addition, this method provided a more realistic environment since participants could do it whenever they wanted and viewed stimulus advertisement without hurry unlike classroom settings. Nevertheless, since participants received extra credit for participation, they were allowed to return to the stimulus page for answers. The authors used the words "use your best recollection" indicating that there was no need for them to report the "right" answer. On the other hand, the design of questionnaire separated the stimulus and recall question far from each other aiming to decrease participants' will to return for answers. From both pretest and main study showed that most participants reported what they remembered; however, it's still possible that the rate of recalling logos correctly may be higher than other settings using online questionnaire.

This is the first study to put conceptual fluency, familiarity and congruence together examining how those three factors affecting recall. In addition, this is the first study that confirmed the existence of middle congruence. Future studies should investigate these factors and others possible elements to expand this area of study. Further, the interrelatedness of those factors should be identified and tested in more details. Logos are important branding tools and are central communicators in sponsorship. More study is needed using a wider range, and

different categories and styles of logos. The study of logos in sports sponsorship is nascent and warrants additional study.

APPENDICES

Consent Form
Thank you for agreeing to participate in this study.

The researchers are interested in how consumers perceive logos. Your input will be very helpful to us.

Please click on the link below to finish the questionnaire. The questionnaire has four pages and will take you less than five minutes to complete.
#LINK#

You will get one extra credit for participation. Your instructor has alternative options for you to earn extra credit, if you do not want to participate in this study. After completing the questionnaire, please send a note to chaowenc@msu.edu with your student ID as a record for your extra credit.

Your participation is voluntary. If you choose to participate we will sincerely appreciate your time and input. However, you have the right to say no. You may change your mind at any time and withdraw. You may choose not to answer specific questions or to stop participating at any time. Whether you choose to participate or not will have no affect on your grade or evaluation.

Your responses are confidential. There will be no identifiers linking the results to you personally. The results will be reported in the aggregate and cannot be linked to any single participant. You must be at least 18 years old to participate in this research.

If you have any questions, comments or complaints about this research project, please feel free to contact:
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APPENDIX B
Pretest Questionnaire

1. Please tell us the name of the brand whose logo you just viewed? Even if you are not completely

   certain, please tell us your best recollection.

   _____

   Instructions:
   Below is a set of word pairs. Please respond by placing a check mark closest to the word within each pair that best describes how you feel.
   For Example: If you thought the brand was trustworthy, you might respond as follows:
      Trustworthy   _   v   _   _   _   _   _   _   _   Untrustworthy

2. What do you think of the logo?
   Easy to See   _   _   _   _   _   _   _   _   _   Difficult to See
   Clear   _   _   _   _   _   _   _   _   _   Unclear

3. What's your overall feeling about the brand whose logo you just viewed?
   Familiar   _   _   _   _   _   _   _   _   _   Unfamiliar
   Good   _   _   _   _   _   _   _   _   _   Bad
   Pleasant   _   _   _   _   _   _   _   _   _   Unpleasant
   Favorable   _   _   _   _   _   _   _   _   _   Unfavorable

4. This brand wants to sponsor the MSU Men's Basketball team. How good a match do you think the brand is to the team?
   Compatible   _   _   _   _   _   _   _   _   _   Not compatible
   A good fit   _   _   _   _   _   _   _   _   _   Not a good fit
   Relevant   _   _   _   _   _   _   _   _   _   Irrelevant

   Instructions:
   Please indicate your level of agreement with each of the following statements by clicking the number between 1 and 5 that best reflects your response. A 1 indicates that you strongly disagree with the statement a 5 indicates that you strongly agree with the statement, the higher the number, the more you agree with the statement.

5. The logo would be easy to notice in an ad
   | Strongly Agree | Agree | Neither | Disagree | Strongly Disagree |
   | 5 | 4 | 3 | 2 | 1 |

6. I think I would recognize the logo if I were to see it again.
   | Strongly Agree | Agree | Neither | Disagree | Strongly Disagree |
   | 5 | 4 | 3 | 2 | 1 |

7. I can tell the brand's products when I view the logo.

Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
5	4	3	2	1

8. The logo reminds me of the brand's products

Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
5	4	3	2	1

9. The logo makes me think of how to use the brand's products

Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
5	4	3	2	1

10. I think MSU men's basketball team players could use some of the brand's products during a basketball game

Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
5	4	3	2	1

11. The brand's products are a good match to MSU men's basketball team

Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
5	4	3	2	1

12. Sponsoring the MSU basketball team is a better fit for the brand than sponsoring other MSU sports teams such as swimming

Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
5	4	3	2	1

13. The MSU men's basketball team is the best fit for this brand's sponsorship

Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
5	4	3	2	1

14. Sponsoring the MSU Men's Basketball team is a better fit than a non-sports group.

Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
5	4	3	2	1

15. Your basic information:

☐   ☐
Male   Female

Your major _____

Your Age_____

What is your class level?

☐   ☐   ☐   ☐   ☐
Freshmen   Sophomore   Junior   Senior   Graduate

Main Study Questionnaire

Page One

Thank you for agreeing to participate in this survey. Your opinions are very important and valuable for the project.

Please read through the AD about MSU men's basketball team below.
Then, go to the next page to fill out the questionnaire

New Page

1.) I think I am a MSU men's basketball fan

( ) Strongly Agree

( ) -

( ) -

( ) Not Sure

( ) -

( ) -

( ) Strongly Disagree

2.) I know the MSU men's basketball team players' names.

( ) Strongly disagree

( ) -

( ) -

( ) Not Sure

( ) -

( ) -

( ) Strongly agree

3.) I care about the standing of the MSU men's basketball team

( ) Strongly disagree

( ) -

( ) -

( ) Not Sure

( ) -

( ) -

( ) Strongly agree

4.) I follow the game results of MSU men's basketball team

( ) Strongly disagree

( ) -

( ) -

( ) Not Sure

( ) -

( ) -

( ) Strongly agree

5.) I would still be committed to the MSU men's basketball team regardless of the lack of any star players.

( ) Strongly disagree

( ) -

( ) -

( ) Not Sure

( ) -

( ) -

( ) Strongly agree

6.) I could never switch my loyalty from the MSU men's basketball team even if my close friends were fans of another team.

( ) Strongly disagree

( ) -

( ) -

( ) Not Sure

( ) -

( ) -

( ) Strongly agree

7.) I would still be committed to the MSU men's basketball team regardless of the lack of physical skill among the players.

( ) Strongly disagree

( ) -

( ) -

( ) Not Sure

( ) -

( ) -

( ) Strongly agree

8.) It would be difficult to change my beliefs about the MSU men's basketball team

( ) Strongly disagree

( ) -

( ) -

( ) Not Sure

( ) -

( ) -

( ) Strongly agree

New Page

9.) Please tell us the name of the brand that sponsored the MSU men's basketball team AD? Even if you are not completely certain, please tell us your best recollection.

_____

10.) How confident are you in accurately recalling the sponsor's name?

( ) Extremely confident

( ) -

( ) -

( ) Somewhat confident

( ) -

( ) -

( ) Not at all confident

11.) The logo was easy to notice in the MSU men's basketball team ad

( ) Strongly disagree

( ) -

( ) -

( ) Not sure

( ) -

( ) -

( ) Strongly agree

12.) I think I would recognize the logo if I were to see it again.

( ) Strongly disagree

( ) -

( ) -

( ) Not sure

( ) -

( ) -

( ) Strongly agree

13.) I can imagine the sponsor's products when I view the logo.

( ) Strongly disagree

( ) -

( ) -

( ) Not sure

( ) -

( ) -

( ) Strongly agree

14.) The logo reminds me of the sponsor's products

( ) Strongly disagree

( ) -

( ) -

( ) Not sure

( ) -

( ) -

( ) Strongly agree

15.) The logo makes me think of how to use the sponsor's products.

( ) Strongly disagree

( ) -

( ) -

( ) Not sure

( ) -

( ) -

( ) Strongly agree

16.) The logo communicates with me about the sponsor's products.

( ) Strongly disagree

( ) -

( ) -

( ) Not sure

( ) -

( ) -

( ) Strongly agree

17.)I know the logo's meaning when I view it.

( ) Strongly disagree

( ) -

( ) -

( ) Not sure

( ) -

( ) -

( ) Strongly agree

18.) I think MSU men's basketball team players could use some of the sponsor's products during a basketball game

( ) Strongly disagree

( ) -

( ) -

( ) Not sure

( ) -

( ) -

( ) Strongly agree

19.) The sponsor's products are a good match to MSU men's basketball team

( ) Strongly disagree

( ) -

( ) -

( ) Not sure

( ) -

( ) -

( ) Strongly agree

20.) Sponsoring the MSU basketball team is a better fit for this sponsor than sponsoring other MSU sports teams such as swimming

( ) Strongly disagree

( ) -

( ) -

( ) Not sure

( ) -

( ) -

( ) Strongly agree

21.) The MSU men's basketball team is the best fit for this brand's sponsorship

( ) Strongly disagree

( ) -

( ) -

( ) Not sure

( ) -

( ) -

( ) Strongly agree

22.) The MSU men's basketball team is the best fit for this brand to sponsor than other types of sponsorship such as music

( ) Strongly disagree

( ) -

( ) -

( ) Not sure

( ) -

( ) -

( ) Strongly agree

23.) I would consider buying apparel from this sponsor because of MSU men's basketball team.

( ) Strongly disagree

( ) -

( ) -

( ) Not sure

( ) -

( ) -

( ) Strongly agree

24.) If I were going to buy apparel, I would like to pay more for this brand because it sponsors MSU men's basketball team

( ) Strongly disagree

( ) -

( ) -

( ) Not sure

( ) -

( ) -

( ) Strongly agree

Copy of New Page

25.) What do you think of the logo in the MSU men's basketball team AD?

( ) Easy to See

( ) -

( ) -

( ) -

( ) -

( ) -

( ) Difficult to See

) -

( ) Clear

( ) -

( ) -

( ) -

( ) -

( ) -

( ) Unclear

26.) How good a match do you think the sponsor of the AD you just viewed is to the MSU men's basketball team?

( ) Compatible

( ) -

( ) -

( ) -

( ) -

( ) -

( ) Not Compatible

) -

( ) A Good Fit

( ) -

( ) -

( ) -

( ) -

( ) -

( ) Not a Good Fit

) -

( ) Relevant

( ) -

( ) -

( ) -

( ) -

( ) -

( ) Irrelevant

27.) To me, the sponsor brand's products I viewed in the AD are:

( ) Important

( ) -

( ) -

( ) -

( ) -

( ) -

( ) Unimportant

) -

( ) Boring

( ) -

( ) -

( ) -

( ) -

( ) -

( ) Interesting

) -

( ) Relevant

( ) -

( ) -

( ) -

( ) -

( ) -

( ) Irrelevant

) -

( ) Exciting

( ) -

( ) -

( ) -

( ) -

( ) -

( ) Unexciting

) -

( ) Means Nothing

( ) -

( ) -

( ) -

( ) -

( ) -

( ) Means a Lot to Me

) -

( ) Appealing

( ) -

( ) -

( ) -

( ) -

( ) -

( ) Unappealing

) -

( ) Fascinating

( ) -

( ) -

( ) -

( ) -

( ) -

( ) Mundane

) -

( ) Worthless

( ) -

( ) -

( ) -

( ) -

( ) -

( ) Valuable

) -

( ) Involving

( ) -

( ) -

( ) -

( ) -

( ) -

( ) Uninvolving

) -

( ) Not Needed

( ) -

( ) -

( ) -

( ) -

( ) -

( ) Needed

28.) What's your overall feeling about the sponsor brand?

( ) Familiar

( ) -

( ) -

( ) -

( ) -

( ) -

( ) Unfamiliar

) -

( ) Good

( ) -

( ) -

( ) -

( ) -

( ) -

( ) Bad

) -

( ) Pleasant

( ) -

( ) -

( ) -

( ) -

( ) -

( ) Unpleasant

) -

( ) Favorable

( ) -

( ) -

( ) -

( ) -

( ) -

( ) Unfavorable

New Page

29.) Your Basic Information:

[ ] Male

[ ] Female

30.) Your Major:

_____

31.) Your Age:

_____

32.) What is your class level?

[ ] Freshman

[ ] Sophomore

[ ] Junior

[ ] Senior

[ ] Graduate

APPENDIX D
Debriefing Form

Thank You!

Thank you for taking our survey. Your response is very important to us.

During this survey, you were asked to express your thoughts on MSU men's basketball team.

The actual purpose of the study was to examine if you could correctly recall the sponsor's name.

Please notice that the AD and the sponsor in the survey is fictitous.

If you have any concerns about your participation or the data you provided in light of this disclosure, please discuss this with us. We will be happy to provide any information we can to help answer questions you have about this study.

If you have questions about your participation in the study, please contact Wen-Chi Chao (chaowenc@msu.edu), or my faculty advisor Nora Rifon (rifon@msu.edu)

Please again accept our appreciation for your participation in this study.

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