

# Using Brand Personality to Measure the Effectiveness of Image Transfer in Formula One Racing

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This research investigates the effectiveness of image transfer from a Formula One (F1) team to the principal sponsor, measuring the brand-personality congruency between the two. A 2 (strong/weak team performance) x 2 (functional/non-functional relationship) between-groups ANCOVA assessed the F1 team-sponsor brand-personality congruency, whilst controlling for fan identification. Based on results from a survey of 160 Australian F1 motor sport fans, support was found for the major influence of a functional-based sponsor relationship and the minor influence of a F1 team's (winning) performance on the efficiency of the image-transfer process. Further, fan identification had a significant covariate effect, allowing the F1 team's performance influence to emerge.

Keywords: Image transfer; sponsorship; brand personality; branding; Formula One; F1; Motor sport; functional congruity; fan identification; Australia

## Introduction

Sports fans can exhibit fanatical consumption behaviour, which can include extreme brand loyalty to sponsors' products and attending or viewing games and races (Ferrand & Pages 1999, Hunt, Bristol & Bashaw 1999). Sports sponsorship increasingly seeks to tap into this behaviour, reflected by the extensive growth in sports sponsorship-linked marketing programs over the past two decades, where logo-laden player jerseys and race cars have now turned them into 'rolling billboards' (Hoek 1998, Cornwell, Pruitt & Van Ness 2001). Global sponsorship expenditure is estimated to reach \$US37.7 billion in 2007, up nearly 12% over 2006 (Promo 2007). The increased importance of sponsorship is reflected in the typical sponsoring organisation allocating 13% of its total marketing budget to the medium (IEG 2006).

Sports sponsorship attempts to increase brand awareness or alter an existing brand by associating a product/brand with the characteristics of a sporting team, event or well-known individual (Marshall & Cook 1992, Gwinner 1997, Madrigal 2000, Cornwell, Pruitt & Van Ness 2001, Cliffe & Motion 2005). The transfer of positive (or potentially negative) images to the sponsor's brand is enabled without having to verbally or consciously convince the consumer of the product's positive attributes (Quester & Farrelly 1998). By becoming part of a special and personally relevant moment in fans' lives, sponsors' involvement with sports events can broaden and deepen their relationship with their target market (Keller 2003). Repeated exposure to event ads can lead to feelings of familiarity and positive attitudes toward the advertised brand, even if these ads have not been consciously assessed like a traditional ad (Bennett 1999). Thus, sponsorship can help differentiate a brand and add financial value to it (Cornwell, Roy & Steinard 2001). Typical sponsor objectives include increasing brand loyalty, creating awareness, changing or reinforcing their image, driving retail or dealer traffic and stimulating sales, trial and usage (Keller 2003, IEG 2006). Sport sponsors enjoy improved awareness of and attitude toward the sponsor's brand, increased attention to the sponsor and its other promotions, as well as increased preference for and willingness to use the sponsor's product (Madrigal 2000, Meenaghan 2001, Koo, Quarterman & Flynn 2006).

This is particularly true for motor sport fans, who can be up to three times more brand loyal than fans of other sports (D'Orio 1997, Performance Research 2000, Petrecca 2001, JMU 2005, Thomaselli 2006). Purchasing sponsors' products can also empower motor sport fans, so that they feel like they are contributing to the sport (JMU 2005, Phipps 2005a, Thomaselli 2006). For example, 72% of NASCAR motor sport fans buy products that support the sport and 40% will switch product loyalties to a sponsor's brand, including avoiding brands that cease their sponsorship (Petrecca 2001).

Formula One (F1) motor sport racing is the most technologically advanced, high-profile and expensive sport in the world, with a large worldwide audience and fan base. In 2006, 301,800 people attended the Australian Grand Prix, 1.5 million in Australia viewed it on TV, and there is a 100 million global audience for each race on average (AGP 2007). The biggest-spending F1 teams are believed to spend upwards of \$US350 million a year. F1 teams face a continual challenge to raise the sponsorship funds necessary to compete effectively (Hoyle 2006), as F1 teams rely on direct corporate sponsorship for 80-85% of their total income (BBC 2006). This is especially critical for the independent F1 teams that are not backed by a manufacturer (Hoyle 2006).

Sponsoring a F1 team is not cheap, with principal or title annual sponsorship packages often starting at £7.5 to £25 million (\$US15–50 million) per year depending on the team's ranking, followed by co-sponsors (£1.5-£7.5 million) and trade link-ups (or 'official suppliers') (£0.5-£1.5 million) (Anonymous 2006b, BBC 2006). There are around 15-20 named sponsors for a F1 team in total, with the one or two principal team sponsors receiving the largest and most prominent logo positioning on the race car. These top sponsors are typically recognised as part of team name (e.g. Panasonic Toyota and Vodaphone, McClaren Mercedes), along with receiving greater access to and use of drivers for promotional purposes and hospitality-suite access. The handful of co-sponsors and the other trade link-ups receive smaller and less visible positioning on the race car and more limited driver and hospitality-suite access. For example, being a major sponsor of Ferrari costs Telecom Italia £25 million per year and Martini £50 million per year. Additional promotional expenditure is also linked to these F1 deals to leverage the sponsorship investment (Anonymous 2006a, Barrand 2006). In contrast to on-screen exposure considerations of major sponsors, the lower level sponsors may be more interested in being associated with F1 and its image (and promoting that association) than in on-car visibility (BBC 2006). For example, MAC Tools, supplier of premium hand and power tools to automotive, repair, motor sport and light industrial businesses, is seeking to add credibility to its brand through its association with the pinnacle of automotive engineering via its sponsorship of F1 team B.A.R. Lucky Strikes (Anonymous 2004).

Despite the large expenditure on F1 sponsorship and its importance, the general understanding in the literature of the set of factors that can influence sponsorship's image-transfer effectiveness in the F1 context is limited. Two potentially important F1 sponsorship factors of primary interest for this study are the functional-based similarity of a team and sponsor and a team's winning performance. These factors form the theoretical underpinnings of the study and will now be briefly reviewed, along with fan identification (a covariate in this study) and brand personality, which is used to assess the effectiveness of the image-transfer process.

## **Functional-Based Similarity**

Sponsorship research has identified the importance of the link, fit, congruency, relatedness or matching up between the sponsor and the sponsored team/event (Gwinner & Eaton 1999, McDaniel 1999, Speed & Thompson 2000, Meenaghan 2001, Roy & Cornwell 2004, Cornwell *et al* 2006, Koo, Quarterman & Flynn 2006). Sponsorships are more successful when the product/brand sponsoring the team/event has a direct product relevance, that is, the product is, or may be used, in the sporting event. This direct product relevance is defined as functional-based similarity (Gwinner 1997). Image transfer is stronger and more effective when the sponsoring brands share functional-based similarity and/or an image-based similarity with the event (Gwinner & Eaton 1999). Consumers who perceive the brand/event image fit via sponsorship as congruent are likely to have more positive cognitive and affective responses. Therefore, increased sponsor-sport event fit positively influences the sponsor's image and attitude toward the sponsor's brand, increases attention paid to the sponsor and its other promotions, as well as increasing intentions to use the sponsor's product (Gwinner & Eaton 1999, Speed & Thompson 2000, Koo, Quarterman & Flynn 2006).

In the motor sport context, increased fit can improve consumer recall (Quester & Farrelly 1998), with stronger wealth effects (in the form of shareholder wealth gains) accruing to sponsors with direct ties to the consumer automotive industry (Cornwell, Pruitt & Van Ness 2001, Pruitt, Cornwell & Clark 2004). United Parcel Service (UPS) nominated the natural tie-in between UPS and NASCAR as key to its \$US25 million per year sponsorship. Speed, reliability, performance and tremendous use of technology were all key attributes of both UPS and NASCAR (Phipps 2005b).

## **Winning**

Winning impacts on sports team and sponsor marketing outcomes. For the team, winning is associated with increased attendance, team-related merchandise sales, fan identification, basking in reflected glory and team brand loyalty (Wann & Branscombe 1990, Gladden & Milne 1999, Campbell, Aiken & Kent 2004). Winning teams also attract more fans of the casual, 'fair-weather' and 'bandwagon' variety, but they also tend to lose the fans when the team's performance drops off (Redden & Steiner 2000, Gladden & Funk 2001).

Sponsoring a winning motor sport team is associated with increased television exposure and with receiving the largest financial returns, i.e. shareholder wealth gains (Quester 1997, Cornwell, Pruitt & Van Ness 2001, Pruitt, Cornwell & Clark 2004), whereas a team/driver losing and failing to finish is viewed as detrimental to the motor sport sponsor's brand (Petrecca 2001). For sponsors of a poorly performing team, the consumer may also perceive the source of any sponsorships to be untrustworthy (Bennett 1999).

## **Fan Identification**

The strong loyalty of motor sport fans suggests that fan identification may have an effect on the sport-sponsor image-transfer process (Gwinner & Eaton 1999, Gwinner & Swanson 2003). Fan identification is the personal commitment, perceived connectedness and emotional involvement spectators have with the sports organisation, where the team's failings and achievements are experienced as one's own (Mael & Ashforth 1992, Hunt, Bristol & Bashaw 1999, Shank 2005). Fan identification is related to team loyalty, and fan satisfaction with attending the sporting event and future intentions to attend games (Madrigal 1995, Gladden &

Funk 2001, Matsuoka, Chelladurai & Harada 2003, Campbell, Aiken & Kent 2004). Fans that identify more deeply with their team are less likely to reduce their support and loyalty when the team is not performing well (Wann & Branscombe 1990, Sutton *et al* 1997, Redden & Steiner 2000). Fan identification is also related to improved sponsor recall and recognition, attitude toward and satisfaction with sponsors, and increased preference for sponsor brands (Bennett 1999, Madrigal 2000, Gwinner & Swanson 2003, Dalakas & Levin 2005, JMU 2005). As fan identification is not the focus of this study, it will be used as a covariate.

### **Brand Personality (BP)**

Brands, like people, take on personality traits (Biel 1993, Aaker 1997, Kapferer 1997, Keller 2003, Freling & Forbes 2005a). Brand personality can be defined as “the set of human characteristics associated with a brand” (Aaker 1997, p. 347). Drawing on the ‘big five’ dimensions of human personality, Aaker (1997) conceptualised BP as possessing five dimensions (Sincerity, Excitement, Competence, Sophistication and Ruggedness), each comprised of a number of individual personality traits. By communicating, brands gradually build up their own individual human-type character or personality traits. For example, a brand may be characterised as being ‘modern’, ‘old fashioned’ or ‘exotic’.

These human-type personality traits provide self-expressive or symbolic functions for the consumer (Aaker 1999), who uses the personality as a cue and exploits the positive aspects to present a given image (Freling & Forbes 2005a). A brand with the right personality can result in the consumer feeling that the brand is relevant and that they should remain loyal to it. Thus, consumers often choose brands that have a personality that is consistent with their own self-concept (Aaker 1996, Aaker 1999, Keller 2003, Kressman, Sirgy, Herrman, Huber, Huber & Lee 2006).

BP is a strategically important construct that can help firms achieve enduring differentiation and sustainable competitive advantage (Biel 1993, Diamantopoulos, Smith & Grime 2005, Freling & Forbes 2005a, Venable, Rose, Bush & Gilbert 2005). BP influences product and brand perceptions, can have a positive influence on product evaluations and can represent the principle basis on which differentiation is determined when there is little or no distinction other than the brand (Aaker 1997, Freling & Forbes 2005a). A strong, favourable BP provides emotional fulfilment and may lead to image enhancement, an increased willingness to continue using a given brand or to try a new brand or brand extension, and to pay premium prices for a brand (Freling & Forbes 2005b, Venable *et al* 2005, Chang & Chieng 2006, Kressman *et al* 2006). Sports sponsorship may be a valuable tool used to communicate symbolic brand associations as part of a process to build or change the personality of a brand (Speed & Thompson 2000, Cornwell, Roy & Steinard 2001, Cliffe & Motion 2005). Thus, sports-event brand-personality traits can be used in examining the image-transfer process in the sports-sponsorship context (Gwinner & Eaton 1999).

### **Research Purpose and Hypotheses**

In light of the size of the F1 sponsorship investment and global exposure, sponsors need to assess the congruence of the F1 team’s image and their own (Ferrand & Pages 1999). However, despite the value and importance of the F1 sponsorship market, research directed toward understanding brand-image transfer in general, and in a motor sport context in particular, is lacking. Therefore, this paper addresses calls in the literature for sponsorship research to shift from an emphasis on awareness effects and to also focus on how sponsorship

linkages influence brand-image effects and image transfer (Meenaghan & O'Sullivan 2001, Thjømmøe, Olson & Brønn 2002, Smith 2004). The purpose of this study is to investigate the effectiveness of image transfer from the F1 team to the principal sponsor by measuring the brand-personality congruency between the two when influenced by the functional-based sponsor relationship and the team's (winning) performance, controlling for fan identification. Specifically, the following hypotheses will be examined:

- H1: Functional-based similarity will influence the effectiveness of the image-transfer process, holding constant the level of fan identification with the F1 team.
- H2: The winning performance level of the F1 team will influence the effectiveness of the image-transfer process, holding constant the level of fan identification with the F1 team.

In other words, if an image transfer is occurring as H1 proposes, the image of the F1 team and the image of the sponsor would be more similar in the functionally-based context, as the F1 team's image would be 'transferring' to the sponsor's brand (Gwinner & Eaton 1999). Similarly, if H2 holds true, then a poor performing team could reduce the efficiency of the image-transfer process, with a lower resulting image congruency.

## Methodology

This research focused on the effectiveness of image transfer from a F1 team to the principal sponsor, measuring the brand-personality congruency between the two for F1 motor sport fans using a 2 (strong/weak team performance) x 2 (functional/non-functional relationship) between-groups experimental design controlling for the effect of fan identification. Fan identification was used as a covariate to increase the precision of the experiment (Lattin, Carroll & Green 2003, Hair *et al* 2006). Principal sponsors were focused on due to the size of their investment, their prominence in the promotion of the team and image-building objectives. Based on two focus groups with knowledgeable F1 fans, four F1 teams were selected that each differed in their (winning) performance level and functional-based relationship combination. These are presented in Table 1. A self-administered questionnaire was then designed, pre-tested on a group of F1 enthusiasts and corrections made as required. Four versions of the questionnaire were created to reflect each experimental treatment, with respondents being randomly assigned to an experimental treatment. The questionnaire took approximately 8-10 minutes to complete.

**Table 1. Experimental treatments**

	<b>Strong Performing Team</b>	<b>Weak Performing Team</b>
<b>Functional-based relationship</b>	Williams & BMW	Jaguar Cosworth & Jaguar Performance Cars
<b>Non-functional-based relationship</b>	Ferrari & Marlboro	B.A.R. & Lucky Strikes

## Respondent Recruitment and Sample Profile

Survey respondents were customers of a specialty motor sport memorabilia store located in Sydney, NSW. The store's prime focus is on F1 memorabilia and merchandise, as well as also organising group trips to both the Australian and Malaysian F1 Grand Prix races<sup>1</sup>, which ensured a ready pool of respondents with sufficient knowledge to rate the focal F1 teams and their principal sponsors on the BP traits. Data collection began a quarter of the way through the F1 season, when four races had already been run. This allowed fans sufficient time to develop opinions on the performance and brands of the F1 teams. Customers approaching the counter staff or making a purchase were asked to participate, with approximately two-thirds agreeing. This resulted in 160 useable responses (40 per treatment) being collected over a three-week period.

Respondents were 27 years old on average (with a range of 18-55) and mostly male (83%). A majority (64%) of respondents had watched the most recent F1 Grand Prix (GP) race, 87% watched five or more GP races each season (with 43% watching all GP races in a season) and 26% of respondents had attended the Australian Grand Prix, the opening race of the season. Respondents used three media sources on average to follow F1 (96% used TV, 72% the Internet, 54% newspapers and 54% magazines) and were knowledgeable about current F1 events and the F1 team rated. Respondents reported seeing the F1 sponsors regularly in the media, and seeing them in three media sources on average. The sample was assessed as being a reasonable representation of the Australian F1 fan base (Geach 2000), and was deemed suitable for the purposes of the research.

## Questionnaire Structure and Measures Used

To focus respondents' thinking about F1 and their assigned F1 team, they were first asked to report on their current knowledge about F1 and level of involvement (e.g. attending and watching F1 races) and then to list as many businesses or products that sponsored their assigned F1 team. They then rated the BP for the assigned F1 team and the BP for the team's principal sponsor along with their level of fan identification with the F1 team, followed by demographic questions.

BP traits have been used in prior sport-sponsorship research (Gwinner & Eaton 1999, Koo, Quarterman & Flynn 2006). Aaker's (1997) 42-item BP scale was used to measure the brand personalities for the F1 team and sponsor in this study, using a 5-point Likert scale (strongly disagree/strongly agree). The reliabilities for the BP total were the same for the F1 teams and the sponsors ( $\alpha = .97$ ), whilst the reliabilities ( $\alpha$ ) for the individual BP dimensions ranged from .81 to .95 for the F1 teams and .84 to .97 for the sponsor brands. Fan identification with the F1 team ( $\alpha = .93$ ) was measured using an 8-item, 5-point scale (not at all descriptive of me/descriptive of me) adapted from Wann & Branscombe (1993).

The (dependent) image-transfer congruency measure was calculated by using the absolute difference between the respondent's F1 team BP and sponsor BP item scores (Gwinner & Eaton 1999). The BP-item difference scores were then summed to generate an image-transfer congruence index. Smaller difference scores closer to zero indicate greater fit (i.e. greater congruency) between the team BP and sponsor BP. This is a common technique in self-image congruency studies (Sirgy, Grewal, Mangleburg, Park, Chon, Claiborne, Johar & Berkman

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<sup>1</sup> The Australian Grand Prix is held in Melbourne, Victoria.

1997) and has been used in other BP-related (Kressman *et al* 2006) and brand image-related sports-sponsorship research (Koo, Quarterman & Flynn 2006).

## Results

A 2 x 2 between-groups ANCOVA assessed the congruency between the brand personalities of the F1 teams and principal sponsors, whilst controlling for fan identification (FAN ID). Manipulation checks confirmed that respondents in each treatment accurately identified team sponsors as related (or not) to F1 racing and as strong or weak performing teams. Next, the ANCOVA assumptions (Pallant 2001) were assessed for the dependent measure (image transfer) and covariate (fan identification) and found to be satisfied. No significant interaction effect was found between F1 team performance (TEAM) and sponsor relationship (SPONSOR) ( $F(1, 155) = .093, p = .761$ ). Both main and covariate effects were significant and are reported here.

The treatment results are presented in Table 2. Controlling for FAN ID, a significant main effect was found for the existence of a functional-based SPONSOR relationship and the BP congruency of the F1 team and sponsor ( $F(1, 155) = 236.827, p < .0005$ ), with a large effect size (partial  $\eta^2 = .60$ ). Functional-based relationship sponsors (mean = 31,  $sd = 11$ ) had significantly lower difference scores than non-functional-based relationship sponsors (mean = 69,  $sd = 22$ ). Thus, H1 is supported.

Controlling for FAN ID, a significant main effect was found for the strength of the TEAM's performance and the BP congruency of the F1 team and sponsor ( $F(1, 155) = 3.901, p = .05$ ), with a small effect size (partial  $\eta^2 = .03$ ). Stronger performing teams (mean = 52,  $sd = 25$ ) had slightly larger difference scores than weaker performing teams (mean = 49,  $sd = 27$ ). Thus, H2 is supported.

**Table 2. BP image-transfer treatment results**

	Strong Performing Team	Weak Performing Team
<b>Functional-based relationship</b>	33	28
<b>Non-functional-based relationship</b>	73	67

Notes: FAN ID used as a covariate; Adjusted marginal means reported for the sum of the 42 BP image-transfer absolute-difference scores

Further, as reported in the ANCOVA results in Table 3, FAN ID was found to have a significant impact as a covariate ( $F(1, 155) = 31.022, p < .0005$ ), with a moderate effect size (partial  $\eta^2 = .17$ ). FAN ID was inversely correlated with image transfer ( $r = -.18, p = .02$ , two-tailed), with fans identifying more highly with the team having smaller congruence scores, thus indicating a more efficient image transfer. Thus, fan identification reduced the 'noise' in the design and better allowed the F1 TEAM's effect to emerge. This covariate influence was highlighted in an additional two-way ANOVA analysis, where the exclusion of FAN ID from the model resulted in no significant main effect being found for F1 TEAM's

performance ( $F(1, 156) = 1.337, p = .249$ ), and with an even smaller effect size (partial  $\eta^2 = .01$ ). SPONSOR's influence was still very strong, though also slightly lower (partial  $\eta^2 = .54$ ). Fan identification's influence was moderate, however, as reflected in the small correlation with image transfer and in the incremental change in the R-squared for the ANCOVA model ( $R^2 = .62$ ) versus the ANOVA model (with no covariate) ( $R^2 = .55$ ).

**Table 3. ANCOVA image-transfer results**

Source	Type III Sum of Squares	df	Mean Square	F	Sig. ( $p$ )	Eta Squared
Corrected model	65645	4	16411	63.392	< .0005	.621
Intercept	114146	1	114146	440.913	< .0005	.740
FAN ID	8031	1	8031	31.022	< .0005	.167
TEAM	1010	1	1010	3.901	.050	.025
SPONSOR	61311	1	61311	236.827	< .0005	.604
TEAM * SPONSOR	24	1	24	.093	.761	.001
Error	40127	155	259			
Total	509079	160				
Corrected total	105772	159				

Notes: Corrected model R-squared = .62 (adjusted R-squared = .61)

### Further BP-Dimension Exploration: MANCOVA Results

The data was further explored using a two-way MANCOVA (after satisfying the MANCOVA assumptions) to assess how the image transfer of the five individual BP dimensions (represented by the summated means for each dimension) were affected by the two treatments, whilst controlling for fan identification. Follow-up pairwise comparisons within each treatment factor for each BP dimension were also conducted. Overall, the same general pattern found in the ANCOVA results emerged for the image-transfer congruency across the set of five dimensions (MANCOVA) and for the individual BP dimensions. Table 4 presents the adjusted marginal means for each treatment cell, with significant pairwise differences within each treatment indicated.

Controlling for FAN ID, a significant main effect was found for the existence of a functional-based SPONSOR relationship and the BP dimension congruency of the F1 team and sponsor (Wilks'  $\Lambda = .321, F = 63.903(5, 151), p < .0005$ ), with a large effect size (partial  $\eta^2 = .68$ ). Significant functional pairwise differences were found across all five BP dimensions. Controlling for FAN ID, a significant main effect was found for the strength of the TEAM's performance and the BP congruency of the F1 team and sponsor (Wilks'  $\Lambda = .812, F = 6.991(5, 151), p < .0005$ ), with a moderate effect size (partial  $\eta^2 = .19$ ). Significant TEAM performance pairwise differences were found across three of the five BP dimensions (Excitement, Sophistication, Ruggedness). Next, there was also a significant TEAM \* SPONSOR interaction (Wilks'  $\Lambda = .917, F = 2.744(5, 151), p = .02$ ), though it had a small effect size (partial  $\eta^2 = .08$ ). In looking at the adjusted means plots, only Sincerity and



Competence showed disordinal, non-crossover interaction effects. Finally, there was a significant influence of FAN ID as a covariate (Wilks'  $\Lambda = .820$ ,  $F = 6.633$  (5, 151),  $p < .0005$ ), with a with a moderate effect size (partial  $\eta^2 = .18$ ). As with the ANCOVA results, FAN ID had a similar incremental influence in removing noise from the multivariate MANCOVA model.

**Table 4. Two-way MANCOVA image-transfer treatment results**

	Sponsor Relationship		Performance (Winning)	
	Functional	Non-functional	Strong	Weak
<b>Sincerity</b>	.49 ***	1.37	.92	.94
<b>Excitement</b>	.72 ***	1.75	1.33 *	1.14
<b>Competence</b>	.84 ***	2.01	1.39	1.46
<b>Sophistication</b>	.96 ***	1.68	1.52 ***	1.12
<b>Ruggedness</b>	.77 ***	1.50	1.28 **	.98

Notes: FAN ID used as a covariate; Adjusted marginal means reported for the average of the image-transfer absolute-difference scores for each BP dimension; For within-treatment pairwise comparisons: \* =  $p < .05$ , \*\* =  $p < .01$ , \*\*\* =  $p < .001$

## Conclusions, Implications, Limitations and Future Research

Based on survey results from 160 Australian F1 motorsport fans, this study provides empirical support for the major influence of a functional-based sponsor relationship and the minor influence of a F1 team's (winning) performance on the efficiency of the image-transfer process, when controlled for the level of fan identification. Used as a covariate, the level of F1 fan identification was also found to have a moderate impact on the image-transfer effectiveness between the F1 team and their principal sponsor, with its removal allowing the F1 team's (winning) performance influence to emerge. Further exploration of the individual BP-dimension results in a MANCOVA analysis confirmed the general pattern of main-effects and covariate influence.

The functional-based sponsor relationship had the greater impact on the BP congruency of the F1 team and sponsor. The very strong relationship accounted for 60% of the variance of the dependent variable (assessed by partial  $\eta^2$ ), holding constant the level of fan identification.

The F1 team's (winning) performance had the smaller impact on the BP congruency of the F1 team and sponsor. The weak relationship accounted for only 3% of the variance in the dependent variable, holding constant the level of fan identification.

Fan identification was found to have a significant, moderate influence as a covariate. Its inclusion allowed the F1 team's winning performance to emerge as a significant influence on the BP congruency between team and sponsor, with a similar influence evident in the individual BP-dimension results. Further, fans that identified more highly with the team had smaller congruence scores, thus indicating a more efficient image transfer.

The findings of this study illustrate the practical benefits for F1 and sports-sponsorship practitioners in assessing the effectiveness of the brand image-transfer process, particularly pertaining to brand personality. In light of the large expense associated with being a F1 sponsor, these findings suggest that sponsors should give strong consideration to the functional similarity or congruency between their product/brand and the F1 team in order to maximise the impact of their sponsorship investment. This is particularly relevant for brand image-building, reinforcement or change situations, where F1-related leveraging activities could be used to emphasise the aspects of the functional similarity between their brand and their sponsored F1 team. Firms with less functionally similar brands may be better served with a co-sponsor or trade link-up role that would involve a smaller investment. This would particularly be relevant for firms with more general awareness, exposure, networking or corporate-hospitality sponsorship objectives. Alternatively, these less functionally similar firms could use their marketing communications to highlight the link (image or otherwise) between them and the F1 team.

Even though a team's (winning) performance had a weak effect on the image-transfer process, team performance is still an issue worth sponsor consideration. Weak-performing teams can find it difficult to attract sponsor funds and tend to attract significantly smaller amounts than leading F1 teams (BBC 2006). This difficulty can hamper their ability to field a competitive F1 race car driven by the best drivers, which in turn lessens their chances of winning, thus creating a potential downward spiral. Poor-performing teams are likely to be on screen less during the race (Arthur, Dolan & Cole 1998), which lessens the potential for awareness building by sponsors. Winning considerations should also take into account the apparent moderating effect of fan identification.

The covariate influence of fan identification suggests that F1 team sponsors could benefit from using communication campaigns targeted at highly identified fans, such as registered team (or 'race club') members and subscribers to a team's newsletters, team merchandise purchasers (e.g. by Web/mail order), as well as readers of F1-related magazines and Websites. It also suggests that F1 teams should look at increasing the ways in which fans can become more involved with their team (e.g. interactive Websites featuring weekly driver chat sessions), so as to heighten their level of involvement, which can then make the team more attractive to potential sponsors.

In light of the team's winning performance having a weaker influence on the image-transfer process and fan identification's apparent role in attenuating this influence, sponsors may wish to ascertain the importance of winning for their target market. Fan identification research has identified that 'winning is everything' for some sports fans, whilst 'how you play the game' and competing for 'the love of the game' is important to other fans (Sukhdial, Aiken & Kahle 2002, Campbell, Aiken & Kent 2004). Therefore, understanding whether just competing in F1 or winning in F1 is important to the target segment could be factored into the selection of 'any' F1 team or a winning F1 team in order to maximise the potential sponsorship impact.

Limitations of this research involve its focus on the Australian F1 motor sport market as assessed by a cross-sectional sample of F1 fans that came from one major Australian metropolitan market. Similarly, only four F1 team brands were investigated that represented the extremes of winning performance, and only one (principal) sponsor relationship was assessed. Thus, caution should be used in extrapolating these findings to the broader F1 motorsport segment in general and to other motorsport segments and countries.

Therefore, future research could further investigate fan identification's role in influencing the efficiency of image transfer from the F1 team to the sponsor, such as having fans rate their favourite team, and in other team-based sporting contexts, such as soccer, rugby union and basketball. As this study focused solely on functional similarity, future research could also investigate the extent to which image similarity (Gwinner & Eaton 1999) of the F1 team and sponsor also affects the image-transfer process. Further investigation is also needed to better understand the nature of the influence of the team's (winning) performance on the image-transfer process and what role fan identification plays. Finally, this study focused on fan perceptions of the F1 team as a whole, although individual drivers may have a larger media profile than their team (e.g. Michael Schumacher and Ferrari) with a devoted fan base (Dalakas & Levin 2005), thus warranting further investigation.

In conclusion, the findings of this study support and extend prior sport event-sponsorship, image-transfer congruency research to the motor sports-team context. The results suggest that, when controlling for fan identification, organisations can leverage their image-transfer sponsorship investments by considering the degree of functional similarity with the F1 team and the F1 team's (winning) performance. Fan identification's significant covariate influence suggests that this factor also needs consideration when making sponsorship decisions.

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