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The Color of Support: The Effect of Sponsor–Team Visual Congruence on Sponsorship Performance

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Abstract

Brand sponsorship connects brands with large, passionate audiences. The sponsorship literature emphasizes the importance of brand sponsor–team congruence; however, prior research has largely focused on the relevance of the brand to the sport or geographic area. This article offers the first real-world empirical investigation of the effects of visual congruence through color matching on sponsorship performance. A wide-scale study of 703 Major League Baseball fans' evaluations of their team's sponsors, merged with real stadium signage data, offers evidence of the benefits of visual congruence. Two experiments in the contexts of product packaging and online advertising provide converging evidence of the positive effects of created visual congruence on attitudes toward the sponsorship, brand attitudes, and intentions. Brands without an inherent match to a team can enjoy enhanced sponsorship benefits with little additional costs simply by adopting the team's colors in visual displays. However, the viewer's motivation (fan status), opportunity (fan exposure), and ability (lack of color blindness) to process visual congruence moderates its effectiveness. By using the proposed framework, managers can maximize the value of their sponsorship rights.

During the 2016 National Football League (NFL) season, Bud Light customized beer cans to visually match each team. Shedding its iconic blue color in favor of each sponsored team's colors may have enhanced the effectiveness of its $1.4 billion NFL sponsorship (Roberts 2015). However, Bud Light's cobranding redesign violates the established branding principle of maintaining consistent visual cues over time to reinforce a brand's identity (Keller 1993). Furthermore, in asking "What is the proper executional approach to combining brands?" Keller and Lehmann (2006, p. 750) lament that although "companies frequently spend considerable sums on the design of logos, little academic research has explored the impact on consumer behavior of logo design or other visual aspects of branding" (p. 743). In response, the current research offers a real-world empirical investigation of the effect of visual congruence achieved through the brand sponsor matching the team's colors on sponsorship performance.

Communicating through visual design is efficient (Krishna, Cian, and Aydınoğlu 2017; Labrecque and Milne 2012) and especially relevant in sports contexts. The brief displays of sponsor logos on or near athletes during an event offer little opportunity to convey the brand's support and

activate an association with the team (Mazodier and Quester 2014). As a result, investors often regard sponsorship announcements pessimistically (Mazodier and Rezaee 2013). However, we argue that optimizing the visual display may improve brand sponsorship efforts. This is important because brand expenditures on sports sponsorships are outpacing general brand advertising in North America (4.3% vs. 2.6%) and exceeding $62 billion annually worldwide (IEG 2017). Sponsorship also remains one of the few avenues to reach mass-market consumers in fragmented, on-demand, commercial-free (e.g., Netflix) entertainment contexts (Gijsenberg 2014; Thompson 2016).

Managers who aim to maximize the value of their sponsorship expenditures unfortunately encounter conflicting guidance from research on visual design in sponsorship. On the one hand,

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visual congruence from matching brand–team colors may reduce effectiveness, as eye-tracking experiments have found that sponsorship signage with colors that contrast with surroundings better captures viewers' attention (Boronczyk, Rumpf, and Breuer 2018; Breuer and Rumpf 2015). On the other hand, students evaluate brand advertisements that support a cause more favorably when the brand's and the cause's colors match (Zdravkovic, Magnusson, and Stanley 2010). In addition, fans wear their team's colors to signal their support (Derbaix, Decrop, and Cabossart 2002); perhaps sponsors can communicate their support similarly.

To reconcile the seemingly contradictory best practices emerging from prior research, we posit that visual congruence enhances sponsorship performance, as long as the viewer processes the visual information. Conceptually, we draw on MacInnis, Moorman, and Jaworski's (1991) framework of brand information processing to organize viewer characteristics that afford the necessary opportunity (i.e., viewership-based exposures to signage), ability (i.e., no color blindness), and motivation (i.e., fan status) to process the visually congruent sponsorship. With these viewer characteristics as preconditions, we use categorization (Fiske and Pavelchak 1986; Wedel and Pieters 2015) and attribution (Kelley and Michela 1980; Woisetschläger, Backhaus, and Cornwell 2017) theories to predict that fans evaluate visually congruent sponsorships more positively because the brand shares the appearance of a sincere supporter of the team.

Our empirical investigation of the proposed conceptual model takes a multimethod approach and relies on brand sponsor evaluation data from 1,358 participants across three studies in different sports and sponsorship advertising contexts. Study 1 ties actual in-stadium sponsorship signage from every Major League Baseball (MLB) stadium to 703 fans' evaluations of their team's brand sponsors. The resulting 15,289 ratings reveal a positive effect of visual congruence, in which brand colors in the sponsorship signage match the team's colors, on fan attitudes toward the sponsorship. A bootstrap mediation analysis reveals an indirect effect of visual congruence on fan attitudes toward the sponsorship through perceptions of sponsor support, as well as a direct effect. As predicted, the positive effects disappear when fans have not viewed enough games or are color blind. In Studies 2 and 3, we manipulate visual congruence in quasiexperiments. Study 2, set in the context of sponsor product packaging similar to Bud Light's custom NFL cans, verifies that perceived sponsor support mediates the positive effect of visual congruence on attitudes toward the sponsorship. Study 3 features digital advertising that promotes a National Basketball Association (NBA) team along with its main sponsor, and it extends the key effect to several customer-level brand performance metrics that each contribute to brand equity (brand attitudes, visit and purchase intentions, and word of mouth). Because the samples of the first two studies are mostly composed of fans, we recruited both fans and nonfans for Study 3 to examine the role of fan status and find that visual congruence only drives favorable attitudes and behavioral intentions among fans.

The empirical investigation in turn offers several insights for visual design in branding and sponsorship. First, our findings reveal the importance of color, beyond even its connotative meaning or representativeness (Deng, Hui, and Hutchinson 2010; Labrecque and Milne 2012; Wedel and Pieters 2015). Visual congruence signifies a brand sponsor's genuine support of the team, which is critical because fan attributions partly determine sponsorship success (Woisetschläger, Backhaus, and Cornwell 2017). Despite the strong argument for keeping branding elements consistent (Aaker, Fournier, and Brasel 2004; Keller 1993), our findings corroborate calls for cobranding flexibility when one brand communicates support for another (Newmeyer, Venkatesh, and Chatterjee 2014).

Second, this research adds to studies of congruence in sponsorship literature, most of which focus on conceptual or geographic fit between the sponsor and the sponsored entity (e.g., Olson and Thjømøe 2011; Simmons and Becker-Olsen 2006; Woisetschläger, Backhaus, and Cornwell 2017). In Study 1, we find positive effects of visual congruence while controlling for conceptual and geographic congruence. These findings are highly consequential for managers, in that visual congruence, as a sponsorship congruence strategy, falls under managers' control, but geographic congruence is inherently limited to local teams and conceptual congruence is limited to certain brands that fit with sports (Mazodier and Quester 2014). Brands without an inherent color match to a team can adopt that team's colors in targeted sponsorship activities, which corresponds to a 12.4% lift in attitudes in Study 1. Targeting is key though, because, as we find in Study 3, a visually congruent sponsorship ad (vs. incongruent ad) prompts fans to rate the brand approximately 17% more favorably on a composite of brand performance metrics, but we find marginal support that nonfans recall the brand less frequently. With this framework, managers can leverage visual congruence strategically to maximize the value of their sponsorship rights.

Background Literature Relevant to Visual Congruence in Sponsorship Branding

Sponsorship marketing refers to the organization and implementation of activities to build and communicate an association with a sponsored entity (Cornwell et al. 2006). Fans watch athletes compete while taking in visual information from sponsor brands' logos, displayed on signage throughout the stadium, on the playing surface, and on athletes' uniforms. Visual congruence in sponsorship, which we define as an expression of unity through matching visible branding elements (e.g., color identity) between a sponsor brand and a sponsored entity (e.g., team), is often achieved when the sponsor brand's signage matches the team's color identity. For example, Toyota's and Budweiser's red signs at the Cincinnati Reds' stadium match the Reds' color identity, but at the New York Mets' stadium, their signs are incongruent with the Mets' orange and blue color identity (for examples, see Figure 1). Although visual congruence in sponsorship has not been examined in empirical field research, the current work benefits from being situated at
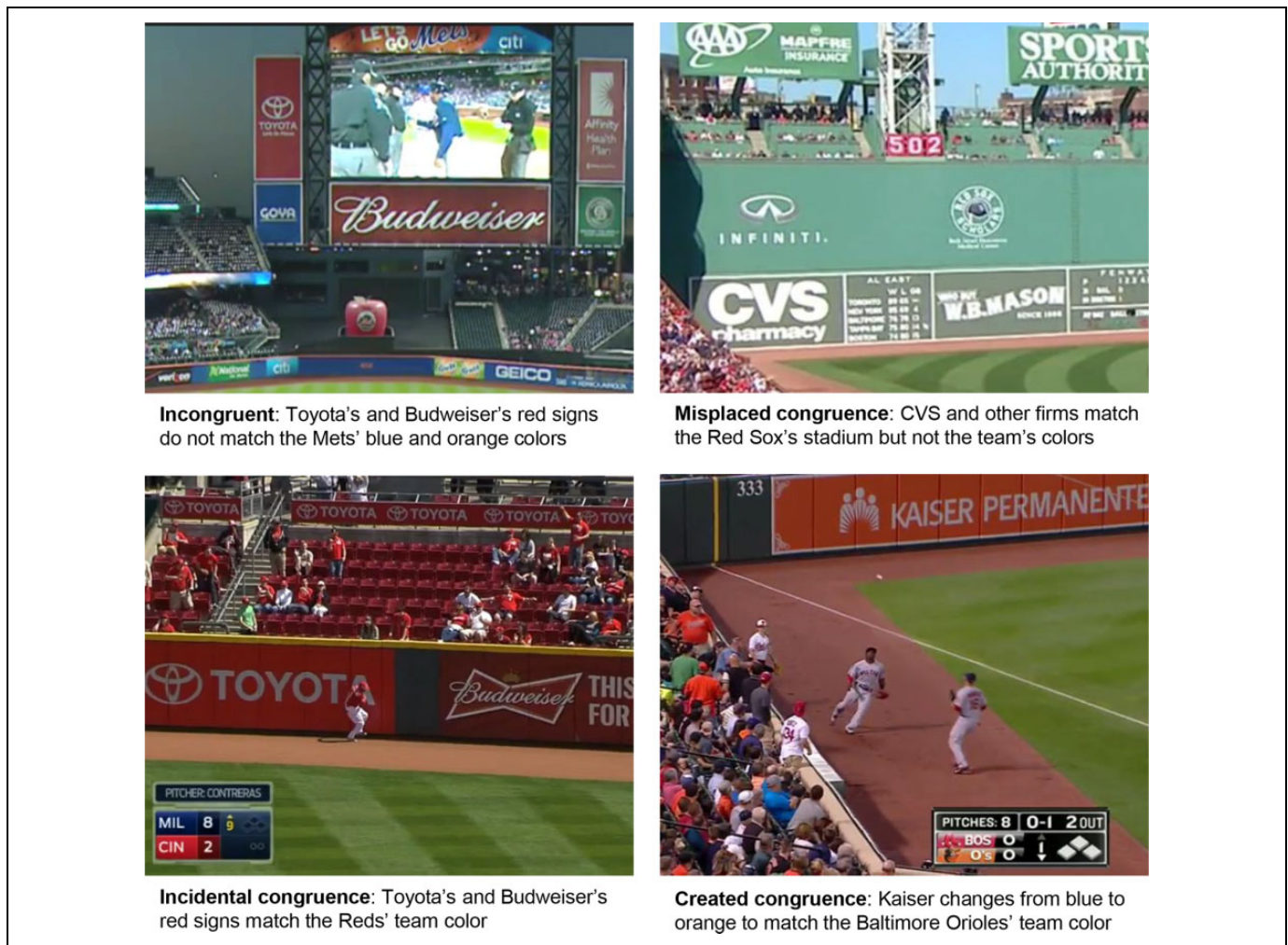
Figure 1. Examples of visual congruence in MLB sponsorship signage.

the intersection of two independent literature streams: (1) sponsorship congruence and (2) visual design in branding. We first review sponsorship congruence literature and then integrate literature on visual design into our conceptual framework and hypotheses.

In general, sponsorship congruence refers to the fit between the sponsor brand and the sponsored entity (e.g., team). Congruence predicts a variety of performance metrics—from attitudes, to recall, to abnormal stock returns. While studies tend to find that congruence enhances performance (Cornwell et al. 2006; Cornwell, Pruitt, and Clark 2005; Mazodier and Merunka 2012; Simmons and Becker-Olsen 2006; Speed and Thompson 2000; Woisetschläger, Backhaus, and Cornwell 2017), exceptions exist in which the effect is nonsignificant or negative (Calderon-Martinez, Mas-Ruiz, and Nicolau-Gonzalbez 2005; Cobbs, Groza, and Pruitt 2012; Mazodier and Quester 2014; Mazodier and Rezaee 2013; Olson and Thjømøe 2009). The inconsistent findings may partly stem from variations in congruence assessments.

Sponsorship research tends to focus on conceptual congruence, which represents the semantic overlap or logical coherence between the brand and the sponsored entity (for a review, see Olson and Thjømøe [2011]). Researchers have operationalized conceptual congruence and related constructs (e.g., generalized fit) with surveys of fan perceptions, experimental manipulations, and coded archival data (Cornwell et al. 2006; Cornwell, Pruitt, and Clark 2005; Johar and Pham 1999; Simmons and Becker-Olsen 2006; Speed and Thompson 2000). Conceptual congruence can be further divided by similarity, such as functional relevance when a brand's product is used in a sport (e.g., Nike athletic gear) or cultural relevance when a brand's product is emblematic of fans (e.g., luxury watches and golf; beer and football tailgates) (Cornwell, Pruitt, and Clark 2005; Olson and Thjømøe 2011; Simmons and Becker-Olsen 2006). We view conceptual congruence as encompassing the many shared mental representations of the brand and sponsored entity (e.g., shared mission, personality, status) and distinguish them from other bases of comparison that may be manifest externally from mental representations.

Researchers seeking additional sources of congruence in sponsorship have identified geographic congruence as a unique driver of performance (see Table 1). Operationalized as a

Table 1. Review of Research on Multiple Sources of Sponsorship Congruence Beyond Conceptual Congruence.

Research	Sources of Congruence and Operationalization	Effect on Performance	Methodology	Sponsorship Context
Abril, Sanchez, and Recio (2018)	• Conceptual: dummy-coded if sponsor is functionally or culturally relevant to the sport (following Cornwell et al. [2005]) • Geographic: dummy-coded if event took place in sponsor's home country • Visual: N.A.	• Outcome: abnormal stock return • Conceptual: + • Geographic: + • Visual: N.A. (not investigated)	Event study methodology	98 sponsorships of four major international sporting events
Cobbs, Groza, and Pruitt (2012)	• Conceptual: dummy-coded if sponsor is functionally relevant to the sport • Geographic: dummy-coded if team is from the sponsor's home country • Visual: N.A.	• Outcome: abnormal stock return • Conceptual: n.s. • Geographic: − • Visual: N.A. (not investigated)	Event study methodology	73 Formula One sponsorships
Olson and Thjømøe (2011)	• Conceptual: participant survey ratings of overall fit (following Speed and Thompson [2000]), functional and cultural relevance, and audience similarity; inverted absolute difference scores in ratings of sponsor/event prominence, prestige, and personality • Geographic: inverted absolute difference scores in participant ratings of sponsor/event as international versus domestic on semantic differential scale • Visual: N.A.	• Outcome: attitudes and intentions • Conceptual: mostly + • Geographic: +, n.s. • Visual: N.A. (not investigated)	Cross-sectional: 285 participants completed all measures in a single survey	Fictional press releases for one of two sporting events by one of six brands
Woisetschläger, Backhaus, and Cornwell (2017)	• Conceptual: participant survey ratings of overall fit (following Simmons and Becker-Olsen 2006) and sponsor industry related (or not) to sport in experiment • Geographic: dummy-coded sponsor from headquarter categories of international, national but not from team's city, local if from team's city • Visual: N.A. (not investigated)	• Outcome: attitude and loyalty • Conceptual: + • Geographic: +, indirect • Visual: N.A. (not investigated)	• Multisource field study: objective sponsorship data matched with survey of 2,787 consumers. • Experiment: 576 participants.	• 44 real sponsorships of 25 German soccer teams (2,997 total evaluations) • 48 fictional press releases with varying characteristics.

Table 1. (continued)

Research	Sources of Congruence and Operationalization	Effect on Performance	Methodology	Sponsorship Context
Zdravkovic, Magnusson, and Stanley (2010)	• Conceptual: participant survey ratings of overall fit (following Simmons and Becker-Olsen [2006]) and similarity of brand/cause mission and target market • Geographic: participant survey ratings on three-item scale assessing the extent to which the brand and the cause have ties to the same geographic area • Visual: participant survey ratings on three-item scale assessing the extent to which the visual presentation and colors of the brand and the cause overlap	• Outcome: attitude • Conceptual: mostly + • Geographic: n.s. • Visual: +	Cross sectional: 92 participants completed all measures in a single survey.	12 real advertisements promoting sponsorship of a social cause (9 ads evaluated per participant, 826 total evaluations)
This research	• Conceptual: dummy-coded if sponsor's product is functionally or culturally relevant to the sport (following Cornwell et al. [2005]) • Geographic: dummy-coded if team is from the sponsor's home city • Visual: dummy-coded if signage displays sponsor in the team's color identity, either from an natural match (incidental) or because brand adopts team's colors in signage (created). Follow-up experiments randomly assigned participants to view sponsors in team's colors or brand's original colors	• Outcome: perceived support, attitude toward sponsorship, and brand equity indicators • Conceptual: + • Geographic: + • Visual: +	• Multisource field study: objective sponsorship data matched with survey of 703 real fans; organic exposure to sponsorship • Experiment: 126 participants • Experiment: 338 nonfans, 91 fans	• 646 real sponsorships of 30 MLB teams (15,289 total evaluations) • Sports drink product packaging • Digital advertising

Notes: N.A. = not available; n.s. = not significant. Studies focused on a single congruence source not included for brevity. Breuer and Rumpf (2015) only examine visual congruence between sponsor signage and surrounding images (negative effect on attention). Yang and Goldfarb (2015) only examine geographic congruence (positive effect on joint sponsor/team value). Olson and Thjømøe (2011) provide a review of studies focused only on factors related to conceptual congruence.
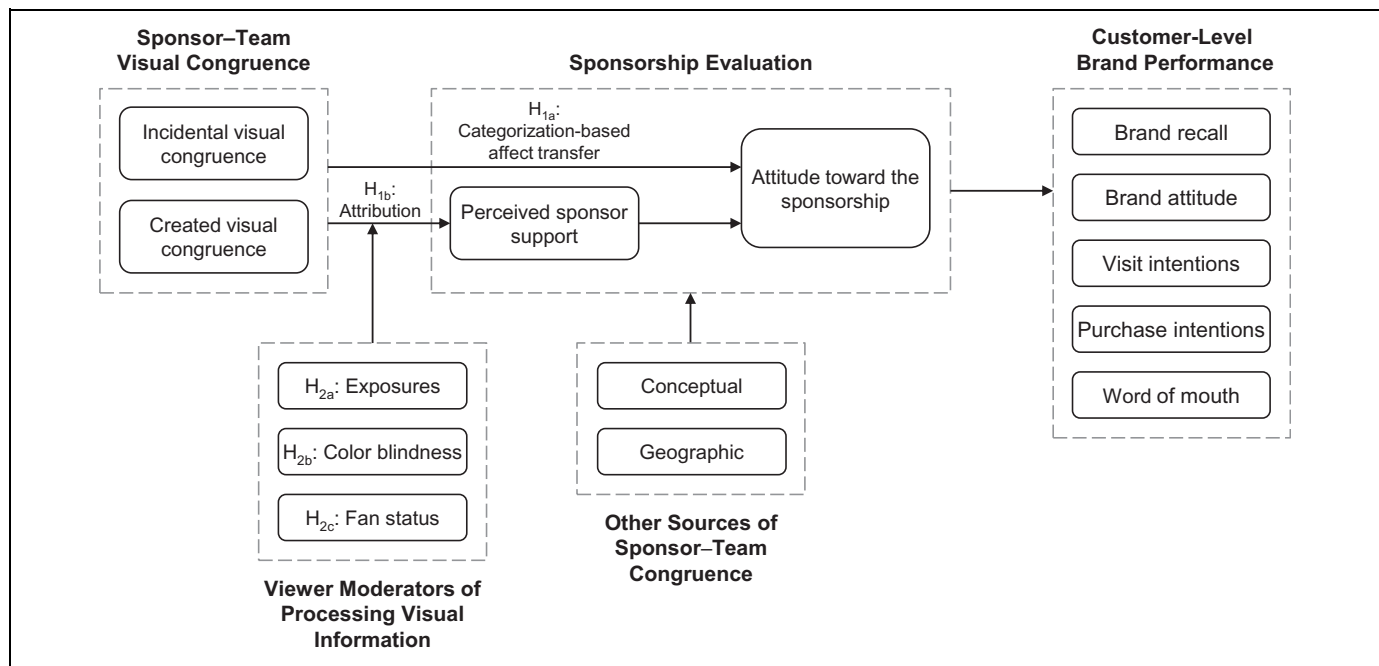
Figure 2. Conceptual framework: Visual congruence in sponsorship.

shared country of origin or shared hometown within a county, geographic congruence tends to improve performance beyond conceptual congruence (Abril, Sanchez, and Recio 2018; Olson and Thjømøe 2011; Woisetschläger, Backhaus, and Cornwell 2017; Yang and Goldfarb 2015), though in one exception, geographic congruence predicted a negative shareholder response to a sponsorship announcement (Cobbs, Groza, and Pruitt 2012). Both conceptual and geographic congruence help facilitate affect transfer and make the brand's support appear stronger and more authentic (Gwinner and Eaton 1999; Woisetschläger, Backhaus, and Cornwell 2017).

Less is known about other sources of congruence. To inform our study of the effects of visual congruence, alongside conceptual and geographic congruence, we review the three studies that are directly relevant. The first suggests a positive impact of visual congruence. Zdravkovic, Magnusson, and Stanley (2010) examine the effects of several sources of congruence on students' evaluations of ads promoting sponsorship of social causes. Of ten predictors in the proposed model, visual congruence exerted the strongest effect on attitudes toward the brand. The other two studies highlight a potential risk arising from visual congruence. Breuer and Rumpf (2015) and Boronczyk, Rumpf, and Breuer (2018) conduct eye-tracking studies of participants viewing sporting events and find that visual contrast, not congruence, between a sponsor's signage color and the sign's surrounding colors captures more viewer attention. This result is consistent with visual salience literature suggesting that visual contrasts stand out in distracting environments, such as retail stores (Krishna, Cian, and Aydınoğlu 2017; Milosavljevic et al. 2012). Overall, the real-world effect of visual congruence in determining sponsorship performance remains uncertain (Newmeyer, Venkatesh, and Chatterjee 2014).

Contingency Model: How Visual Congruence Enhances Sponsorship Performance

How does visual congruence affect sponsorship performance? First, we detail two paths through which visual congruence should enhance fans' sponsorship evaluations and ultimately drive more favorable brand attitudes and intentions. Second, we draw on MacInnis, Moorman, and Jaworski's (1991) motivation, opportunity, and ability framework of brand information processing to integrate the seemingly contradictory findings detailed in the previous section (Boronczyk, Rumpf, and Breuer 2018; Breuer and Rumpf 2015; Zdravkovic, Magnusson, and Stanley 2010). We argue that viewer characteristics map onto their motivation, opportunity, and ability to process the visual congruence favorably, so they represent necessary conditions for the positive effects of visual congruence. We summarize our conceptual framework in Figure 2.

Why Visual Congruence Should Enhance Fans' Sponsorship Evaluations

Visual congruence should enhance attitudes toward the sponsorship through two paths: (1) categorization-based affect transfer and (2) inferences of sponsor support for the team. Path 1 reflects categorization theory, in that consumers attempt to classify an object into a certain category on the basis of salient cues. If the categorization is successful, affect associated with the category transfers to the object (Fiske and Pavelchak 1986). Prior research has indicated that visual appearance acts as a category membership cue (Barsalou 1992) and dominates other types of cues (Snodgrass and McCullough 1986). Moreover, logo color serves as a category label when color is

diagnostic (Wedel and Pieters 2015). Use of the team's color indicates that entities are connected with the team, and thus, visual congruence should lead to a category-based evaluation of the brand. Brands classified into the team category then may benefit from an affect transfer from the team (Mazodier and Merunka 2012; Speed and Thompson 2000). Anecdotal evidence of color-based affect comes from Celtic Football Club fans who were outraged when they received season tickets that featured the colors of the Rangers, a rival team in the Scottish Premiership (Gunn 2018).

Attribution theory underlies the second path by which visual congruence might improve sponsorship evaluations. People tend to attribute internal causes to other people's actions and hold more favorable attitudes toward an actor when they infer a benevolent motivation (Kelley and Michela 1980). Sports fans may attribute sponsorship to a brand's genuine support for the team or calculative self-promotion; only inferences of genuine support lead to favorable attitudes toward the sponsor (Woisetschläger, Backhaus, and Cornwell 2017). Fans wear their favorite team's color to "express their identification with their team as a unified community and use color as a means to assess support of other fans" (Derbaix, Decrop, and Cabossart 2002, p. 511), and as a result of consistency effects (Heider 1958), this belief should extend to beliefs about a brands.

Together, these two paths should contribute to more favorable evaluations of the sponsorship and translate into enhanced customer-level brand performance (i.e., brand recall, brand attitude, visit and purchase intentions, and word of mouth). Therefore, we formally posit the following:

> H_{1a}: Visual congruence has a positive effect on fans' sponsorship evaluations (attitude toward the sponsorship) and enhances brand sponsor performance (brand recall, brand attitude, visit and purchase intentions, and word of mouth).

> H_{1b}: Perceived sponsor support mediates the positive effect of visual congruence on fans' sponsorship evaluations (attitude toward the sponsorship).

Contingent Effects of Motivation, Opportunity, and Ability to Process Visual Information

MacInnis, Moorman, and Jaworski's (1991) brand information processing framework articulates that the effectiveness of brand advertising fundamentally depends on the viewer's motivation, opportunity, and ability to comprehend, make sense of, and draw meaning from the brand information contained in an ad. To establish H_{1a} and H_{1b}, we assumed that viewers comprehend, make sense of, and draw meaning from the brand sponsor displaying its brand information in colors matching the team, but such an assumption may not hold.

First, opportunity is "the extent to which distractions or limited exposure time affect consumers' attention to brand information in an ad" (MacInnis, Moorman, and Jaworski 1991, p. 34). For our research context, opportunity results from exposure to the visual display of the sponsorship signage. A fan

who listens to games rather than watching them would lack a sufficient number of exposures to the visually congruent signage to recognize that the brand uses the team's colors. More exposures to sponsorship signage are important, because contrasting colors are better for grabbing viewer attention (Breuer and Rumpf 2015).

Second, we consider ability, defined as "consumers' skills or proficiencies in interpreting information in an ad" (MacInnis, Moorman, and Jaworski 1991, p. 34). Reflecting our focus on visual congruence through matching colors, we test for color blindness as a relevant impairment. A fan with color blindness can process all branding information except for the visual congruence achieved through color matching. With this measure, we can effectively isolate any true positive effect of visual congruence from unobserved confounds that should equally influence all fans.

Third, motivation entails the "desire or readiness to process brand information in the ad" (MacInnis, Moorman, and Jaworski 1991, p. 34). We have assumed that viewers are fans, but prior studies of visual congruence sample nonpartisans, which may have at least partially contributed to the negative effects of matching colors on viewer attention (Breuer and Rumpf 2015). Only fans with affiliation motives seek out and remember brands that show support for the team (Mazodier, Henderson, and Beck 2018). If a sponsor brand tries to create visual congruence by displaying its brand in the team's colors, rather than the brand's original color, a less motivated viewer might fail to recognize the brand in this unfamiliar color (Keller 1993). We capture our expectations about the conditional processing of visual congruence as follows:

> H_{2a}: Fan exposures moderate the effect of visual congruence on sponsorship performance, such that the positive effects of visual congruence on sponsorship performance strengthen as fan exposures increase.

> H_{2b}: Fans' color blindness moderates the effect of visual congruence on sponsorship performance, such that the positive effects of visual congruence on sponsorship performance fail to materialize among fans with color blindness.

> H_{2c}: Viewers' fan status moderates the effect of visual congruence on sponsorship performance, such that positive effects of visual congruence on sponsorship performance materialize only among fans of the team.

Study 1: Real-World Examination of Sponsorship Visual Congruence in MLB

We amassed a unique, multisource data set to offer the first empirical test of visual congruence between sponsor and team brands and its effects on real-world sponsorship performance. The compilation of the data set began with coding information about sponsorship signage in every MLB stadium during the 2015 season. We combined this signage information with background information about each sponsor brand and each team to capture three sources of sponsor–team congruence: (1) visual

congruence, based on the colors of the sponsor brand in the sponsorship signage; (2) conceptual congruence, based on the relevance of the brand's category to the sport; and (3) geographic congruence, based on shared headquarters locations. At the conclusion of the 2015 MLB season, we surveyed fans of each team, recruited through targeted Facebook ads. Fans rated each brand sponsoring their favorite team, as well as four additional brands that were not sponsors of any team; we included them as a comparison with actual sponsors to check the validity of the data collection method.

With this empirical analysis, we sought four objectives. First, we test whether visual congruence in sponsorship signage has a robust relationship with fans' attitudes toward the sponsorship (H_{1a}). Second, we assess the extent to which the total effect reflects an attribution appraisal–based indirect effect, such that fans perceive sponsors with brand colors matching the team's colors as more supportive and therefore evaluate supportive sponsor brands more positively (H_{1b}). Third, we compare the total effect of visual congruence with that of conceptual and geographic congruence. Fourth, we test the moderation hypothesis, which predicts that the effect of visual congruence is conditional on fans' opportunity and ability to process the visual information ($H_{2a–b}$).

Fan Survey Data

We recruited respondents through Facebook ads targeted to people identified as fans of a particular MLB team. Our ad for each team featured a picture of the team's players and the request, "[Team] fans: take survey & enter to win $100"; the description further stated, "[Team] fans, please rate sponsors from the 2015 season. Take a short survey and be entered in a drawing for $100 to Amazon. Your opinion supports our research and teaching. Thank you."

The total campaign cost $1,723 and resulted in 703 completed fan surveys (36% female; average age 52 years). Fans of all 30 teams (an average of 23 fans per team, ranging from 11 to 34) evaluated brand sponsors with signage in their teams' stadium (an average of 26 sponsors per team, ranging from 12 to 43), culminating in 15,289 total observations. We did not provide any pictures of the brands or their sponsorship signage in the survey, so any influence of the signage came from the respondents' exposure to it throughout the season.

The fan survey supplied the measures for our dependent variable, representing the attitudinal dimension of sponsorship performance, and our observed mediation variable, representing the attribution process through which sponsorships influence attitudes. Fans rated their attitudes toward each brand's sponsorship ("Use the scale below to indicate your opinion of each brand as a sponsor of [Team name]") on a seven-point scale (1 = "very negative," 4 = "neutral," and 7 = "very positive") and the level of perceived sponsor support ("Use the scale below to indicate the extent to which you believe each brand currently supports the [Team name]") on another seven-point scale (1 = "does not support team," 4 = "moderately supports team," and 7 = "intensely supports team"). We relied

on single items to reduce fan fatigue from rating many brands. We chose to have fans evaluate the brand as a sponsor, because this evaluation task is applicable to a wide variety of brands from any industry, whether a fan has prior experience with the product or service category or not.[1] After the brand ratings, fans completed Birch's (1997) pictorial color blindness tests (1 = failed any tests, 0 = otherwise; see Web Appendix W2), estimated the percentage of the team's games they watch (0%–100%) for a measure of fan exposure that approximates their opportunities to view sponsorship signage, and provided basic demographics. We explore fan-level heterogeneity in the tests of our moderation hypotheses.

Sponsor Brands, Sponsorship Signage, and Team Data

Six undergraduate students served as independent coders and captured information on the sponsor brands, sponsors' stadium signage, and teams. One student watched a home game for every MLB team and took screen shots of sponsor signage in the stadium.[2] Two students compiled a list for each team of all the sponsor brands with permanent signage in the stadium, excluding digital signage or signage superimposed through the television broadcast (i.e., optic replacement signage). Every stadium features permanent and nonpermanent signage that changes throughout the season, this rotational signage would add noise to the data and reduce our ability to observe a true effect. Finally, at least two students for each brand searched the internet to record the brand's colors, category, location of its headquarters, and distribution presence. The student coders scored each brand's conceptual congruence according to Cornwell, Pruitt, and Clark's (2005) criteria (1 = product is a component of the athlete or fan experience [e.g., New Era baseball caps, Budweiser beer], 0 = otherwise [e.g., State Farm insurance]). Students scored geographic congruence on the basis of the brand's and team's geographic locations (1 = same metropolitan area, 0 = otherwise). As a control for brand size, they scored the brand's distribution presence (1 = national [large], 0 = otherwise [small]). The coders then returned to the images of the sponsor's signage in the stadium and recorded its location (behind home plate, dugout, infield wall, outfield stands, outfield wall), which we dummy-coded, with outfield wall as the reference category. They also coded the size of the signage relative to what is typical for each location in the stadium (3 = larger, 2 = typical, 1 = smaller). These served as signage-related controls.

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[1] A supplemental study with a minor league baseball team whose sponsor switched colors to match the team reveals a strong correlation between this attitudinal measure of sponsorship performance and both word of mouth (r = .65, p < .001) and purchase intentions (r = .60, p < .001). Details are available in Web Appendix W1.

[2] These games were from the last two months of the season. Three students watched highlights from games at the beginning of the season to confirm that more than 89% of the signs in our data set were present at the start of the season. If we exclude signage absent at the start of the season, the sample size decreases from 15,289 to 13,823, but the key effects of visual congruence on attitudes toward the sponsorship remain positive and significant at p < .01.

Finally, for our key independent variable, the coders captured visual congruence by classifying whether the sponsor's signage colors matched the team's colors. The reference category contained sponsors with incongruent signage that displayed the brand in its original colors, which happened to differ from the team's colors. As contrasts, we also considered incidental visual congruence, such that the brand's colors happen to match the team's colors, and created visual congruence, in which a brand purposefully adopts the team's colors in the sponsorship signage (e.g., Kaiser Permanente and the Baltimore Orioles; see Figure 1). We also observed a third type of visual congruence that served as a quasiplacebo comparison, namely, misplaced visual congruence, which occurred when the brand adopted the colors of the stadium but not the team's colors (e.g., green and white branding on the Green Monster portion of the Boston Red Sox's outfield wall). The coders reported few differences (less than 5%) and discussed the team's context to arrive at final decisions.[3] Partial matches (e.g., a brand's signage features two colors, only one of which matches the team) were coded as incongruent. We also gathered team-related control variables for performance, popularity, and the prevalence of sponsor signage. We captured each team's wins for three seasons (2013–2015), average attendance for the 2015 season in thousands, and number of sponsor signs. Table 2 contains the descriptive data and correlations.

Model Specification and Analysis

We constructed several models to examine the empirical relationship between sponsor–team congruence and fan attitudes toward the sponsorship. First, we aimed to assess the total effect of each of the three observed sources of congruence (visual, conceptual, and geographic) on the attitude of fan i of team j toward the sponsor brand b. Given our cross-nested structure, multiple brands sponsoring multiple teams, we specified the model as follows:

$$
\begin{aligned}
\text{Attitude}_{ijb} = {}& \beta_0 + \beta_{1-3}\text{Visual Congruence}_{jb} \\
& + \beta_4\text{Conceptual Congruence}_b \\
& + \beta_5\text{Geographic Congruence}_{jb} \\
& + \beta_6\text{Sponsor Brand Size}_b + \beta_7\text{Signage Size}_{jb} \\
& + \beta_{8-11}\text{Signage Location}_{jb} \\
& + \beta_{12}\text{Fan} - \text{Team Fixed Effects}_i \\
& + e_{ijb}, e_{ijb} \sim N\,(0,\ \sigma_e^2), \quad (1)
\end{aligned}
$$

where we decompose visual congruence into β_1 for incidental visual congruence, in which the brand happens to share colors

with the team; β_2 for created visual congruence, in which the brand adopts the team's colors in the signage; and β_3 for misplaced visual congruence, in which the brand adopts the colors of the stadium but not the team. In our main model, we do not include brand fixed effects, because the effect of conceptual congruence, β_4, would be fully captured by brand fixed effects; conceptual congruence varies by brand but does not vary within brand across teams. Instead, we control for observable brand- and signage-specific controls, captured by β_6–β_{11}. Because each fan rates multiple brands, we can control for fan/team-specific fixed effects (e.g., fan's demographics and team success) through the coefficient vector $\boldsymbol{\beta_{12}}$.[4]

Second, we constructed models to assess the extent to which the total effect of each source of congruence might reflect an attribution process, such that fans evaluate congruent sponsor brands more positively because they perceive these brands as more supportive of their team. We adapted Equation 1 to a model in which the outcome is fan i's perception of the level of brand b's support of team j:

$$
\begin{aligned}
\text{Perceived Sponsor Support}_{ijb} = {}& \gamma_0 + \gamma_{1-3}\text{Visual Congruence}_{jb} \\
& + \gamma_4\text{Conceptual Congruence}_b \\
& + \gamma_5\text{Geographic Congruence}_{jb} \\
& + \gamma_6\text{Sponsor Brand Size}_b \\
& + \gamma_7\text{Signage Size}_{jb} \\
& + \gamma_{8-11}\text{Signage Location}_{jb} \\
& + \gamma_{12}\text{Fan} - \text{Team Fixed Effects}_i \\
& + \varepsilon_{ijb}. \quad (2a)
\end{aligned}
$$

Then, we updated the model for attitude toward the sponsorship to include perceived sponsor support as a predictor of attitude toward the sponsorship:

$$
\begin{aligned}
\text{Attitude}_{ijb} = {}& \alpha_0 + \alpha_1\text{Perceived Sponsor Support}_{ijb} \\
& + \alpha_{2-4}\text{Visual Congruence}_{jb} \\
& + \alpha_5\text{Conceptual Congruence}_b \\
& + \alpha_6\text{Geographic Congruence}_{jb} \\
& + \alpha_7\text{Sponsor Brand Size}_b \\
& + \alpha_8\text{Signage Size}_{jb} + \alpha_{9-12}\text{Signage Location}_{jb} \\
& + \alpha_{13}\text{Fan} - \text{Team Fixed Effects}_i + \varepsilon_{ijb}. \quad (2b)
\end{aligned}
$$

The estimates of the indirect effects are $\gamma_1 \times \alpha_1$ for incidental visual congruence, $\gamma_2 \times \alpha_1$ for created visual congruence, $\gamma_4 \times \alpha_1$ for geographic congruence, and $\gamma_5 \times \alpha_1$ for conceptual congruence. Because the components of the indirect effects are estimated quantities, we calculate the indirect effects from 5,000 bootstrapped samples and examine the middle 95% of the estimated indirect effects to confirm that the effects differ from 0 (Hayes 2018). The fan/team fixed effects help control for common method variance from measuring both the mediator and outcome in the same survey. We also cluster standard

---

[3] The coders considered the fans' perspective when determining congruence between shades of colors. Teams differ in the extent to which they adopt various color shades, so the coders considered each team's color history, variety of uniforms and hats for sale on the MLBshop.com website, and the similarity of their colors to rival teams' colors. To address concerns about potential biases or errors due to the classification of visual congruence, we conducted an analysis ("Robustness 2") with an alternative measure based on digital scores of hue, saturation, and brightness.

[4] A robustness check uses brand fixed effects, which wholly encompass the effect of conceptual congruence but allow for a more conservative test of visual congruence.

Table 2. Descriptive Statistics of Sponsorship in MLB.

Variables	N	Min	Max	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1. Attitude toward the sponsorship	15,289	1	7	4.34	1.98	—																				
2. Perceived sponsor support	15,289	1	7	4.73	1.55	.56	—																			
Visual Congruence																										
3. Noncongruence: colors do not match	646	0	1	.68	.47	−.04	−.05	—																		
4. Incidental: Brand colors already match team	646	0	1	.16	.37	.05	.04	−.65	—																	
5. Created: Change colors to match team	646	0	1	.03	.17	.04	.02	−.27	−.08	—																
6. Misplaced: Colors match stadium, not team	646	0	1	.12	.33	−.02	.01	−.54	−.17	−.07	—															
7. Conceptual congruence (component of sport)	378	0	1	.25	.43	.14	.13	−.01	.01	−.04	.02	—														
8. Geographic congruence (shared headquarters)	646	0	1	.48	.50	.06	.04	.00	.03	.04	−.06	−.21	—													
9. Sponsor brand size (national vs. regional)	378	0	1	.69	.46	−.04	−.03	.09	−.04	−.03	−.06	.16	−.39	—												
10. Signage size (small, typical, large)	646	1	3	1.82	.64	.09	.06	.04	.08	−.01	−.14	−.01	−.03	.11	—											
Signage Location																										
11. Behind home plate	646	0	1	.03	.18	−.01	−.02	−.05	−.06	.02	.13	−.07	−.03	.00	−.11	—										
12. Dugout	646	0	1	.05	.18	.02	.02	−.22	−.05	.05	.34	.11	−.08	−.05	−.28	−.04	—									
13. Infield wall	646	0	1	.04	.19	−.01	.00	−.06	.02	−.04	.09	.06	.02	.05	−.13	−.04	−.04	—								
14. Outfield stands	646	0	1	.40	.49	.05	.03	.04	.07	−.02	−.13	.12	.05	.01	.28	−.15	−.19	−.16	—							
15. Outfield wall	646	0	1	.48	.50	−.05	−.03	.10	−.04	.00	−.10	−.16	.00	.00	−.06	−.18	−.22	−.19	−.78	—						
16. Fan gender (female)	703	0	1	.36	.48	−.03	.02	−.03	.00	.00	.04	−.01	−.01	.01	.00	−.01	.00	.01	−.01	.01	—					
17. Fan age	703	19	71	52.19	9.36	.04	−.01	−.01	.01	.00	.01	−.01	−.02	.00	−.01	.00	.00	.02	−.01	.01	.05	—				
18. Fan color blindness	703	0	1	.26	.44	.04	.03	.00	.00	−.02	.01	−.01	.01	−.01	−.01	−.01	.00	.00	−.01	−.01	−.03	.05	—			
19. Fan exposures to signage (% games watched)	703	0	1	.72	.27	.07	.08	−.01	.00	.03	.00	−.01	.00	−.01	.02	−.01	.00	−.01	.00	.01	.15	.10	.07	—		
20. Team wins (total: 2013–2015)	30	207	287	243	22.6	−.01	−.02	−.05	.02	.15	−.04	−.01	−.03	−.04	−.01	−.01	−.03	.00	−.09	.11	.13	.06	−.04	.14	—	
21. Team attendance (average in thousands)	30	15.4	46.5	30.35	7.36	−.04	−.04	−.01	−.04	.10	.01	.02	−.04	.04	−.06	.00	−.02	.00	−.01	.02	.05	.01	−.07	.02	.50	—
22. Team number of stadium sponsors	30	8	39	21.70	6.40	−.05	.01	−.02	.07	−.04	−.03	−.02	.06	.00	.01	−.02	−.01	−.05	.04	.00	.01	−.02	.01	−.04	−.15	.18

Notes: N = number of unique observations in the sample, Min is minimum observed value, Max is maximum observed value. Visual congruence is a categorical variable, so it has been converted into four binary variables and correlations are point-biserial.

Table 3. Estimation Results: Total, Indirect, and Direct Effects of Sponsor–Team Congruence on Attitude Toward the Sponsorship in MLB.

	Total Effects		Indirect and Direct Effects						
	Model 1: Attitude Toward the Sponsorship		Model 2a: Perceived Sponsor Support		Model 2b: Attitude Toward the Sponsorship		Bootstrap Estimates of Indirect Effect		
	Estimate	SE	Estimate	SE	Estimate	SE	Mean	LLCI	ULCI
Mediator Model 2b: perceived sponsor support					.65***	(.02)			
Sponsor–Team Congruence									
Visual congruence (vs. noncongruent brand colors)									
Incidental: Brand colors already match team	.22***	(.04)	.16***	(.03)	.12***	(.03)	.10	.07	.14
Created: Change colors to match team	.41***	(.10)	.18**	(.07)	.29***	(.08)	.12	.04	.20
Misplaced: Colors match stadium, not team	−.08	(.06)	.02	(.04)	−.09*	(.05)			
Conceptual congruence	.70***	(.04)	.48***	(.03)	.39***	(.03)	.31	.28	.34
Geographic congruence	.31***	(.04)	.21***	(.03)	.18***	(.03)	.13	.10	.17
Controls									
Sponsor brand size	−.17***	(.05)	−.08**	(.04)	−.12***	(.04)			
Signage size	.28***	(.02)	.16***	(.02)	.18***	(.02)			
Signage location (vs. outfield wall)									
Behind home plate	.21***	(.08)	.04	(.06)	.19***	(.07)			
Dugout	.26***	(.08)	.21***	(.06)	.12*	(.06)			
Infield wall	−.19**	(.07)	.03	(.06)	−.20***	(.06)			
Outfield stands	−.01	(.03)	−.01	(.03)	−.01	(.03)			
Fan–team fixed effects (703 fans from 30 teams)	Yes		Yes		Yes				
Model									
R-square	.36		.36		.53				
N	15,289		15,289		15,289				

*$p < .10$.
**$p < .05$.
***$p < .01$.
Notes: LLCI = lower level of the 95% confidence interval; ULCI = upper level of the 95% confidence level; estimates of 5,000 bootstrap samples.

errors by fan to account for correlation in the errors from Equations 2a and 2b. To facilitate the tests of the moderation hypotheses, we removed the fan/team fixed effects, which allows for fan-specific heterogeneity; we test whether fan exposures to sponsorship signage amplify (H_{2a}) and fan color blindness suppresses (H_{2b}) the effects of visual congruence on attitudes toward the sponsorship through perceived support.

Results

Total effects of sponsor–team congruence on fan attitude toward the sponsorship. The estimated model reveals the sponsorship performance implications of each source of sponsor–team congruence (Table 3, Model 1). In support of H_{1a}, fans appear to hold more favorable attitudes when the sponsorship signage displays the brand in colors matching the sponsored team's colors. Both incidental and created visual congruence exhibit significant, positive effects on attitudes toward the sponsorship (incidental $b = .22$, $p < .01$; created $b = .41$, $p < .01$). The effect of created visual congruence is greater than that of incidental visual congruence ($b = .19$, $p < .05$). These positive effects do not seem to be due to visual fluency, however; we find no evidence of a similar benefit from misplaced visual congruence, in which the sponsor signage matches the stadium but not the team ($b = −.08$, $p = .13$).

Both conceptual congruence ($b = .70$, $p < .01$) and geographic congruence ($b = .31$, $p < .01$) also significantly predict more favorable fan attitudes toward the sponsorship. To determine the magnitude of the congruence-based performance benefits, we drew 5,000 bootstrap samples and estimated the percentage lift in attitudes from each source (for a display of the density distribution for each source of congruence, see Figure 3). Across all 5,000 samples, each source of congruence always corresponds to more positive attitudes. Conceptual congruence is the most beneficial (22.6% more favorable attitudes), followed by created visual congruence (12.4%), geographic congruence (9.7%), and incidental visual congruence (6.6%). These percentages are encouraging, though the results for conceptual and geographic congruence should be taken with caution because their benefits might exist even without the sponsorship, given that people are already naturally inclined to favor local over distant brands and sports fans prefer sports-related brands over other brands (Woisetschläger, Backhaus, and Cornwell 2017).

Indirect effects of sponsor–team congruence on attitudes toward the sponsorship through perceived sponsor support. We find evidence of an indirect effect of each source of congruence in the significant, positive effects on perceived sponsor support (Table 2, Model 2a: incidental visual congruence $b = .16$,
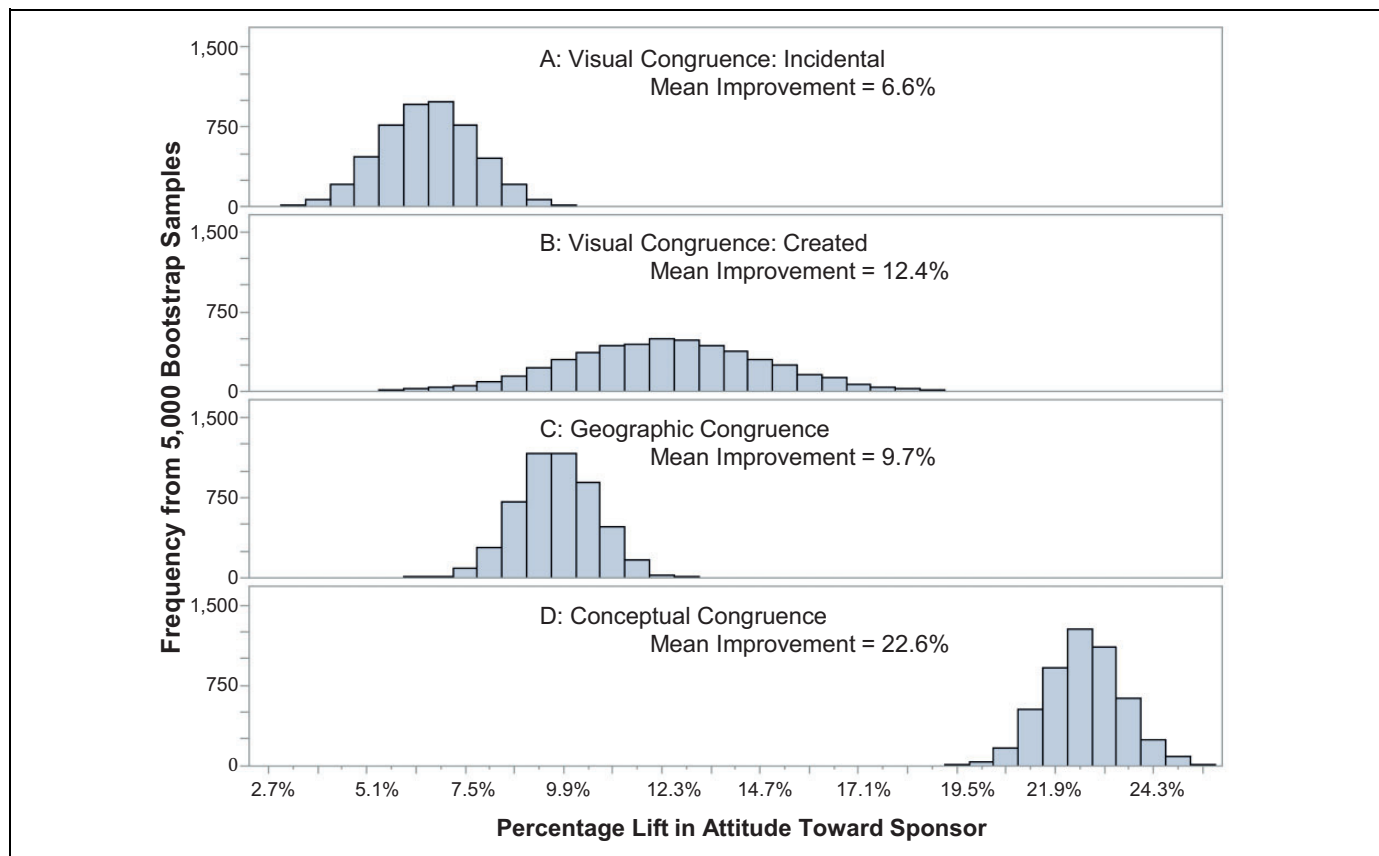
Figure 3. Density distribution of estimated percentage lift in attitude toward the sponsorship from each source of sponsor–team congruence.
Notes: Distribution of estimated percentage lift in attitude obtained from 5,000 bootstrap samples. Endogeneity correction from color-blind fans suggests that true effect of processing visual congruence is 4.9% lift in attitude for incidental and 9.2% lift for created. There was no method for endogeneity correction of conceptual or geographic congruence.

$p < .01$; created visual congruence b $= .18, p < .05$; conceptual congruence b $= .48, p < .01$; geographic congruence b $= .21$, $p < .01$), along with a positive effect of perceived sponsor support on attitudes toward the sponsorship (Model 2b: b $= .65, p < .01$). In support of H_{1b}, the bias-corrected 95% confidence interval [CI] based on 5,000 bootstrap samples excludes 0 for both the indirect effect of incidental visual congruence (index $= .10$; 95% CI $= [.07, .14]$) and created visual congruence (index $= .12$; 95% CI $= [.04, .20]$). The results of Model 2b show that each congruence source also exhibits a significant direct effect on attitudes ($ps < .01$), beyond the indirect effect through perceived sponsor support. The indirect effect accounts for less than 50% of the total effect of each congruence source, suggesting that congruence's power to shape attitudes extends beyond its influence through fan attributions.

Robustness analyses. We conducted additional analyses to increase our confidence in the core findings. In Robustness 1 (see Table 4), we reduced the sample to brands that sponsor multiple teams and included brand fixed effects, along with fan/team fixed effects. The significant effect of incidental visual congruence (b $= .13, p < .05$) suggests that the positive influence of visual congruence extends beyond unobserved managerial actions. These effects hold even after we remove

respondents who live in the same city as the team, which we did to reduce concerns about the impact of preexisting local brand biases.[5] We recognize that this positive effect might exist without the sponsorship, such that fans might prefer any brand that shares their favorite team's colors. However, the positive effect of created visual congruence (b $= .35, p < .01$) suggests unique benefits of visual congruence in the sponsorship itself. Unfortunately, we cannot observe why a brand manager might choose to change colors for one team but not another. A comparison of the magnitude of effects from this more restricted model and the model without brand fixed effects reveals that between 60% (incidental) and 85% (created) of the effect of visual congruence comes directly from visual congruence, but unobserved factors also have a role (e.g., managers might increase sponsorship activations for teams with visual congruence, perhaps reflecting the same visual congruence processes that work on fans). Together, these findings substantiate the

---

[5] Qualtrics provides estimates of longitude and latitude. Fans' median distance from the team's stadium was 48 miles, and 25% of fans were at least 180 miles away. If we only include fans who were at least 48 miles away, the brand fixed effects model should provide estimates free of any local brand bias. With this restricted sample (4,135 ratings), we still find positive effects of incidental and created visual congruence on attitudes toward the sponsorship ($p < .01$).

Table 4. Robustness Results: Alternative Specifications for Examining Visual Congruence on Attitude Toward the Sponsorship.

	Robustness 1: Including Brand Fixed Effects		Robustness 2: Alternative Measure Visual Congruence		Robustness 3: Including Nonsponsor Brands	
	Estimate	SE	Estimate	SE	Estimate	SE
Mediator Model 2b: Perceived Sponsor Support						
Sponsor–Team Congruence						
Visual congruence (vs. noncongruent brand colors)			.04**	(.01)		
Incidental: Brand colors already match team	.13**	(.06)			.23***	(.04)
Created: Change colors to match team	.35***	(.13)			.47***	(.08)
Misplaced: Colors match stadium, not team	.00	(.08)			−.06	(.04)
Conceptual congruence			.70***	(.03)	.57***	(.03)
Geographic congruence	.29***	(.05)	.32***	(.03)	.27***	(.03)
Controls						
Sponsor brand size			−.17***	(.04)	−.14***	(.04)
Signage size	.28***	(.02)	.29***	(.02)		
Signage location (vs. outfield wall)						
Behind home plate	.42***	(.13)	.18**	(.08)		
Dugout	.37***	(.12)	.23***	(.07)		
Infield wall	−.14	(.11)	−.19***	(.07)		
Outfield stands	.01	(.05)	.00	(.03)		
Nonsponsor brand (vs. actual sponsors)					−.93***	(.04)
Brand fixed effects (82 brands)	Yes					
Fan–team fixed effects (703 fans from 30 teams)	Yes		Yes		Yes	
Model						
R-square	.49		.36		.37	
N	8,321		15,289		18,165	

*$p < .10$.
**$p < .05$.
***$p < .01$.
Notes: Robustness 1 includes brands that sponsor multiple teams. Conceptual congruence and sponsor brand size are captured by brand fixed effects. Robustness 2 utilizes a measure of visual congruence derived from the Euclidean distance between the digital scores of hue, saturation, and brightness for the signage and the team. Robustness 3 includes ratings of four brands for each team that did not actually sponsor the team.

performance benefits of visual congruence in sponsorship. We also address the managerial selection issues in Studies 2 and 3.

For the second robustness analysis, we sought to increase confidence that our findings do not stem from biases or errors introduced when our coders used their judgment to classify visual congruence. Therefore, we constructed an alternative visual congruence measure derived from the Euclidean distance between the digital color for the brand signage and the team's color,[6] in terms of hue, saturation, and brightness (Breuer and Rumpf 2015). The mean digital color distance score converged with our coders' classification; signs classified as visually incongruent have digital color distance scores twice the magnitude of signs classified as visually congruent ($M_{congruent} = 73.12$, $M_{incongruent} = 155.32$; $t(708) = 9.53$, $p < .001$). We transformed and normalized this digital color distance score into a congruence metric by the function $1 − $ (digital color distance/100). The positive, significant effect of this alternative visual congruence measure on attitudes toward

the sponsorship ($b = .04$, $p < .05$) substantiates the original findings that rely on the coders (see Table 4).

In Robustness 3, we included all fan ratings of the four nonsponsor brands included in the fan survey, despite not having any signage supporting a team (Starbucks, Walmart, IKEA, and Home Depot). We dummy-coded nonsponsors and observe, as expected, a strong, significant, negative effect of nonsponsorship on fans' attitudes toward the sponsorship ($b = −.93$, $p < .01$). Even the most zealous fans have trouble recalling which brands actually sponsor their team (Wakefield, Becker-Olsen, and Cornwell 2007), but these results support the notion that sponsorship signage has a general, sustaining influence on fan evaluations.

Tests of the moderation hypotheses. We removed the fan/team fixed effects to examine whether the effects of visual congruence differ across fans, because their attitudes are shaped by their visual processing of sponsorship signage. We replaced the fixed effects with fan- and team-level controls and ran several moderation analyses of the indirect effect through perceived sponsor support (see Table 5). In support of H_{2a}, fan exposures, measured as the percentage of games the fan watched (mean-centered to ease interpretation of the simple effects of visual

___

[6] For teams with multiple colors, we chose the color that was closest to the predominant color in the signage.

Table 5. Moderated Mediation Models: Individual Differences That Moderate the Linkage Between Visual Congruence and Perceived Sponsor Support.

	Moderation H$_{2a}$: Fan Exposures		Column A Moderation H$_{2b}$: Fan Color Blindness		Column B Moderation H$_{2b}$: Fan Color Blindness		Bootstrap Estimates of Moderated Mediation		
	Estimate	SE	Estimate	SE	Estimate	SE	Index	LLCI	ULCI
Visual congruence (vs. noncongruent brand colors)					.21***	(.04)			
Incidental: Brand colors already match team	.16***	(.03)	.19***	(.04)					
Created: Change colors to match team	.25***	(.07)	.33***	(.08)					
Misplaced: Colors match stadium, not team	.06	(.04)	.06	(.05)	.06	(.04)			
Conceptual congruence	.48***	(.03)	.48***	(.03)	.48***	(.03)			
Geographic congruence	.20***	(.03)	.20***	(.03)	.20***	(.03)			
Moderation									
Incidental visual congruence × Fan exposures	−.08	(.13)							
Created visual congruence × Fan exposures	.72***	(.28)					.50	.16	.84
Misplaced visual congruence × Fan exposures	.11	(.13)							
Incidental visual congruence × Fan color blindness			−.13*	(.08)					
Created visual congruence × Fan color blindness			−.28	(.17)					
Misplaced visual congruence × Fan color blindness			.01	(.09)					
Visual congruence × Fan color blindness					−.16**	(.07)	−.11	−.21	−.01
Controls									
Sponsor brand size	−.10***	(.04)	−.10***	(.04)	−.10***	(.04)			
Signage size	.18***	(.02)	.18***	(.02)	.18***	(.02)			
Signage location (vs outfield wall)									
Behind home plate	.02	(.07)	.02	(.07)	.02	(.07)			
Dugout	.19***	(.06)	.19***	(.06)	.19***	(.06)			
Infield wall	.02	(.07)	.02	(.07)	.01	(.07)			
Outfield stands	−.02	(.03)	−.02	(.03)	−.02	(.03)			
Fan gender (female)	.03	(.03)	.03	(.03)	.03**	(.03)			
Fan age	.00*	(.00)	−.003*	(.001)	−.003*	(.001)			
Fan color blindness	.07**	(.03)	.10***	(.03)	.10***	(.03)			
Fan exposures	.43***	(.06)	.46***	(.05)	.46***	(.05)			
Team wins	.00	(.00)	.00	(.00)	.00	(.00)			
Team attendance	−.007***	(.002)	−.007***	(.002)	−.007***	(.002)			
Team number of stadium sponsors	.00	(.00)	.00	(.00)	.002*	(.002)			
Intercept	4.67***	(.18)	4.66***	(.18)	4.64***	(.18)			
Model									
R-square	.04		.04		.04				
N	15,289		15,289		15,289				

*$p < .10$.
**$p < .05$.
***$p < .01$.
Notes: LLCI = lower level of the 95% confidence interval; ULCI = upper level of the 95% confidence level; estimates of the index of moderated mediation estimated for 5,000 bootstrap samples.

congruence), significantly moderate the effect of created visual congruence (b = .72, $p < .01$). A spotlight analysis (Spiller et al. 2013) reveals that created visual congruence lifts attitudes by 17% for fans who watch many games (99% of games = 1 SD above the mean) but only by 7% for fans who watch a more moderate percentage (45% of games = 1 SD below the mean). A floodlight analysis identifies 60% of games watched as the Johnson–Neyman point, above which created congruence has a significant, positive effect ($p < .05$). More than 70% of fans in our sample reported watching at least 60% of games. Interestingly, we find no statistical support for the prediction that exposures moderate the effect of incidental visual congruence, when a brand's colors happen to match the team's colors.

Perhaps the benefits of incidental visual congruence get conveyed immediately, due to fans' prior knowledge of both the brand's and the team's shared colors. In addition, the sponsor brand may be recognized more easily in its familiar color scheme.

For the second moderation hypothesis (H$_{2b}$), we initially observed only a marginally significant color blindness × incidental visual congruence interaction (Table 4, Moderation H$_2$, Column A: b = −.13, $p < .10$) and a directional but nonsignificant color blindness × created visual congruence interaction (b = −.28, $p = .11$). We found few observations of color-blind fans rating visually congruent sponsors (i.e., approximately 5% of total observations). Therefore, we ran the color-blindness

moderation model a second time (Column B), after combining both types of sponsor–team visual congruence. In support of H_{2b}, this second color-blindness moderation model reveals that the positive effect of visual congruence on fans without color blindness (b = .21, $p < .01$) almost completely disappears among fans with color blindness (interaction b = −.16, $p < .05$). We consider color-blind fans as a type of placebo control, not influenced by visual congruence but affected by other unobserved factors that potentially correspond with visual congruence, and therefore we consider the conditional effect of visual congruence among fans without color blindness as an endogeneity-corrected estimate. Evidence of moderated mediation through perceived sponsor support comes from an index of moderated mediation, for which the 95% confidence interval from 5,000 bootstrapped samples does not include 0 (Table 5).

Discussion

This study of sponsor–team congruence in MLB documents a notable effect of visual congruence on sponsorship performance. Sponsor brands' signage, displaying the brand in colors that match the sponsored team's colors, improves attitudes toward the sponsorship. The effect holds whether the congruence is created or incidental, though it is significantly stronger for created visual congruence. We observe an indirect path for each source of congruence through perceived support and a direct path that is not mediated by attribution-based appraisals. Further increasing our confidence in the causal, positive effects from visual processing, we show that the benefits from created visual congruence increase with the number of exposures to the signage, but fans with color blindness are not influenced by visual congruence. Because all respondents are fans, we were unable to test H_{2c}'s prediction that the positive effect is conditional on fan status; we address this third moderation hypothesis in Study 3. Our robustness analyses support our coding and our data collection method; they also reduce concerns that the results of visual congruence are simply due to brand-specific effects, because we reveal within-brand effects of incidental visual congruence (e.g., Coca-Cola matches the Cincinnati Reds' colors but not the New York Mets'). Moreover, the effects of created visual congruence imply that the benefit derives from the sponsorship, rather than inherent fan color preferences for any brand.

Despite the convergent results across analyses, the correlational nature of these data mean that we cannot completely rule out the possibility that the effects of created visual congruence result from unobserved factors, related to the brand manager's selection of which colors to use. This concern is unlikely to explain the total effect or the effect of incidental visual congruence, which varies across teams within the same brand. Furthermore, misplaced visual congruence with the stadium also might stem from a brand manager's dedication to the team, as indicated by a willingness to alter the brand's colors to match the stadium, but it does not correspond with more positive fan attitudes. Ultimately, we need experiments to confirm the causal role of visual congruence for enhancing sponsorship performance. Inspired by Bud Light's use of a custom-colored can for each NFL team, we designed Study 2 as a managerially relevant extension.

Study 2: Effects of Visual Congruence in Product Packaging Design

The objectives for Study 2 were threefold. First, we aimed to confirm experimentally that created visual congruence enhances attitudes toward sponsorships through perceived support, using multi-item measurement scales. Second, we aimed to generalize our findings to another sponsorship context. In Study 1, the sponsor's logo appeared on the team's property (i.e., stadium signage). On product packages, however, the team's logo appears on the sponsor's property (i.e., product), where it does not compete for attention with the game. Third, we examine created visual congruence in a situation similar to Bud Light's custom NFL beer cans, in which Bud Light pursued visual congruence in its sponsorships of several teams simultaneously. Ubiquitous sponsorship usually undermines a brand's ability to convey support for any team (Speed and Thompson 2000), but if visual congruence through color matching can help boost perceived support, managers may expand their sponsorship efforts and reach more fans. Therefore, Study 2 features a brand that adopts the colors of multiple teams for an ecologically valid, managerially useful manifestation of created visual congruence.

Method

Participants and procedures. A marketing research firm intercepted 175 people in public and asked them to participate in the study, in exchange for a nominal payment. Participants began the survey on an iPad by reading information about Monster Energy, which included information that Monster was considering launching a sports drink. Cincinnati was a desirable location for the study, because it is Monster Energy's top market by market share.[7] Participants were handed a poster of the sports drink and prototypes of actual bottles that featured a sponsorship of the Cincinnati Bengals on the bottle label, as well as three other bottles featuring three other NFL teams (for pictures, see the Appendix). Conditions were assigned according to the locations in the mall where the firm recruited participants; in one condition, the bottle's visual design featured the Monster logo in its original green color (visually incongruent), and in the other condition, the Monster logo matched each team's color (visually congruent). After evaluating the drink, participants completed the survey. To qualify, the participants had to indicate sufficient brand knowledge to identify Monster's color identity as green (49 lacked this knowledge). The final sample contained 126 adults (65 women, 60 men,

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Table 6. Effect of Visual Congruence on Sponsorship Performance in Product Packaging and Digital Advertising Quasi Experiments.

| | Study 2: Product Packaging | | | | Study 3: Digital Advertising | | | | | | | | | |
| | Perceived Support | | Sponsorship Attitude | | Brand Attitude | | Visit Intentions | | Purchase Intentions | | Word of Mouth | | Brand Recall | |
	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE
Primary Predictors														
Visual congruence	.56**	(.23)	.74***	(.26)	.55***	(.18)	.88***	(.28)	.59**	(.27)	.56**	(.26)	.76	(.74)
Fan	−.15	(.27)	−.03	(.31)	.47***	(.14)	.53**	(.22)	.31	(.21)	.24	(.20)	1.02*	(.55)
Visual congruence × Fan					.63***	(.20)	.65**	(.32)	.48	(.30)	.45	(.30)	1.49*	(.85)
Controls														
Age	.00	(.01)	−.01	(.01)	.01	(.00)	.01**	(.01)	.02***	(.01)	.02***	(.01)	.00	(.02)
Gender (female)	.58**	(.23)	.73***	(.26)	−.21**	(.08)	−.42***	(.13)	−.42***	(.13)	−.38***	(.12)	.13	(.36)
Color blindness	−.77***	(.28)	−.41	(.32)	−.21*	(.11)	−.14	(.18)	−.02	(.17)	−.17	(.16)	.71	(.64)
Ratings of competitors					.39***	(.04)	.70***	(.07)	.64***	(.07)	.67***	(.06)	.43***	(.14)
Intercept	4.16***	(.39)	5.41***	(.45)	2.80***	(.29)	.69	(.46)	.57	(.45)	.50	(.41)	−4.29***	(1.08)
Model														
R-square	.14		.12		.22		.25		.22		.26		.10	
N	126		126		429		429		429		429		429	

$*p < .10.$
$**p < .05.$
$***p < .01$

Notes: Study 2 included too few nonfans (N = 28) for a reliable estimate of the visual congruence × fan interaction. Study 3 displays the direct effect of visual congruence for fans of the team and the direct effect of fan for the visually congruent ad. R-square is Nagelkerke R-square for brand recall logistic regression.

1 preferred not to indicate; median age 26 years; 98 identified as Cincinnati Bengals fans).

Measures. Participants evaluated their attitudes toward the sponsorship on a three-item, seven-point Likert scale in which they noted their agreement with the following statements: "I feel positive about Monster's sponsorship that I saw today," "The sponsorship I saw today is great," and "I feel very positive about Monster's sponsorship" (1 = "strongly disagree," and 7 = "strongly agree"; α = .96). Next, participants indicated the extent to which the brand supports the Cincinnati Bengals on three items: "Monster Energy intensely supports the Cincinnati Bengals," "Monster Energy appears to be committed to the Cincinnati Bengals," and "Monster Energy is passionate about the Cincinnati Bengals" (1 = "strongly disagree," and 7 = "strongly agree"; α = .93). We asked whether they were fans of the Cincinnati Bengals (yes/no) and to what extent (1 = "not at all," and 7 = "to a great extent"). Then, participants answered, "What color best represents Monster's brand logo (not the sports drink you evaluated today)?" and completed a manipulation check of the extent to which they noticed visual congruence: "The image of Monster's logo on the bottle matched . . ." "the Cincinnati Bengals' typical logo color identity" and "Monster's typical logo color identity" (reversed). Finally, participants completed the three-part color blindness test from Study 1 (Birch 1997) and provided demographic information.

Results

Manipulation check. Confirming the expected differences across visual congruence conditions, an independent sample t-test reveals a significant difference in participants' ratings of visual congruence ($M_{congruent}$ = 4.96, $M_{incongruent}$ = 3.66; $t(124)$ = 5.65, $p < .001$).

Direct and indirect effects of visual congruence on attitudes toward the sponsorship. With a mediation analysis, using ordinary least squares path analysis (Model 4; Hayes 2018) while controlling for participant characteristics of age, gender, color blindness, and whether they identified as a fan of the team, we find that visual congruence indirectly influences attitudes toward the sponsorship through its effect on perceived support (see Table 6). The effect of visual congruence on perceived support is positive and significant (a = .56, $p = .02$); in support of the indirect effect (ab = .32), the bias-corrected 95% confidence interval based on 5,000 bootstrap samples excludes 0 ([.07, .65]). We find only marginal support for a direct effect, independent of the effect through perceived sponsor support (c′ = .42, $p = .07$). The total effect of visual congruence on attitudes toward the sponsorship (c = .74, $p = .005$) corresponds to an estimated 14% performance increase. The results remain consistent when we include participants who did not know Monster's color identity, though the effect sizes are predictably slightly smaller and the p-values slightly increase (perceived support a = .39, $p = .04$; attitude c = .50, $p = .02$).

Discussion

This managerial extension to test visual congruence through color matching in a product package design experiment confirms the correlational findings from our MLB real-world data. Visual congruence positively influences attitudes toward sponsorship through perceived support. We experimentally demonstrate these effects in an ecologically valid product testing environment, similar to the real-world example of Bud Light's

sponsorship of the NFL. Unfortunately, fewer than 20 participants did not identify as Bengal fans in each congruence condition, so we could not estimate a congruence × fan status interaction. It is unclear whether visual congruence helps regardless of fandom, perhaps due to fluency, or whether it only works for fans who are motivated to process the sponsorship. We conducted Study 3 to address this question.

Study 3: Effects of Visual Congruence in Digital Sponsorship Ads on Brand Performance

With Study 3, we experimentally test the sponsorship performance implications of visual congruence and add two extensions. First, we investigate whether fan status moderates the key effect to test our prediction in H_{2c} that visual congruence improves sponsorship performance only among fans of the sponsored team. Study 1 and 2 relied on samples that did not include a sufficient number of nonfans to examine H_{2c}. Second, we test the performance implications on a broad set of customer-level brand performance metrics that contribute to brand equity (Park et al. 2010; Simmons and Becker-Olsen 2006). Attitudes toward the sponsorship positively influence customer-level brand performance (see the supplemental study in Web Appendix W1; Simmons and Becker-Olsen 2006); with this current study, we measure brand performance in a context where visual congruence potentially hinders performance among nonfans who may be less likely to notice visually congruent sponsorship ads. Therefore, we situate our experiment in an online newspaper, in which we embedded a digital ad featuring the team and sponsor brand, displayed either in the team's colors or the brand's original color. If the benefits of visual congruence are conditional on fan status, then brands may target visually congruent digital ads to the sponsored team's fans.

Method Sample and Design

Four hundred twenty-nine residents of California (184 female; median age 29 years) completed an online survey through the Prolific Academic website (www.prolific.ac). We told participants that the survey sought their views about the new layout of a digital newspaper for the website (see the Appendix). At the time of the survey (September 2018), the Golden State Warriors, an NBA team located in California, had completed the first season of a three-season, $60 million jersey sponsorship deal with Rakuten, an e-commerce brand (Rollins 2017). The newspaper contained several digital ads, including one for the Golden State Warriors that featured the sponsor Rakuten and that repeated on the first and third pages of the newspaper. Participants were randomly assigned to one of two conditions in which the Rakuten logo appeared in either the Warrior's blue color, to create a visually congruent ad, or Rakuten's original red color.

After reading the newspaper and providing open-ended feedback about the layout, the participants transitioned to an ostensibly separate part of the survey to evaluate several e-commerce brands. As a measure of brand recall, they listed all the e-commerce brands they could recall (1 = Rakuten listed, 0 = otherwise). Then respondents completed the brand performance metrics for four e-commerce brands: Amazon, Rakuten, eBay, and Wish. The different customer-level brand performance metrics each contribute to brand equity (Park et al. 2010; Simmons and Becker-Olsen 2006); they are brand attitude ("How do you feel about the following e-commerce companies?"; 1 = "extremely negative," and 7 = "extremely positive") and behavioral intentions ("I will visit [brand] website or mobile application to buy products online"; "I will purchase products from [brand]"; "I will recommend [brand] to my friends to buy products online"; 1 = "strongly disagree," 7 = "strongly agree"). We analyzed each measure independently but also compiled them into a composite score, computed as an average of the measures (α = .91).

Next, participants indicated if they were a fan of the NBA; if so, they selected their favorite team. Their selections enabled us to create a dichotomous variable of fan status. Finally, participants supplied basic demographics, and completed the color blindness tests from Studies 1 and 2.

Results

We conducted a series of ordinary least squares regressions with visual congruence, fan status, and their interaction as predictors of the customer-level brand performance metrics (i.e., brand attitudes, visit intentions, purchase intentions, word of mouth, and the composite measure). We also controlled for gender, age, and color blindness, as well as for evaluations of the other e-commerce companies (Amazon, eBay, and Wish) to account for baseline variance in comfort with e-commerce, the content of the newspaper, and the ad format. Table 6 provides model estimates, for which we shifted visual congruence (0 = congruent ad, −1 = incongruent ad) and fan status (0 = fan, −1 = not a fan), so the lower-order effect of visual congruence represents the effect among Warrior fans, and the lower-order effect of fan status represents the effect among those who saw the congruent ad.

In partial support of H_{2c}, the results reveal a significant interaction of visual congruence and fan status for the customer-level brand performance metrics that arise earlier in the purchase journey (brand attitudes b = .63, $p < .01$; visit intentions b = .65, $p = .04$) but not those that are prominent later (purchase intentions b = .48, $p = .12$; word of mouth b = .45, $p = .13$). Strong support for the conditional effect of visual congruence occurs among fans, but not nonfans, for all measures (brand attitudes b = .55, $p < .01$; visit intentions b = .88, $p < .01$; purchase intentions b = .59, $p = .03$; word of mouth b = .56, $p = .03$). To get a sense of the practical impacts of visual congruence among fans, we also estimated marginal means for each individual performance metric; the estimated improvements due to visual congruence range from 12% for brand attitudes to 24% for visit intentions to 16% for purchase intentions to 15% for word of mouth.

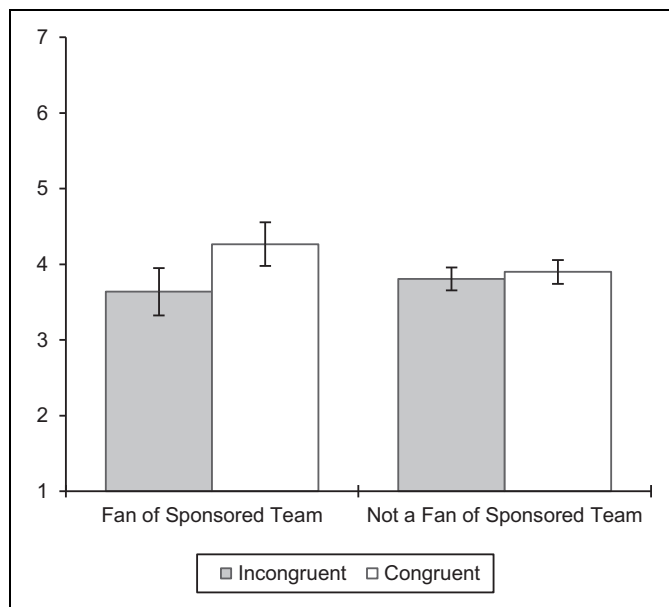To consider the overall impact on customer-level brand performance, we averaged each item to create a composite brand

Figure 4. Study 3: Composite brand performance score after exposure to sponsorship ad.

Notes: Bar height represents estimated marginal means and error bars indicate 95% confidence intervals. A greater proportion of respondents are not fan of the sponsored team (n = 338) compared with fans of the sponsored team (n = 91), which is reflected in the tighter confidence intervals for nonfans.

performance score, and a significant interaction between visual congruence and fan status (b = .58, $p = .02$) reveals that the effectiveness of visual congruence is conditional on fan status, in support of H_{2c}. That is, the positive effect of visual congruence occurs for fans of the team (b = .68, $p < .01$) but not among nonfans (b = .10, $p = .40$). Although the brand had sponsored the Warriors for the entire prior NBA season, mainly in its original red color, fan status exerts a positive and significant effect when Rakuten's brand logo appeared in the Warriors' blue color (b = .40, $p = .02$) but not when it used its original red color (b = −.18, $p = .31$), as we depict in Figure 4.

Although we do not observe different attitudes or behavioral intentions among nonfans, some tentative evidence indicates a negative effect of visual congruence on free recall of Rakuten. That is, we submitted participants' free recall of Rakuten as an e-commerce company to a logistic regression, with fan status, visual congruence, their interaction, respondent demographics, and total number of e-commerce companies recalled as predictors. The interaction of visual congruence and fan status is marginally significant (b = 1.49, $p = .08$), and the conditional effect of visual congruence among nonfans is negative (b = −.73, $p = .09$), such that an estimated 4% of nonfans recall Rakuten when exposed to the visually congruent ad, less than half the estimate of 9% when exposed to the visually incongruent ad.

Discussion

Study 3 provides experimental evidence that visual congruence offers the potential to improve brand performance when sponsorships are promoted to fans, though not to nonfans. In this study context (digital advertising), we could achieve a subtle experimental manipulation of visual congruence as part of a task that was unrelated to sports or sponsorship. Digital ads can accurately target audiences according to their interests, so sponsors can maximize the value of their sponsorships by targeting visually congruent sponsorship ads to fans, even after the season ends. This study also enabled us to observe a negative effect of visual congruence among nonfans, with marginal statistical support for the notion that visual congruence undermines recall among nonfans. This preliminary evidence reiterates the importance of targeting digital ads.

General Discussion

This research extends both sponsorship and brand alliance literature by examining the role of visual congruence between a brand sponsor and a team. Without a natural match to the team, a brand sponsor can enjoy greater sponsorship efficacy by adopting the team's colors in its sponsorship efforts. However, the positive effects are conditional on consumers' opportunity (i.e., viewership-based exposures), ability (i.e., lack of color blindness), and motivation (i.e., fan status) to process the visually congruent sponsorship. Color blindness helps identify color as a causal factor because nonvisual dimensions of the sponsorship should have similar effects across visually congruent and incongruent sponsorships. The other moderators indicate that passionate fans are the consumers especially influenced by visual congruence. Therefore, sponsors should target customized product packaging to team's local markets and target customized digital ads to fans. Sports fans represent billions of consumers and their affiliation motives drive them to both pay extra attention to ads featuring sponsorship and recommend sponsors to their friends (Badenhausen 2016; Deloitte 2018; Mazodier, Henderson, and Beck 2018). Accordingly, this research has important implications for marketing scholars and brand managers alike.

Theoretical Implications

Relevance of color to cobranding. In contribution to the branding and design literature, we identify the importance of visual similarities in brand alliances. Literature on the topic of product design has investigated congruence between colors or between color and shape (Becker et al. 2011; Deng, Hui, and Hutchinson 2010) and visual similarity to a prototypical design (Landwehr, Wentzel, and Herrmann 2013; Liu et al. 2017), but not between two brands. In a single brand context, research into color effects considers the fit with brand personality (Labrecque and Milne 2012) or product category (Doyle and Bottomley 2006). It is worth noting that sponsorship alliances feature a unique power dynamic, in which the team has an existing positive relationship with the customer, and the other brand pays to leverage this established relationship. Further research should investigate whether visual congruence might be less helpful when these power dynamics are more balanced or the direction of the color alteration reverses (e.g., a team adopts the brand's

colors). Continued research should also examine aspects of visual congruence other than color (e.g., font, shape and other visual elements of brand logos) and confirm if the effects we find extend to other forms of brand alliances.

Attributions for visual design. This research shows that the boost in attitudes due to visual congruence results from both a direct route of categorization-based affect transfer and an indirect route that relies on fans' appraisals of perceived support. Past research notes that color can influence connotative meaning (Labrecque and Milne 2012), embodied meaning (Sundar and Kellaris 2017), arousal (Bagchi and Cheema 2013), and categorization (Deng, Hui, and Hutchinson 2010; Wedel and Pieters 2015), but it has stopped short of examining attributions. Because one brand (the team) is already loved by the target consumers (fans), it is important that the other brand (the sponsor) is perceived as genuinely supportive. Visual design communicates efficiently (Krishna, Cian, and Aydınoğlu 2017; Labrecque and Milne 2012), which is especially relevant in sports contexts where brand images are briefly displayed. Future research will need to explore if this strategy remains effective in cobranding contexts where the visuals of one brand conflicts with the brand personality of the other.

Managerial Implications

Embrace brand color flexibility. For brand managers, our findings support calls for flexibility in changing branding elements for sponsorships (Newmeyer, Venkatesh, and Chatterjee 2014), despite arguments for keeping visual elements consistent in a single brand context (Aaker, Fournier, and Brasel 2004; Keller 1993). In the fragmented media environment, sponsorship is growing, because major sporting events continue to draw massive attention (Gijsenberg 2014) and fans cannot "fast-forward" sponsorship images displayed during the game. In-game displays of sponsor brand signage, however, do not afford brands the opportunity to deliver lengthy messages. Managers can leverage their sponsorship investments by changing the colors in the display of their logo to match those of the team, which should involve few additional costs, especially for digital imagery. Although created congruence requires the brand to abandon its brand color identity in the sponsorship context, adopting a team's colors appears effective (16% increase in purchase intentions in Study 3). Indeed, our results also indicate that brands might adopt visual congruence for multiple teams to capitalize on league-wide sponsorship rights (Study 2). The practice of switching colors to match multiple teams' colors remains fairly novel. Further research should investigate if created congruence continues to make the sponsor brands appear more supportive of teams if many brands change colors for many teams. The categorization-based affect transfer path should remain intact.

Exploit visual congruence in targeted digital advertising. Targeted advertising, which refers to any form of advertising that is based on information the advertiser has about the recipient (Schumann, Wangenheim, and Groene 2014), increases return on investment (Manchanda et al. 2006). Targeted advertising has seen explosive growth with the widespread adoption of mobile and social media, with European targeted digital advertising spending expected to reach €21.5 billion in 2020 (IHS Markit 2017). In Study 3, a visually congruent sponsorship that is displayed in a digital advertisement enhances customer-level brand performance metrics. However, Study 3 also indicates that nonfans' recall of the sponsor brand is weaker, at marginally significant levels, when the brand uses the team's colors. Managers can change the digital advertisement image according to the interests of the intended recipient. For in-stadium sponsorship signage, brands could use digital ad replacement technology to change logo colors for specific markets. In this sense, our findings extend prior research that emphasizes targeting sponsorship communications according to fan affiliation motives (Mazodier, Henderson, and Beck 2018), with our research going beyond whom to target by considering what to display.

Limitations

As a note of caution, Study 1 finds that changing the display of the brand to the team's colors is not statistically superior to using incongruent brand signage among fans who watch fewer than 60% of the games, a finding that aligns with prior research (Breuer and Rumpf 2015; Krishna, Cian, and Aydınoğlu 2017; Milosavljevic et al. 2012) and common sense: If a brand is less recognizable, fans need more exposures to recognize it. Incidental visual congruence (e.g., Budweiser at the Reds' stadium), in contrast, is effective for all levels of fan exposure; consistent with advertising research that color typicality facilitates identification and positive evaluation at brief exposures (Wedel and Pieters 2015). Further research might investigate whether nonsponsors that happen to share the team's colors are also favored by fans, even in contexts in which the team is not salient.

Brands would benefit from knowing if the effects diminish as more brands implement visual congruence tactics or if stadiums demand all signage to be visually congruent to create a consistent aesthetic. Additional complications might arise from competitors' color identities; a brand might avoid a team's color if its rival already has that color identity (e.g., Home Depot and Lowe's). Devoted fans may dislike a brand if it adopts the color of a hated team, compared with when the brand simply sponsors the team. This research represents a step toward a better understanding of the role of visual congruence in sponsorship effectiveness, which appears likely to become increasingly important as consumers lose patience for lengthy commercials (Thompson 2016).

Appendix. Stimuli for Studies 2 and 3.

Author Contributions

The authors contributed equally to the article.

Associate Editor

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References

Aaker, Jennifer, Susan Fournier, and S. Adam Brasel (2004), "When Good Brands Do Bad," *Journal of Consumer Research*, 31 (1), 1–16.

Abril, Carmen, Joaquin Sanchez, and Teresa Recio (2018), "How Does Wall Street React to Global Sports Sponsorship Announcements? An Analysis of the Effect on Sponsoring Companies' Stock Market Prices," *Journal of Advertising Research*, 58 (3), 297–310.

Badenhausen, Kurt (2016), "FC Barcelona Ranks as the Top Sports Team on Social Media," (July 14), https://www.forbes.com/sites/kurtbadenhausen/2016/07/14/fc-barcelona-ranks-as-the-top-sports-team-on-social-media/#52b0719b6ab1.

Bagchi, Rajesh, and Amar Cheema (2013), "The Effect of Red Background Color on Willingness-to-Pay: The Moderating Role of Selling Mechanism." *Journal of Consumer Research*, 39 (5), 947–60.

Barsalou, Lawrence W. (1992), "Frames, Concepts, and Conceptual Fields," in *Frames, Fields, and Contrasts: New Essays in Semantic and Lexical Organization*, Adrienne Lehrer and Eva Feder Kittay, eds. Hillsdale, NJ: Lawrence Erlbaum Associates, 21–74.

Becker, Liza, Thomas J.L. van Rompay, Hendrik N.J. Schifferstein, and Mirjam Galetzka (2011), "Tough Package, Strong Taste: The Influence of Packaging Design on Taste Impressions and Product Evaluations," *Food Quality and Preference*, 22 (1), 17–23.

Birch, Jennifer (1997), "Efficiency of the Ishihara Test for Identifying Red-Green Colour Deficiency," *Ophthalmic and Physiological Optics*, 17 (5), 403–08.

Boronczyk, Felix, Christopher Rumpf, and Christopher Breuer (2018), "Determinants of Viewer Attention in Concurrent Event Sponsorship," *International Journal of Sports Marketing and Sponsorship*, 19 (1), 11–24.

Breuer, Christoph, and Christopher Rumpf (2015), "The Impact of Color and Animation on Sports Viewers' Attention to Televised Sponsorship Signage," *Journal of Sport Management*, 29 (2), 170–83.

Calderon-Martinez, Aurora, Francisco J. Ms-Ruiz, and Juan L. Nicolau-Gonzalbez (2005), "Commercial and Philanthropic Sponsorship–Direct and Interaction Effects on Company Performance," *International Journal of Market Research*, 47 (1), 75–99.

Cobbs, Joe, Mark D. Groza, and Stephen W. Pruitt (2012), "Warning Flags on the Race Track: The Global Markets' Verdict on Formula One Sponsorship," *Journal of Advertising Research*, 52 (1), 74–86.

Cornwell, T. Bettina, Michael S. Humphreys, Angela M. Maguire, Clinton S. Weeks, and Cassandra L. Tellegen (2006), "Sponsorship-Linked Marketing: The Role of Articulation in Memory," *Journal of Consumer Research*, 33 (3), 312–21.

Cornwell, T. Bettina, Stephen W. Pruitt, and John M. Clark (2005), "The Relationship Between Major-League Sports' Official Sponsorship Announcements and the Stock Prices of Sponsoring Firms," *Journal of the Academy of Marketing Science*, 33 (4), 401–12.

Deloitte (2018), "Rising Stars – Football Money League," (January), https://www2.deloitte.com/uk/en/pages/sports-business-group/articles/deloitte-football-money-league.html.

Deng, Xiaoyan, Sam K. Hui, and J. Wesley Hutchinson (2010), "Consumer Preferences for Color Combinations: An Empirical Analysis of Similarity-Based Color Relationships," *Journal of Consumer Psychology*, 20 (4), 476–84.

Derbaix, Christian, Alain Decrop, and Olivier Cabossart (2002), "Colors and Scarves: The Symbolic Consumption of Material Possessions by Soccer Fans," in *Advances in Consumer Research*, Vol. 29, Susan M. Broniarczyk and Kent Nakamoto, eds. Valdosta, GA: Association for Consumer Research, 511–18.

Doyle, John R., and Paul A. Bottomley (2006), "Dressed for the Occasion: Font-Product Congruity in the Perception of Logotype," *Journal of Consumer Psychology*, 16 (2), 112–23.

Fiske, Susan T., and Mark A. Pavelchak (1986), "Category-Based Versus Piecemeal-Based Affective Responses: Developments in Schema-Triggered Affect," in *The Handbook of Motivation and Cognition: Foundations of Social Behavior*, Richard M. Sorrentino and E. Higgins, eds. Tory, NY: Guilford, 167–203.

Gijsenberg, Maarten J. (2014), "Going for Gold: Investigating the (Non)Sense of Increased Advertising Around Major Sports Events," *International Journal of Research in Marketing*, 31 (1), 2–15.

Gwinner, Kevin P., and John Eaton (1999), "Building Brand Image Through Event Sponsorship: The Role of Image Transfer," *Journal of Advertising* 28 (4), 47–57.

Gunn, David (2018), "Celtic Fans Rage at Club Over Blue Season Tickets," *The Scotsman* (July 6), https://www.scotsman.com/sport/football/competitions/premiership/celtic-fans-rage-at-club-over-blue-season-tickets-1-4765517.

Hayes, Andrew F. (2018), *Introduction to Mediation, Moderation, and Conditional Process Analysis Second Edition: A Regression-Based Approach*, 2nd ed. New York: The Guilford Press.

Heider, Fritz (1958), *The Psychology of Interpersonal Relations*. Hillsdale, NJ: Lawrence Erlbaum Associates.

IEG (2017), "Sponsorship Spending Forecast: Continued Growth Around the World," (January 4), http://www.sponsorship.com/iegsr/2017/01/04/Sponsorship-Spending-Forecast–Continued-Growth-Ar.aspx.

IHS Markit (2017), "The Economic Value of Behavioural Targeting in Digital Advertising," research report (accessed January 21, 2019), https://datadrivenadvertising.eu/wp-content/uploads/2017/09/BehaviouralTargeting_FINAL.pdf.

Johar, Gita V., and Michel T. Pham (1999), "Relatedness, Prominence and Constructive Sponsor Identification," *Journal of Marketing Research*, 36 (3), 299–312.

Keller, Kevin Lane (1993), "Conceptualizing, Measuring, and Managing Customer-Based Brand Equity," *Journal of Marketing*, 57 (1), 1–22.

Keller, Kevin Lane, and Don Lehmann (2006), "Brands and Branding: Research Findings and Future Priorities," *Marketing Science*, 25 (6), 740–59.

Kelley, Harold H., and John L. Michela (1980), "Attribution Theory and Research," *Annual Review of Psychology*, 31 (1), 457–501.

Krishna, Aradhna, Luca Cian, and Nilüfer Z. Aydınoğlu (2017), "Sensory Aspects of Package Design," *Journal of Retailing*, 93 (1), 43–54.

Labrecque, Lauren I., and George R. Milne (2012), "Exciting Red and Competent Blue: The Importance of Color in Marketing," *Journal of the Academy of Marketing Science*, 40 (5), 711–27.

Landwehr, Jan R., Daniel Wentzel, and Andreas Herrmann (2013), "Product Design for the Long Run: Consumer Responses to Typical and Atypical Designs at Different Stages of Exposure," *Journal of Marketing*, 77 (5), 92–107.

Liu, Yan, Krista J. Li, Haipeng A. Chen, and Subramanian Balachander (2017), "The Effects of Products' Aesthetic Design on Demand and Marketing-Mix Effectiveness: The Role of Segment Prototypically and Brand Consistency," *Journal of Marketing*, 81 (1), 83–102.

MacInnis, Deborah J., Christine Moorman, and Bernard J. Jaworski (1991), "Enhancing and Measuring Consumers' Motivation, Opportunity, and Ability to Process Brand Information from Ads," *Journal of Marketing*, 55 (4), 32–53.

Manchanda, Puneet, Jean-Pierre Dubé, Khim Yong Goh, and Pradeep K. Chintagunta (2006), "The Effect of Banner Advertising on Internet Purchasing," *Journal of Marketing*, 43 (1), 98–108.

Mazodier, Marc, Conor M. Henderson, and Joshua T. Beck (2018), "The Long Reach of Sponsorship: How Fan Isolation and Identification Jointly Shape Sponsorship Performance," *Journal of Marketing*, 82 (6), 28–48.

Mazodier, Marc, and Dwight Merunka (2012), "Achieving Brand Loyalty Through Sponsorship: The Role of Fit and Self-Congruity," *Journal of the Academy of Marketing Science*, 40 (6), 807–20.

Mazodier, Marc, and Amir Rezaee (2013), "Are Sponsorship Announcements Good News for the Shareholders? Evidence From International Stock Exchanges," *Journal of the Academy of Marketing Science*, 41 (5), 586–600.

Mazodier, Marc, and Pascale G. Quester (2014), "The Role of Sponsorship Fit for Changing Brand Affect: A Latent Growth Modeling Approach," *International Journal of Research in Marketing*, 31 (1), 16–29.

Milosavljevic, Milica, Vidhya Navalpakkam, Christof Koch, and Antonio Rangel (2012), "Relative Visual Saliency Differences Induce Sizable Bias in Consumer Choice," *Journal of Consumer Psychology*, 22 (1), 67–74.

Newmeyer, Casey E., R. Venkatesh, and Rabikar Chatterjee (2014), "Cobranding Arrangements and Partner Selection: A Conceptual Framework and Managerial Guidelines," *Journal of the Academy of Marketing Science*, 42 (2), 103–18.

Olson, Erik L., and Hans Mathias Thjømøe (2009), "Sponsorship Effect Metric: Assessing the Financial Value of Sponsoring by Comparisons to Television Advertising," *Journal of the Academy of Marketing Science*, 37 (4), 504–15.

Olson, Erik L., and Hans Mathias Thjømøe (2011), "Explaining and Articulating the Fit Construct in Sponsorship," *Journal of Advertising*, 40 (1), 57–70.

Park, C. Whan, Deborah J. MacInnis, Joseph Priester, Andreas B. Eisingerich, and Dawn Iacobucci (2010), "Brand Attachment and Brand Attitude Strength: Conceptual and Empirical Differentiation of Two Critical Brand Equity Drivers," *Journal of Marketing*, 74 (6), 1–17.

Roberts, Daniel (2015), "Bud Light Will Remain NFL's Official Beer Until 2022," *Fortune* (November 4), http://fortune.com/2015/11/04/bud-light-nfl-deal/.

Rollins, Khadrice (2017), "Warriors Agree to NBA's Largest Jersey Sponsor Deal with Japanese Company Rakuten," *Sports Illustrated* (September 12), https://www.si.com/nba/2017/09/12/warriors-jersey-sponsorship-deal-rakuten.

Schumann, Jan H., Florian v. Wangenheim, and Nicole Groene (2014), "Targeted Online Advertising: Using Reciprocity Appeals to Increase Acceptance Among Users of Free Web Services," *Journal of Marketing*, 78 (1), 59–75.

Simmons, Carolyn J., and Karen L. Becker-Olsen (2006), "Achieving Marketing Objectives Through Social Sponsorships," *Journal of Marketing*, 70 (4), 154–69.

Snodgrass, Joan G., and Brian McCullough (1986), "The Role of Visual Similarity in Picture Categorization," *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 12 (1), 147–54.

Speed, Richard, and Peter Thompson (2000), "Determinants of Sports Sponsorship Response," *Journal of the Academy of Marketing Science*, 28 (2), 226–38.

Spiller, Stephen A., Gavan J. Fitzsimons, John G. Lynch Jr., , and Gary H. McClelland (2013), "Spotlights, Floodlights, and the Magic Number Zero: Simple Effects Tests in Moderated Regression," *Journal of Marketing Research*, 50 (2), 277–88.

Sundar, Aparna, and James J. Kellaris (2017), "How Logo Colors Influence Shoppers' Judgments of Retailer Ethicality: The Mediating Role of Perceived Eco-Friendliness," *Journal of Business Ethics*, 146 (3), 685–701.

Thompson, Ben (2016), "The Sports Linchpin," *Stratechery* (August 16), https://stratechery.com/2016/the-sports-linchpin.

Wakefield, Kirk L., Karen Becker-Olsen, and T. Bettina Cornwell (2007), "I Spy a Sponsor," *Journal of Advertising*, 36 (4), 61–74.

Wedel, Michel, and Rik Pieters (2015), "The Buffer Effect: The Role of Color When Advertising Exposures Are Brief and Blurred," *Marketing Science*, 34 (1), 134–43.

Woisetschläger, David M., Christof Backhaus, and T. Bettina Cornwell (2017), "Inferring Corporate Motives: How Deal Characteristics Shape Sponsorship Perceptions," *Journal of Marketing*, 81 (5), 121–41.

Yang, Yupin, and Avi Goldfarb (2015), "Banning Controversial Sponsors: Understanding Equilibrium Outcomes When Sports Sponsorships are Viewed as Two-Sided Matches," *Journal of Marketing Research*, 52 (5), 593–15.

Zdravkovic, Srdan, Peter Magnusson, and Sarah M. Stanley (2010), "Dimensions of Fit Between a Brand and a Social Cause and Their Influence on Attitudes," *International Journal of Research in Marketing*, 27 (2), 151–60.