The Animosity Transfer Process: Why consumers denigrate foreign sponsors

Journal: International Marketing Review

Manuscript ID: IMR-06-2019-0155

Manuscript Type: Original Article

Keywords: animosity, agonistic emotion, fit, attitude, Sponsorship, preannouncement
The Animosity Transfer Process: Why consumers denigrate foreign sponsors

Abstract

Purpose

Sponsorships involving foreign brands are ubiquitous, but those involving a company from an animosity-evoking country can adversely affect rather than enhance domestic consumers’ attitude towards the brand. This paper seeks to explain the mechanisms by which brand denigration occurs, introducing and validating a model entitled the animosity transfer process.

Design/methodology/approach

Study 1A tests the animosity transfer process, utilizing a scenario in which English consumers react to a German brand sponsoring the England soccer team. Study 1B assesses the generalizability of the model in the context of Indian consumers’ responses to sponsorship of their cricket team by a Chinese company. Study 2 returns to an England-Germany country dyad, testing whether priming consumers with information about the sponsorship prior to a full announcement, attenuates or intensifies the impact of animosity on the studied outcomes.

Findings

The three studies demonstrate that when consumers learn of a sponsorship, it triggers an evaluation process in which the agonistic emotion (anger) a person feels plays a pivotal role. More intense emotional appraisals weaken perceptions of sponsor-sponsee congruence, which together act as consecutive process variables mediating the relationship between animosity and sponsor favorability. Providing consumers with advanced warning (preannouncement) of the sponsorship fails to mitigate the detrimental process, actually amplifying it further.

Originality/value

The animosity transfer model aids understanding of the mechanisms by which animosity affects brand attitude for foreign (outgroup) sponsors. It identifies how animosity generates agonistic emotions,
which weakens perceived fit between the sponsor and sponsee, leading to adverse consumer
responses.

Keywords
Animosity, agonistic emotion, fit, attitude, sponsorship, preannouncement
INTRODUCTION

German discount supermarket Lidl, on becoming an official sponsor of the England soccer team, divided public opinion. Some England supporters welcomed the additional finance for the national team. But, not all thought this way. British newspaper columnist Marina Hyde wrote sarcastically: “Did you fight in two World Wars so Germany could become official sponsor of the England football team?” Indeed, one unhappy reader replied: “It’s like all their bombing was wasted effort when they could have done this all along!” Another commentator wrote: “Nasty foreigners undermining the development of our local teams,” while one reader of a related article, jubilantly shared: “I will never shop there now!”

In contemporary economies, brand managers often turn to foreign markets to sustain and grow (e.g. Miocevic and Morgan 2018). Sponsoring domestic organizations or events can facilitate market entry and cut-through for foreign entrants and this is an increasingly popular strategy (Cornwell 2014). For instance, in the 2018/19 season, all but one of the 20 shirt sponsors of English Premier League soccer clubs were foreign owned companies (Oakes 2018). However, despite its ubiquity, such investments do not automatically guarantee foreign brands a place in the hearts and minds of domestic consumers (Meng-Lewis et al. 2013, Lee and Mazodier 2015). Indeed, prior research suggests that domestic consumers are inherently less favorable towards foreign sponsors (Woisetschläger et al. 2017), an outcome which is consistent with the view that in-group brands tend to automatically generate more positive responses than out-group equivalents (Choi and Winterich 2013).

If making a foreign sponsorship work is already difficult, it becomes even more challenging when domestic consumers hate the brand’s Country-Of-Origin (COO)- as highlighted in some responses in the opening vignette to a German brand (Lidl) sponsoring the England soccer team. The simultaneous pursuit of foreign / cross-border sponsorships in an environment of fraying international
political cooperation and growing nationalism and consumer resentment toward out-groups (Bonikowski 2017), highlights the pressing need for managers to understand how animosity toward their brand’s COO might influence the effectiveness of their marketing efforts. Yet, as argued by Cornwell and Kwon (2019) in their state-of-the-art article, prior research fails to account for the complexity of current international marketing ecosystem, particularly in the sponsorship domain. They acknowledge rivalry as an external factor that, when in play, affects sponsor and partner engagement as well as consumer responses, presenting a very different dynamic to traditional sponsorship contexts. Like Cornwell and Kwon (2019), we categorize animosity between nations as one such form of rivalry. Nonetheless, to date insight remains sparse, with only two studies capturing the direct negative effect that consumer animosity has on sponsorship effectiveness (Meng-Lewis et al. 2013, Lee and Mazodier 2015). While both offer valuable findings, little remains known about the psychological process underpinning this denigration. Responding to calls for a better understanding of the psychological processes motivating consumer phenomena (Marder et al., 2018), we unpack at the granular level how animosity shapes consumer attitudes towards a foreign brand when it is announced as a partner in a major domestic sponsorship.

Underpinning the research, we draw on twenty years of scholarly work relating to consumer animosity (Klein et al. 1998, Riefler and Diamantopoulos 2007), as well as recent advances in emotion research (Lerner et al. 2015, Lerner and Tiedens 2006, Harmeling et al. 2015). Building on these foundations, we introduce the *animosity transfer process*, delineating the route by which consumer animosity towards a sponsor’s country-of-origin affects brand attitude. The theory posits that brand denigration hinges on the integral agonistic emotion (anger) a consumer feels when they learn about a foreign brand sponsoring a domestic object (or entity). In turn, cognitive processing ability changes, which diminishes perceptions of congruency or fit between the two partners. In search of a remedy, we explore whether foreign brands are able to mitigate the degree of denigration by providing advanced warning about the sponsorship but withholding the brand name and its COO. Drawing upon two diverging streams of research on preparing people for bad, or unpleasant, news in the management (Bies 2013) and psychology (Bar-Anan et al. 2009) literatures, we formally test these competing
perspectives and establish whether a preannouncement strategy of this type attenuates or amplifies the
denigration native to the animosity transfer process.

We make three main contributions to the international marketing and sponsorship literatures. Firstly, we extend understanding of how animosity transfers to forge brand responses – in particular brand favorability. Previous animosity research generally (Klein et al. 1998, Riefler and Diamantopoulos 2007), and within the sponsorship domain (Meng-Lewis et al. 2013, Lee and Mazodier 2015), specifies and tests the direct effect of animosity on selected dependent variables. The latter includes important outcomes such as willingness to purchase (WTP), brand attitude, product avoidance, and word-of-mouth (WOM). However, as noted by Cakici and Shukla (2017), the theoretical underpinnings of animosity research remain underdeveloped, and there is a need for a finer-grained perspective, unpacking the mechanisms by which animosity impacts consumer responses. We demonstrate how animosity, by giving rise to agonistic emotions, weakens perceptions of perceived fit between the sponsor and sponsee, which in turn adversely affects brand attitude.

Second, the animosity transfer process provides a foundation for future in-group / out-group sponsorship research, which has only recently discovered a “dark-side”, with fans of rival teams denigrating rather than endorsing brand sponsors (Angell et al. 2016, Bergkvist 2012, Grohs et al. 2015, Olson 2018). In so doing, our research contributes to the emerging communications literature regarding in- and out-group dynamics in a multinational context (Demangeot et al. 2015). Of particular importance is how the animosity transfer process captures a consumer’s integral emotional state after a sponsorship announcement, which mediates their subsequent brand evaluation. Poels and Dewitte (2019) recently lamented the lack of communications research that includes or even considers consumers’ emotional states when tasked with evaluating new information; for which we evidence to be a well-founded concern.

Finally, the paper presents important implications for international brand managers relating to the management of sponsorship announcements. Managing news that may lead to adverse consumer
reactions is an increasing concern, particularly in light of growing consumer-to-consumer communication via social media, with content triggering high arousal emotions such as joy and anger more likely to be shared (Berger and Milkman 2012). Using preannouncements is often presented as a means for preparing consumers for bad news, reducing the generation of felt emotion (Bies 2013). However, justifying empirical evidence is scant and our analysis find this strategy, in the context of sponsorship announcements by brands with an animosity inducing COO, not merely ineffective but counterproductive.

We conduct and present three studies. Study 1A tests the theory’s baseline model utilising a scenario in which English consumers’ respond to a German brand sponsoring the England soccer team. Study 1B extends the generalizability of the model by applying it to a different animosity context, using a refined study design, sample and country dyad, with fieldwork this time collected in India. In study 2 we return to an England-Germany country dyad but test whether priming consumers with information about the sponsorship works to attenuate (or intensify) the impact of animosity on the studied outcome.

CONCEPTUAL DEVELOPMENT

Conceptually, animosity incorporates two main elements: (i) a perception of “the other” (out-group), with characteristics regarded as different from the individual’s in-group and (ii) enmity toward the out-group(s). Animosity is an attitude towards a specific foreign country which comprises both cognitive and affective elements (Bagozzi et al. 1999). Previously, researchers mainly studied animosity stemming from war-related rather than economic-related events, although both correlate strongly with overall measures of animosity (Klein et al. 1998, Shimp et al. 2004). To demonstrate how animosity transfers onto, and works to denigrate, consumer attitudes toward a foreign sponsor brand, we test the model in Figure 1. Before this, we briefly outline the four constructs in the model comprising the animosity transfer process, mapping the relationships between each (see Figure 1).

Insert Figure 1 about here
Emotions are “a general category for mental feeling processes” (Bagozzi et al. 1999, p.185), strongly associated with action tendencies, such as fighting when angry or crying when sad, and activated by specific incidents or events (Lazarus 1991). Since an incident may trigger strong emotional responses in one person but have no effect on another, it is the psychological appraisal of the incident that determines the emotion felt. The Appraisal Tendency Framework (Lerner and Keltner 2001) offers a sophisticated model of emotional responses. Rather than clustering emotions simply by valence – positive or negative – the ATF differentiates each on the basis of different appraisal dimensions.

Anger endures, especially when responsibility or blame for an incident lies with others, is deemed unpleasant, unnecessary and outside the control of the appraiser (Lerner et al. 2015). Research shows that people exhibiting high levels of animosity can experience agonistic emotion (anger) just by thinking about the country (Harmeling et al. 2015) - although emotions tend to be more intense when a specific trigger event or emotion-activating incident is experienced (Lerner, Li, Valdesolo, & Kassam, 2015). Scholars refer to this as integral emotion since it occurs in response to a specific stimulus. In keeping with these insights, we expect that receiving news of a sponsorship involving a foreign brand – the emotion activating incident – will curate more intense emotional responses amongst people with higher animosity towards the brand’s COO. Since blame for the sponsorship is easily allocated or laid upon one or both partners, whereby the broader appraisal is likely to reveal the situation as being unpleasant and unnecessary (Lerner et al. 2015), it follows that agonistic emotion is the prevailing response. Consequently, the first link in the animosity transfer process is validated when:

$$H_{1a} \text{ Higher animosity towards a foreign country (out-group) is positively associated with feelings of agonistic emotion (anger) following news of a foreign brand entering into a sponsorship arrangement with an in-group object.}$$

**Perceived fit**

Fit here represents the degree of perceived compatibility between partners (Mazodier and Quester 2014). We expect that evaluations of fit weaken as agonistic emotion increases, rationalized by the
fact that anger limits depth and breadth of cognitive processing (Lerner and Tiedens 2006). When people experience agonistic emotion they experience a narrowing of situational construal, akin to “tunnel vision” (Lerner and Tiedens 2006). Cognitive resources are redistributed to focus on the emotion-activating event, which normally comes at the sacrifice of thoughtful and deliberative decision-making (Lazarus 1991). Agonistic emotion stimulates heuristic, less calculative, processing of novel stimuli (Lerner and Tiedens 2006), causing the recipient to focus more on anger-related information, which comes at the expense of other non-anger inducing cues (Lerner and Tiedens 2006). If agonistic emotions lead to evaluations based more on the trigger(s) of those emotions, at the expense of other salient clues, we expect that agonistic emotion decreases the likelihood of perceiving a good fit between the sponsor and sponsee (i.e. finding any merit / rationality in the sponsorship) compared against those who do not experience anger might find. As such:

\[ H_{1b}. \text{Higher agonistic emotion is negatively associated with perceived fit between sponsorship partners.} \]

Favorability (post-announcement)

Studies in sponsorship consistently find fit to be a determinant of positive changes in brand attitude (e.g. Pappu and Cornwell 2014). In line with congruency (Cornwell 2014) and spreading activation theories (Anderson 1983), congruent objects stored as separate schemas in the brain are more easily scanned and retrieved from memory. Sponsorships perceived as better fitting should therefore be more fluently processed, causing the evaluator a heightened level of satisfaction and gratification, which should ultimately spill over to enhance their attitude towards the foreign brand (Meyers-Levy and Tybout 1989). Favorability captures the relative degree of attitudinal change a person experiences as a consequence of the marketing effort (Speed and Thompson 2000), and should yield the following outcome:

\[ H_{1c}. \text{Higher perceived fit between sponsorship partners is positively associated with more favorable attitudes to the foreign brand.} \]
In line with the animosity transfer process model, each “link” in the chain should be significant, ultimately denoting the mechanism by which animosity indirectly, and negatively, influences changes in sponsor brand favorability.

H1d. Agonistic emotion and perceived fit, in turn, mediate the negative relationship between animosity and favorability towards the foreign brand.

Attention now turns to strategies that might be employed to manage and mitigate the detrimental effects of animosity. In their sponsorship ecosystem model, Cornwell and Kwon (2019) identify the role of sponsorship activation for determining consumer responses to new partnerships. We consider whether activating a sponsorship using a preannouncement prior to a full announcement moderates its effect in contexts where animosity is likely to be problematic.

Preannouncements are the release of information prior to any formal execution of news. They are often used prior to official brand, product and promotional launches (Thorbjørnsen et al. 2015). Preannouncements can create buzz and excitement for new products and designs, as well as, in a sports context, new players, merchandise and news regarding sponsorship deals. Conceptualizing preannouncements as a form of future-framed marketing, Dahlén et al. (2011) observed that consumers exhibited higher levels of optimism for preannounced but (currently) unavailable products than they did for equivalent merchandise already available for purchase. In another study, consumers reported a more favourable attitude towards a brand they had previously received a preannouncement or teaser campaign for (Thorbjørnsen et al. 2015). Despite the merits of future-framed marketing in positive contexts (e.g. announcement of a new generation of iPhone), those exhibiting higher levels of animosity towards a foreign country are likely to consider news of a brand from a hated or disliked country sponsoring their sports team
as bad news, and thus, a negative context. The question we address is whether this can be attenuated by priming consumers for this bad news by using a preannouncement? More, specifically, we investigate if preannouncing (i.e. future-framing) a foreign sponsorship, but without naming or exposing its COO, moderates agonistic emotion felt at the point of an official announcement? Two competing perspectives dominate this debate.

_preannouncements mitigate sponsor brand denigration_

Bad news is considered as “information that results in a perceived loss …creating cognitive, emotional or behavioral deficits in the receiver after the news” (Bies, 2013, p.137). Bad news is subjective and perceived differentially depending on a variety of contextual and temporal factors (Barclay et al. 2007). Indeed, one of the theoretical bases for cognitive appraisal theory conceives that emotions are elicited on the basis of how events are interpreted, not on the event itself (Lerner, 2001).

In a review of how professionals deliver bad news as part of their occupation (physicians, coroners, law enforcement officers), Bies (2013) argues that some advanced warning that elucidates or primes people about what might happen without explicitly revealing all details of the negative situation is advantageous. This allows recipients to cognitively forecast different future scenarios, affording an opportunity to imagine how a situation might play out, reducing feelings of surprise. This logic echoes research (Seligman and Binik 1977) that suggests that as ability to predict future possible outcomes increases, (i) a person’s adaptability enhances, and (ii) the resulting intensity of their emotional response (e.g. anger, fear) to the actual outcome reduces. If a sponsorship preannouncement is a form of advanced warning about impending bad news, in this case relating to an animosity inducing COO, then increasing the predictability of the situation and providing time to adjust and prepare for this
should lead to: (i) lower agonistic emotion at the point of full announcement, and (ii) an attenuated main effect of animosity on agonistic emotion. This implies:

$H_{2a}$: Advance warning of the sponsorship leads to lower agonistic emotion, higher perceived fit and favorability towards the brand.

$H_{2b}$: Advance warning of the sponsorship suppresses the salience of animosity in determining agonistic emotion.

Preannouncements intensify sponsor brand denigration

On the other hand, the type of preannouncement we suggest here delivers only partial (not full) information prior to a full announcement. Whilst advanced warning provides the consumer with time to prepare for the possibility of bad news, it also likely introduces a degree of negative uncertainty into the overall evaluation process. Uncertainty is aversive in most situations, especially when an event or situation is framed or likely to be interpreted as negative (Wilson et al. 2005). Uncertainty introduces anxiety, particularly in novel situations (Buhr and Dugas, 2002), or when higher levels of involvement govern the context (Bee and Madrigal, 2013).

Influential research shows that uncertainty also works to shape and forge affective responses towards future events (Bar-Anan et al. 2009). In fact, when people are faced with a negative but uncertain situation, research shows that the subsequent outcome is perceived as far more unpleasant than when the same event is framed as certain. This is referred to as the uncertainty intensification principle (Bar-Anan et al. 2009). Drawing a parallel to this research, we posit that using a preannouncement introduces negative uncertainty, which is most salient for people exhibiting higher levels of animosity towards the (unrevealed) brand sponsor’s COO. Uncertainty is also linked to heightened curiosity, which generally protracts affective responses
when bad news is made concrete (Bar-Anan et al. 2009). Since consumers are likely to feel a heightened curiosity, interest and emotional engagement with the uncertain situation prior to the full announcement of the sponsor brand, it might be reasonably expected that translate into an amplification of agonistic emotion when it is revealed that the sponsor is from the hated country. Therefore, and in line with the uncertainty intensification principle, the second competing hypothesis is:

$H_{3a}$: Advanced warning of the sponsorship leads to higher agonistic emotion and lower perceived fit and favorability towards the brand.

$H_{3b}$: Advanced warning of the sponsorship amplifies the salience of animosity in determining agonistic emotion.

**STUDY 1A: TESTING THE BASELINE MODEL (ENGLAND-GERMANY CONTEXT)**

Study 1 is an England-Germany dyad, where the source of animosity is predominantly war-based following two twentieth century military conflicts. With the passage of time (70 years) animosity should be mild (compared to some other dyads) but still visible, allowing a more conservative test of the model and each of its central propositions.

**Participants and Procedure**

We recruited respondents from a Qualtrics managed panel. In total 160 participants completed the questionnaire for a small fee (51% male; $\bar{x}_{age} = 45$ years old). Qualification required panel members to be: English citizens from birth, at least 18 years of age, and with some interest in soccer ($>2$ on a seven-point scale: 1=not at all interested, 7 = very interested).
The questionnaire comprised three sections. First, respondents read an article
detailing tensions between countries, such as Croatia and Serbia and China and Japan, in
order to induce honesty and suppress socially desirable responding (Podsakoff et al. 2003),
before indicating their animosity towards Germany. Several control variables (fan
identification, ethnocentrism, prior attitude towards the [sponsor] brand) were also included
here – the latter hidden among requested evaluations for five decoy brands to offset any major
demand effect issues. Second, after a short country-of-origin brand matching exercise (Cakici
and Shukla, 2017) also designed to reduce demand effects, respondents were told that the
England soccer team would be sponsored by German airline Lufthansa in 2018, and shown a
print ad with the tagline, “Lufthansa - Proud Sponsors of the England Football Team”
(Appendix 1). Measures pertaining to the dependent variable and mediators were then
collected in randomized question blocks, along with various demographic and behavioral
variables (e.g. past travel behavior to Germany) (see Figure 1). Finally, we tested if
respondents were able to correctly identify Lufthansa’s country-of-origin. Three people could
not and were removed, leaving an effective sample of 157 respondents.

In choosing the hypothetical sponsor brand, we conducted a pre-test with 84 English soccer
fans (also recruited via a Qualtrics panel). From a randomized list of Germany’s top 45
brands, respondents selected the one that they thought would make the most appropriate
sponsor of the German soccer team. Our motivation here was to select a brand that English
people automatically associate with Germany. In descending order, Adidas (11.9%), BMW
(7.14%), Audi (7.14%), and Lufthansa (4.76%) were most frequently nominated. We selected
Lufthansa as (i) Adidas might be considered an unrealistic choice of partner as Nike is
England’s long-standing kit manufacturer, and (ii) automobile brand Audi formed the
stimulus for Study 3.
 Measures

We measured all items on seven-point Likert-scales (1 = strongly disagree, 7 = strongly agree) unless otherwise stated. Specifically, animosity was assessed using four-items selected from the global measure of Klein et al. (1998) which combines war and economic bases of animosity. Sample items included: ‘I dislike Germany’ and ‘you can never trust Germany’. Cronbach’s alpha (α) was 0.90. We used a two-item measure of agonistic emotion from the scale of Harmeling et al. (2015), derived from Laros and Steenkamp (2005), to capture the extent to which the emotion-activating event – i.e. news of Lufthansa’s sponsorship - made respondents feel ‘angry’ and ‘irritated’ (α = 0.92). As regards perceived fit, we used Speed and Thompson’s (2000) original five-item scale. Sample items included: ‘There is a logical connection between Lufthansa and the England football team’ and ‘The England football team and Lufthansa fit together well’ (α = 0.94). Finally, we applied Speed and Thompson’s (2000) three-item scale to measure brand favorability. It captures the extent to which news of the sponsorship affected respondent’s attitude to the sponsor brand. A sample item was: ‘This sponsorship improves my perceptions of Lufthansa’ (α = 0.96). Table 1 details the full set of items.

 Results

 Measurement Validation. We conducted a confirmatory factor analysis using robust maximum likelihood estimation in Mplus 7.4 (Muthén and Muthén 2015). The analysis included the four focal constructs outlined above, along with several continuous control variables (ethnocentrism, fan identification, and prior attitude to Lufthansa). Overall, according to widely accepted criteria (Hu and Bentler 1999), the results revealed an acceptable fitting model: $\chi^2 (168) = 216.67, p < 0.001$; Comparative Fit Index (CFI) = 0.98; Tucker Lewis Index (TLI) = 0.98; RMSEA = .04, standardized root mean residual (SRMR) =
0.04. In support of convergent validity, all items loaded on their respective constructs ($p$'s < 0.001), with standardized loadings above 0.78, and most importantly, the average variance extracted (AVE) by each factor exceeded the 50% threshold recommended by Fornell and Larcker (1981). Discriminant validity was also confirmed, since each factor’s AVE exceeded the magnitude of its squared correlation with all other constructs, with the highest combination being between perceived fit and favorability (.48) (see Tables 1 and 2). Harman’s single factor test suggested no obvious issues with common method variance.

Insert Tables 1 and 2 about here

Direct and Mediation Analysis. In estimating the baseline model using path analysis we introduced agonistic emotions and perceived fit as process variables serially mediating the relationship between animosity and favorability (see Figure 1). In addition, each endogenous variable (agonistic emotions, perceived fit, favorability) was regressed on nine control variables which included the remaining three constructs specified in the measurement model (ethnocentrism, fan identification, prior attitude to the sponsor), and six single-item variables (gender, age, perceived country-of-origin fit, German friends or relatives, ever visited Germany, sponsor brand use [flown with Lufthansa in the last 24 months]). For parsimony we followed the Becker (2005) two-step approach, retaining only those paths significantly related to the endogenous variables.

We found support for the serial mediation model with all direct paths statistically significant, satisfying $H_{1a} - H_{1c}$. Next, we specified a fully saturated model to determine whether our baseline model required any refinement. Of the saturated model, only the conditional direct path between animosity and favorability was significant ($\beta = -0.17, t = -2.74, p < 0.05$). We
retained this partially mediated specification (Table 3). In the model, the unstandardized coefficient for animosity was positively related to higher (integral) agonistic emotion (H1a: \( \beta = 0.44, t = 3.64, p < 0.01 \)), while agonistic emotion was, as expected, negatively related to perceptions of fit (H1b: \( \beta = -0.47, t = -5.98, p < 0.01 \)). The latter was positively associated with greater favorability (H1c: \( \beta = 0.76, t = 6.26, p < 0.01 \)). These three paths provide *prima facie* evidence of serial mediation, which was confirmed by jointly testing the consecutive process variables. Bootstrapped estimates (5,000 re-samples) for the indirect effect between animosity and favorability towards Lufthansa was negative and statistically significant, since the confidence interval around its estimate excluded zero (\( \beta = -0.16, 95\% \text{ CI: } -0.27 \text{ to } -0.05 \)). Respondents with higher animosity towards Germany reported a larger relative negative change in their attitude towards Lufthansa as a result of the sponsorship, compared to those exhibiting lower animosity, via this indirect path.

Insert Table 3 about here

Regarding the control variables, only two of the 27 paths were significant. As respondents gained a year in age, they reacted more angrily to the sponsorship announcement (\( \beta = 0.03, t = 3.33, p < 0.01 \)) and considered the England-Lufthansa partnership to be a poorer fit (\( \beta = -0.01, t = -2.06, p < 0.05 \)). We compared our partially-mediated model (with control variables) against a plausible alternative specification. Following Bellezza et al. (2017), we switched the sequence of the mediators (perceived fit to agonistic emotion), but the indirect effect was no longer significant (\( \beta = -0.00, 95\% \text{ CI: } -0.03 \text{ to } 0.03 \)), lending further support for the baseline model.
Retreat Emotions. In line with our theory, animosity should engender greater agonistic than retreat (fear) emotions. However, previous research indicates that when people think about a hated country, they might feel either type of emotion (Halperin 2008). To investigate this we created a two-item measure of the retreat emotions scale used by Harmeling et al. (2015), with respondents asked whether they were feeling ‘scared’ and ‘tense’ in light of the sponsorship (α = .77). A paired-samples t-test revealed that the mean score for agonistic emotion (\(\bar{x} = 3.89\)) exceeded that for retreat emotions (\(\bar{x} = 2.64\); \(t = 9.45, df = 156, p < .01\)). We then added retreat emotions as a second parallel mediating path between animosity and fit perceptions in the baseline model. While all paths associated with the agonistic emotion route remained significant and consistent with the serially mediated process described above, paths involving the retreat emotion (fear) were not statistically significant.

Robustness tests. To further test the robustness of the serially mediated model, we replaced the (i) favorability, and (ii) animosity scales, and on each occasion, re-estimated the baseline model. We substituted Speed and Thompson’s (2000) favorability scale with an absolute difference score capturing attitude change. A two-item semantic differential scale (1 = bad / unfavorable, 7 = good / favorable) was collected before (for use as a control variable) (\(t_1\)) and after (\(t_2\)) respondents learned of the sponsorship news, with the latter subtracted from the former. The model remained highly consistent with the one reported above. We also replaced the abridged animosity scale of Klein et al. (1998) with the alternative three-item measure of Harmeling et al. (2015) [there are frequent military disputes between England and Germany, England and Germany are enemies, Germany is a threat to England’s national security]. Again, the overall indirect effect was of comparable size (\(\beta = -0.13, 95\% CI: -0.20\) to -0.06).
Summary

The results of Study 1A provide support for the animosity transfer process. As expected, denigration hinged upon the agonistic emotion consumers felt towards the marketing partnership, which led to poorer perceptions of fit between the foreign sponsor and domestic sponsee, with both consecutive process variables linking higher animosity and the negative change in brand attitude observed in the study. But, does the transfer of animosity to sponsor evaluations work differently in different contexts (country dyad, sponsorship settings)? To assess the generalizability and versatility of the model, we conducted a follow-up study in India.

STUDY 1B: GENERALIZING THE MODEL (INDIA-CHINA CONTEXT)

Method and Procedure

We switched the sport to cricket and country-dyad to India-China where animosity has recently been rising (Bhatia 2016). Respondents were 120 adult Indian male citizens, (\(\bar{x}_{\text{age}} = 33\) years old), who reported having some interest in cricket. Recruited by Qualtrics, they participated in a two-part re-contact study to insert some temporal distance in order to reduce response bias between the collected measurement of animosity and each of the focal endogenous variables. In the first contact, respondents were informed that they would be taking part in a study about foreign travel. Questions about their attitude and familiarity with various domestic and international airlines, including Air China, the hypothetical sponsor, were collected along with the same controls as study 1A. Several days later, all respondents were re-contacted, and 80 completed a second shorter survey (67% response rate), which included a social media advertisement announcing the Indian cricket team’s sponsorship deal
with Air China (Appendix 1). Information on the serial mediators and favorability towards Air China after the sponsorship announcement were collected at this time. All were randomized within the survey software. Following Goodman and Blum (1996), we conducted attrition analysis to determine whether Part 2 respondents (n=80) differed from their Part 1 only (n = 40) counterparts. No differences were found in terms of animosity, fan identification, ethnocentrism, or prior brand attitude towards Air China (t-values < 1.39, p’s > 0.16).

**Measures**

All measures were the same as Study 1A. To increase nomological validity of the model – an important consideration for establishing the robustness of marketing research models (Krautz and Hoffman, 2018) - we included a measure of trait-anger as part of the first contact survey. Trait anger is defined as “stable individual differences in the frequency, duration, and intensity of state anger” (Wilkowski and Robinson 2008, p.4). Previous research suggests that individuals higher in trait-anger: (i) pay more attention to threatening information and (ii) are more reactive to hostile situational cues. Wilkowski and Robinson (2008) found that individuals higher in trait-anger reacted with greater hostility when faced with ambiguous situations, where their attempts at effortful control and regulation proved less successful. We therefore contend that consumers high in trait-anger will consider their animosity to the out-group sponsor’s country-of-origin to be more salient, compared to those lower in trait-anger. Trait-anger was measured with the trait-irritability scale of Caprara et al. (1985). Specifically, (i) I easily fly off the handle with those who don’t listen or understand, (ii) I am always calm (reversed), (iii) I often feel like a firework ready to explode, and (iv) I get annoyed or frustrated more easily than other people I know (1 = strongly disagree, 7 = strongly agree) (α = 0.69).
Results

Results of the replicated serial mediation model consistent with Study 1A (see Table 3 for coefficients), reconfirming $H_{1a}$ to $H_{1d}$. The only exception was the direct path between animosity and brand favorability, which was no longer significant. Full mediation was confirmed by the bootstrapped confidence interval estimate (5,000 resamples) for the indirect effect ($\beta = -0.12$, 95% CI: -0.22 to -0.01).

A moderated-mediation analysis (occurring in the first link of the chain between animosity and agonistic emotion) determined whether denigration was contingent on individuals’ trait-anger, as would logically be expected. Supporting the nomological validity of the model, results revealed that the animosity-trait anger interaction was significant ($\beta = 0.27$, $t = 2.79$, $p < 0.01$). Following Aiken and West (1991), we examined the indirect effect for individuals whose trait-anger scores were one standard deviation above the mean, at the mean, and one standard deviation below the mean. The serial indirect effect of higher animosity on reducing attitudes towards Air China following news of the sponsorship via agonistic emotion and perceived fit was stronger for those higher in trait-anger ($\beta = -0.16$, $t = -1.96$, $p = 0.05$), weaker for those lower in trait-anger ($\beta = -0.03$, $t < 1$, $ns$), while those at the mean ($\beta = -0.10$, $t = -1.90$, $p < 0.06$) were in-between.

Summary

Both studies present evidence supporting the animosity transfer process in a foreign sponsorship context. Next, we turn our attention to a potential managerial remedy for the brand denigration experienced in high animosity-evoking contexts. In particular, we test if
providing consumers with advanced warning of the sponsorship abates some of the agonistic emotion felt at the time of full announcement.

**STUDY 2: SPONSOR PREANNOUNCEMENTS (ENGLAND-GERMANY CONTEXT)**

*Method and Procedure*

We revisited the England-Germany context employed in Study 1A. Respondents were 140 English males (\(\bar{x}_{age} = 56\) years old). Recruited via the Qualtrics panel, respondents participated in a 2 (preannouncement vs. no preannouncement) x 1 between-subjects design. The questionnaire and stimuli were similar to Study 1, except German automobile brand Audi was the hypothetical sponsor (see Study 1, pre-test results). Nine cases were removed from the dataset for failing attention checks, leaving a sample size of 131.

The survey experiment was delivered over two days in a re-contact design (in keeping with Study 1B). During the initial contact, animosity towards Germany and several other countries (as decoys) was collected. At the close of the survey, but only in the preannouncement condition (n = 62), respondents received a newspaper cutting, informing readers that the England team no longer had a main sponsor (factually correct at the time) but were soon to announce the name of a new “foreign” sponsor. In the no pre-announcement condition (n = 69), respondents were thanked for their time and invited to participate in a further study later. Two days after (the re-contact), respondents in both conditions were informed that Audi would become the next sponsor of the England soccer team via a digital advertisement unveiling the relationship (see Appendix 2). After completing several unrelated activities to provide separation between the news and the measures of endogenous variables.
The viability of the manipulation was supported through asking respondents in the preannouncement condition to identify the type of brand (domestic, foreign, no brand) that would next sponsor the England soccer team. All identified the correct answer. In the recontact study, we asked both groups whether the full announcement (of a foreign brand being the main sponsor) was surprising or not (1 = not at all surprising, 7 = very surprising).

In the preannouncement condition, the news was not seen as being as surprising ($\bar{x}_{\text{preannouncement}} = 4.97; \bar{x}_{\text{no preannouncement}} = 5.67; t = -2.17, df = 129, p < .05$), although still above the mid-point. There were no differences in any of the control variables between conditions.

**Results**

**Replication.** Using the aggregated sample ($n = 131$), we replicated the baseline model for a third time. The fully mediated model produced a significant indirect effect of animosity (contact 1) on favorability (recontact) ($\beta = -0.09$, 95% CI: -0.18 to -0.03).

**Tests for moderated-mediation.** As expected, respondents in the preannouncement condition were no different to the no preannouncement condition in terms of animosity ($\bar{x}_{\text{preannouncement}} = 2.59; \bar{x}_{\text{no preannouncement}} = 2.36; t = .87, df = 129, p > .05$). However, in the case of the preannouncement, respondents reported higher agonistic emotion ($\bar{x}_{\text{preannouncement}} = 4.17; \bar{x}_{\text{no preannouncement}} = 3.61; t = 2.01, df = 129, p < .05$), lower perceptions of fit, at a marginal level of significance ($\bar{x}_{\text{preannouncement}} = 2.39; \bar{x}_{\text{no preannouncement}} = 2.84; t = -1.78, df = 129, p = .07$), and a lower level of favorability towards Audi ($\bar{x}_{\text{preannouncement}} = 2.77; \bar{x}_{\text{no preannouncement}} = 3.41; t = -2.41, df = 129, p < .05$). As such, the results support $H_3a$ rather than $H_2a$.

We next tested if the preannouncement moderated the effect of animosity on agonistic emotion. We found marginal support that it did ($\beta_{\text{animosity*preannouncement}} = -0.29, t = -1.69, p < .05$).
.10). A moderated indirect effect of animosity on perceptions of fit ($\beta_{\text{preannouncement}} = -0.19$, 90% CI: -0.33 to -0.09) and favorability ($\beta_{\text{preannouncement}} = -0.14$, 90% CI: -0.33 to -0.06) was also established. Applying 90% bootstrapped confidence intervals to the estimates, the effect of animosity on both outcomes was stronger (and more negative) when a preannouncement was used than in its absence. Consequently, $H_{2b}$ is rejected, whilst $H_{3b}$ has marginal support.

**GENERAL DISCUSSION**

Prior research establishes that sponsorship of domestic entities by foreign brands can lead to negative outcomes for the sponsor (Lee and Mazodier 2015). A corpus of research on animosity within international marketing suggests that rivalry manifesting in antagonistic feelings held by the in-group towards out-group actors (Klein et al. 1998) may account for the ‘dark side’ of sponsorship. Yet, surprisingly little attention has been given to examining animosity within the context of international sponsorship, despite its widespread use.

The animosity transfer process casts light on the mechanisms by which animosity affects brand attitude for the foreign (out-group) partner in an international sponsorship arrangement. Specifically, we extend existing knowledge on the topic (see Meng-Lewis et al. 2013, Lee and Mazodier 2015) by focusing on the underlying process behind the negative effect animosity has on denigrated sponsor brand attitudes in this context. Our focus is on the period immediately following consumers becoming aware of the sponsorship. We show that the agonistic emotion a person feels in response to the news is driven by the animosity they feel to the brand’s COO. Agonistic emotion inhibits cognitive processing which negatively affects assessments of perceived fit and, in turn, brand favorability. Three studies confirm the model, which is generalized to different sports and country dyads.
The model posits that brand denigration hinges on the agonistic emotion (anger) individuals exhibit in response to news of the foreign brand sponsoring the domestic entity. Extant research establishes that emotions influence judgments and decision-making and this goes beyond (bad) good emotions leading to more (un)favorable or (pessimistic) optimistic evaluations (Lerner et al. 2015, Lerner and Tiedens 2006). In the context of foreign brands sponsoring national sports teams, we find that agonistic emotion consistently contributed to poorer perceptions of fit with the domestic partners (England soccer and Indian cricket teams). This is consistent with the functional view of emotions, which regards them as phenomena designed to increase individuals’ adaptive responses to important environmental stimuli (DeSteno et al. 2004). Evolutionary perspectives regard out-groups as a potential source of conflict and rivalry, creating a barrier to in-group goal fulfilment. In this context, emotions are useful to help individuals activate goal-driven tendencies (Böhm et al. 2018). However, agonistic emotions also bias inter-group evaluations (DeSteno et al. 2004); in our case, shaping judgments of dissimilarity and magnifying ill-fitting evaluations with in-group objects.

The animosity transfer process provides a theoretical foundation, based on a nuanced psychological understanding of consumers, for future in-group / out-group sponsorship research. An area recently identified as subject to a “dark-side” is that of inter-club rivalry, whereby fans are seen to denigrate rather than endorse opposition brand sponsors (Angell et al. 2016, Bergkvist 2012, Olson 2018). Our research contributes to this emerging body of work concerned with exposing and then unravelling when brands might experience negative outcomes from sponsorships (Bergkvist 2012, Grohs et al. 2015), in this case, in terms of an international dimension. This is important as often sponsorship outcomes have disappointed brand managers (Cornwell 2014) and there is a need to understand potential reasons for this.
While managers cannot easily control their company’s COO, they can influence how sponsorships are announced. Preannouncements are an often suggested strategy for reducing agonistic emotions (Bies 2013). However, we find no easy solution and such a strategy, in the context of animosity inducing sponsorships, proved as if it could be counterproductive. Indeed, we find support for the (negative) uncertainty intensification principle in this context (Bar-Anan et al. 2009). In an unreported follow-up study we explored whether this result might be attributable to the word “foreign” being used in the preannouncement stimuli. Converting the term to “an international brand…” which could be interpreted as having a more positive connotation, only served to replicate the existing results. This draws attention to other potential strategies for reducing such adverse effects in international marketing. For example, one approach, for use in cases which generate low to moderate levels of animosity, could be counteracting primes which provoke alternative, more desirable emotions have been found to be effective in regulating aggression (Meier et al. 2006). For instance, by inducing individuals to experience compassion can lead to enhanced perceptions of similarity with out-group members (Han et al. 2007). In the sponsorship context, this might be achieved by focusing on similarities in culture, or common goals, beliefs and values. For instance, communications might appeal to individuals’ moral identity (Choi and Winterich 2013) by stressing how grassroots sport, community engagement, and disadvantaged groups will all benefit from the partnership. A second approach might involve making individuals aware of their own inherent biases. For instance, Lerner et al. (1998) showed how conscious monitoring of mental processes reduced the impact of incidental anger on punitive attributions. In an analogous manner, Schwarz and Clore (2003) found individuals reported greater satisfaction with their lives on sunny, as opposed to rainy days, but only when their attention was not drawn to the weather. For foreign sponsors, a cognitive-awareness
approach might entail reminding consumers, “don’t let your feelings about Country X, cause you to miss out on this great deal”.

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

We tested our model in a sports sponsorship context. Whilst this is the most common form of sponsorship, future research should test the generalizability of the animosity transfer process in other international sponsorship settings (e.g. conferences) which may not be so emotionally charged. Furthermore, while we have no reason to doubt the ecological validity of our model, validation using real-time partnerships would be beneficial and insightful, albeit practically difficult to operationalize, especially since marketing managers typically shroud in secrecy such partnerships before their formal announcement. In addition, we utilized favorability (marginal change in attitude to the sponsor following the announcement) as the outcome variable. This was appropriate given the application to sponsorship (Speed and Thompson 2000). Yet, in other contexts, alternative outcome variables (e.g., willingness to pay, ownership, word of mouth, forgiveness) may also need to be considered. Likewise, we only measured the effects at a single point in time, namely immediately following the sponsorship announcement. Given that animosity has been found to change over time (Lee and Mazodier 2015), subsequent studies should examine our model under dynamic temporal conditions.

REFERENCES


Figure 1: Conceptual Model of the Animosity Transfer Process

Control Variables
Prior Attitude, Ethnocentrism, Fan identification, Country-of-Origin Fit, Female, Age, Visited outgroup country, friends/family in outgroup country, sponsor-brand ownership (past).
Appendix 1: Stimuli used in Studies 1A and 1B
Appendix 2: Manipulation Stimuli used in Study 2

Breaking News

The FA would like to take this opportunity to inform the English public that a new OFFICIAL SPONSOR for the England Football Team has been chosen.

The selected company is FOREIGN. The name of the new sponsor brand will be made public very soon.
Proud Sponsors of England

Audi
Vorsprung durch Technik
Table 1: Descriptive Statistics and Confirmatory Factor Analysis (Study 1)

<table>
<thead>
<tr>
<th>Factor</th>
<th>Label</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Standardized Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animosity [AVE = .70, CR = .90, IV]</td>
<td>ANI1  I dislike Germany.</td>
<td>2.83</td>
<td>1.56</td>
<td>.78 (.04)</td>
</tr>
<tr>
<td></td>
<td>ANI3  I will never forgive Germany.</td>
<td>2.27</td>
<td>1.51</td>
<td>.81 (.05)</td>
</tr>
<tr>
<td></td>
<td>ANI4  Germany is not reliable.</td>
<td>2.46</td>
<td>1.42</td>
<td>.83 (.04)</td>
</tr>
<tr>
<td></td>
<td>ANI5  You can never trust Germany.</td>
<td>2.42</td>
<td>1.60</td>
<td>.91 (.03)</td>
</tr>
<tr>
<td>Agonistic Emotions [AVE = .84, CR = .91, Mediator 1]</td>
<td>AE1  Angry</td>
<td>3.75</td>
<td>1.71</td>
<td>.87 (.04)</td>
</tr>
<tr>
<td></td>
<td>AE2  Irritated</td>
<td>4.04</td>
<td>1.85</td>
<td>.96 (.03)</td>
</tr>
<tr>
<td>Perceived Fit [AVE = .76, CR = .94, Mediator 2]</td>
<td>PF1  There is a logical connection between Lufthansa and the England soccer team.</td>
<td>2.80</td>
<td>1.53</td>
<td>.78 (.07)</td>
</tr>
<tr>
<td></td>
<td>PF2  The England team and Lufthansa fit together well.</td>
<td>2.87</td>
<td>1.53</td>
<td>.95 (.02)</td>
</tr>
<tr>
<td></td>
<td>PF3  It makes sense to me that Lufthansa sponsors the England soccer team.</td>
<td>2.72</td>
<td>1.34</td>
<td>.94 (.02)</td>
</tr>
<tr>
<td></td>
<td>PF4  The image of the England soccer team and Lufthansa are similar.</td>
<td>2.68</td>
<td>1.49</td>
<td>.84 (.04)</td>
</tr>
<tr>
<td></td>
<td>PF5  Lufthansa and the England soccer team stand for similar things.</td>
<td>2.99</td>
<td>1.49</td>
<td>.82 (.04)</td>
</tr>
<tr>
<td>Favorability [AVE = .90, CR = .97, DV]</td>
<td>FAV1  This sponsorship makes me feel more favorable to Lufthansa.</td>
<td>3.36</td>
<td>1.39</td>
<td>.96 (.01)</td>
</tr>
<tr>
<td></td>
<td>FAV2  This sponsorship improves my perception of Lufthansa.</td>
<td>3.43</td>
<td>1.47</td>
<td>.96 (.01)</td>
</tr>
<tr>
<td></td>
<td>FAV3  This sponsorship makes me like Lufthansa more.</td>
<td>3.32</td>
<td>1.48</td>
<td>.93 (.02)</td>
</tr>
<tr>
<td>Fan Identification [AVE = .82, CR = .90, Control]</td>
<td>FAN-ID1  Others (friends, family) see me as a big fan of the England soccer team.</td>
<td>4.41</td>
<td>1.70</td>
<td>.94 (.12)</td>
</tr>
<tr>
<td></td>
<td>FAN-ID2  I see myself as a big fan of the England soccer team.</td>
<td>4.67</td>
<td>1.70</td>
<td>.87 (10)</td>
</tr>
<tr>
<td>Prior Attitude to the Sponsor Brand [AVE = .89, CR = .94, Control]</td>
<td>ATT1  Bad-Good</td>
<td>4.64</td>
<td>1.07</td>
<td>.93 (.03)</td>
</tr>
<tr>
<td></td>
<td>ATT2  Unfavorable-Favorable</td>
<td>4.55</td>
<td>1.04</td>
<td>.96 (.03)</td>
</tr>
<tr>
<td>Ethnocentrism [AVE = .79, CR = .92, Control]</td>
<td>ETH1  It is not right to purchase foreign products because it puts English workers out of jobs.</td>
<td>2.92</td>
<td>1.54</td>
<td>.84 (.05)</td>
</tr>
<tr>
<td></td>
<td>ETH2  We should purchase products manufactured in England instead of letting other countries get rich off us.</td>
<td>3.92</td>
<td>1.81</td>
<td>.86 (.03)</td>
</tr>
<tr>
<td></td>
<td>ETH3  We should not buy foreign products because this hurts England business and causes unemployment.</td>
<td>3.29</td>
<td>1.67</td>
<td>.96 (.02)</td>
</tr>
</tbody>
</table>

Legend: AVE = average variance extracted; CR = composite reliability.
### Table 2: Correlation Table (Study 1)

<table>
<thead>
<tr>
<th>FACTOR</th>
<th>ANI</th>
<th>AE</th>
<th>PF</th>
<th>FAV</th>
<th>Fan-ID</th>
<th>ATT</th>
<th>ETH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animosity (ANI)</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agonistic Emotions (AE)</td>
<td>.38**</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived Fit (PF)</td>
<td>-.25**</td>
<td>-.59**</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Favorability (FAV)</td>
<td>-.37**</td>
<td>-.50**</td>
<td>.69**</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fan-ID</td>
<td>-.10</td>
<td>-.05</td>
<td>.16*</td>
<td>.14</td>
<td>1.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prior Attitude to Sponsor Brand (ATT)</td>
<td>-.48**</td>
<td>-.27**</td>
<td>.24**</td>
<td>.29**</td>
<td>.17*</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>Ethnocentrism (ETH)</td>
<td>.55**</td>
<td>.31**</td>
<td>-.21**</td>
<td>-.23**</td>
<td>-.04</td>
<td>-.32**</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Key: ** sig < .01 level; * sig <.05 level  
Values below the diagonal are factor inter-correlations
Table 3: Path Analysis Results for Studies 1A and 1B (Unstandardized Coefficients)

<table>
<thead>
<tr>
<th>Hypothesis and Path Description</th>
<th>Study 1A (n = 157)</th>
<th>Study 1B (n = 80)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Initial Model</td>
<td>Replication Model</td>
</tr>
<tr>
<td><strong>Direct Paths</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Animosity $\rightarrow$ Agonistic Emotion</td>
<td>.44**</td>
<td>.46**</td>
</tr>
<tr>
<td>Agonistic Emotion $\rightarrow$ Perceived Fit</td>
<td>-.47**</td>
<td>-.25*</td>
</tr>
<tr>
<td>Perceived Fit $\rightarrow$ Favorability</td>
<td>.76**</td>
<td>.84*</td>
</tr>
<tr>
<td>Animosity $\rightarrow$ Favorability</td>
<td>-.17*</td>
<td>-.01^NS</td>
</tr>
<tr>
<td><strong>Moderated Paths</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Animosity*Trait_Anger $\rightarrow$ Agonistic Emotion</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Key: ** sig < .01 level; * sig < .05 level