

A Stranger's Touch: Effects of Accidental Interpersonal Touch on Consumer Evaluations and Shopping Time

BRETT A. S. MARTIN

Brett A. S. Martin is professor of marketing at the Queensland University of Technology, 2 George Street, Brisbane QLD 4000, Australia (brett.martin@qut.edu.au). The author thanks John Deighton, Debbie MacInnis, Dawn Iacobucci, Sekar Raju, Peter Nuttall, Maria Thompson, Amanda Wanstall, Joe Cannon, Judy Drennan and the members of the Services Innovation Research Program. Thanks are also extended to the Editor, Associate Editor and reviewers for the constructive suggestions which enhanced the research.

Abstract

This article examines an unexplored area of consumer research - the effect of accidental interpersonal touch (AIT) from a stranger on consumer evaluations and shopping times. The research presents a field experiment in a retail setting. This study shows that men and women who have been touched by another consumer when examining products report more negative brand evaluations, negative product beliefs, less willingness to pay, and spend less time in-store than their control (no touch) counterparts. Our findings indicate that the AIT effect is especially negative for touch from a male stranger for both men (same-sex touch) and women (opposite-sex touch). Directions are provided for future study that highlight potential moderators and process

explanations underlying the AIT effect.

During shopping, consumers are sometimes accidentally touched by other consumers. Indeed retail anthropologist, Paco Underhill (1999) highlighted an unusual finding based on years of observational data of shopper behavior in his bestselling book, *Why We Buy*. When women are bumped from behind while shopping (accidental interpersonal touch) they are likely to move away from merchandise they are interested in and frequently leave the store.

Within marketing, touch research has studied consumers touching products (Krishna and Morrin 2008; Peck and Shu 2009), products touched by other consumers (Argo, Dahl, and Morales 2006), products touching each other (Morales and Fitzsimons 2007), or the trait, need for touch (Peck and Childers 2003). Yet no research has examined accidental interpersonal touch. This is surprising given the variety of contexts where consumers can be accidentally touched by strangers (e.g., attending a busy sale).

Prior research suggests intentional touch frequently has a positive effect on consumers. For instance, Hornik (1992a) found that female shoppers who were touched by a confederate posing as an employee as they entered a store, spent more time in-store. Yet for accidental interpersonal touching, Underhill maintains that when women - and to a lesser extent men - are brushed by another consumer in a store, they are likely to cease considering the product and may leave. This is relevant to practitioners since many retailers believe that time spent in-store and purchases are positively correlated (Inman, Winer, and Ferraro 2009).

The purpose of this article is to demonstrate the accidental interpersonal touch effect (AIT) on consumer evaluations and shopping time using data from a field experiment. We investigate

the moderating effect of the gender of the stranger who touches the consumer, and consumer gender. We show that consumers who have been accidentally brushed in a store report less favorable brand evaluations and leave a store earlier than their no-touch counterparts. This AIT effect is more pronounced for consumers touched by male strangers. Psychological mechanisms underlying the AIT effect are not tested, however a range of potential causes are discussed.

BACKGROUND

Touch Effects

Touch is integral to human social life. Touch is our most developed sensory modality at birth (Hertenstein et al. 2006) and prior research has demonstrated a variety of touch effects, ranging from influencing compliance with requests (Dolinski 2010; Guégen, Jacob, and Boulbry 2007) to alcohol consumption (Kaufman and Mahoney 1999). One of the most frequently researched topics in touch is gender differences (Gallace and Spence 2008; Stier and Hall 1984). In this research, we propose that females and males respond more negatively to being touched by male strangers. However since this involves females responding more negatively to opposite-sex touch, and males responding more negatively to same-sex touch we present the logic for each gender separately.

Female Consumers. The present research suggests that female shoppers react negatively to being touched by a female or male stranger. Regarding female touch, prior observational research has documented that touch between females is more common than touch between males (Hall and Veccia 1990; Stier and Hall 1984). However these studies reflect interactions between personal acquaintances rather than between strangers. In a review of touch research, Thayer

(1986) asserts that uninvited touch from a stranger is frequently viewed as intrusive or threatening. We propose that females will respond negatively to touch from a female stranger. The assumption that women may view a stranger's touch as inappropriate is consistent with research which suggests that the intimacy of a touch for women must match the perceived intimacy of the relationship to be viewed as appropriate (Hertenstein et al. 2006). Since it is likely that no intimacy will exist with a stranger the implications of this finding is that touch from a female stranger should be viewed as inappropriate.

We expect AIT effects for females to be heightened when they are touched by a male stranger. A variety of studies suggest that females do not like being touched by male strangers (Hertenstein et al. 2006; Heslin, Nguyen, and Nguyen 1983). For example, Andersen, Andersen, and Lustig (1987) in a survey of 3,877 undergraduate students from 40 universities found opposite-sex touch avoidance was higher for females than males. Thus, touch from a male stranger should be viewed negatively by females.

A question that naturally arises is how does this research that shows a female aversion to touch, particularly from male strangers, reconcile with touch research in marketing, which show positive effects for touch, irrespective of touch confederate gender (see table 1). Prior research suggests that a person's response to touch can be influenced by the context in which the touch occurs and the relationship between individuals (Hertenstein et al. 2006). Typically, the touch confederate in marketing studies performs legitimate service roles such as a store employee and prior studies indicate that touch in a professional context may be viewed positively (Fisher, Rytting, and Heslin 1979; Hornik 1992b). In contrast, a stranger would be expected to follow societal norms for interpersonal distance and implicit rules of conduct in retailing settings (Grove

and Fisk 1997). When these expectations are not met, a negative response is more likely (Hertenstein et al. 2006). In summary, females should regard touch from a stranger negatively; particularly touch from a male stranger.

Insert table 1 about here

Male Consumers. Prior research indicates that men prefer more interpersonal distance than women (Evans and Howard 1973), and males evaluate unjustified touch negatively (Sussman and Rosenfeld 1978). Thus, men should react unfavorably to interpersonal touch. Yet prior studies suggest that men can welcome touch from female strangers. For example, Heslin, Nguyen and Nguyen (1983) found that men regarded touch from a female stranger to be as pleasant as from a close female friend, whereas women only found opposite-sex touch pleasant from a close male friend. Similarly, prior research indicates that men are more likely than women to view social interactions in sexual terms (Levesque, Nave, and Lowe 2006). These studies offer the potential for males to respond favorably to touch from a female stranger.

In this research, we propose that males will respond more negatively to touch from a male stranger. Observational research of people meeting at an airport shows that male same-sex pairs are less likely than female same-sex pairs to engage in touching, that male same-sex touching is for a shorter duration than for females, and such touching tends to involve handshakes (Greenbaum and Rosenfeld 1980). Men have also been found to evaluate same-sex touch more negatively than women (Hertenstein et al. 2006). A range of explanations have been offered in the literature for the male aversion to same-sex touch, including uninvited touch indicating

higher status or dominance (Greenbaum and Rosenfeld 1980; Roese et al. 1992), and concerns of being perceived as homosexual (Dolinski 2010; Roese et al. 1992).

The implication of such findings is that men should respond negatively to being touched by a male stranger. Unlike prior marketing research where the touch confederate adopted a service role, and was proactive in the interaction towards a goal such as choice of meal (Guégen, Jacob, and Boulbry 2007; Hornik 1992a), we propose that unexpected touch from a male stranger will be viewed negatively. Thus, like women, men should react more negatively to touch from a male stranger than touch from a female stranger.

- H1:** Consumer evaluations will be less favorable and shopping times will be shorter in response to accidental interpersonal touch than for the no-touch control group.
- H2:** Consumer evaluations will be less favorable and shopping times will be shorter in response to accidental interpersonal touch from a male stranger than a female stranger.

METHOD

Design and Overview

One hundred and forty-four participants (72 males, 72 females, age: $M = 27.43$ years, $SD = 8.62$ years) were recruited for a field experiment using a 2 (touch: touch, no touch) \times 2 (confederate gender: male, female) \times 2 (participant gender: male, female) between-subjects factorial design. The experiment was conducted in a city in the southern part of England.

Procedure

To recruit participants, two research assistants (male and female) approached members of the public in the main shopping district of the city outside the entrance of the store used for the experiment. The store sold a range of bags and suitcases. Participants were informed that a local university was conducting a project on how consumers viewed shopping. Participants were asked to enter the store, shop as they normally would, and to give their view of a hip bag displayed in the middle of the store. Participants were told they were free to look at other parts of the store before and after viewing the bag if they wished as the researchers were interested in their natural shopping behavior. They were offered £5 (\$8) to participate.

Participants were tested individually and upon their return, completed a questionnaire which included dependent measures and an open-ended suspicion probe of the study's purpose. As the participant was told the study instructions, a confederate inside the store who conducted the touch condition, unobtrusively viewed the discussion to recognize the participant.

Touch Manipulation

Two trained confederates (male and female, 32 and 34 years respectively) were used for the touch/no touch conditions. The touch condition involved a brief, light touch, using the side of the confederate's arm as they brushed past behind the participant as the participant viewed the target product. The confederate ostensibly browsed looking at other products, before brushing past the participant as the confederate walked at normal pace out of the aisle. The duration of the touch

lasted approximately half a second and targeted the middle of the right shoulder blade.

Confederate training ensured that touch was applied consistently.

We chose the shoulder blade as the target area to build on recent touch research (Levav and Argo 2010) and to avoid intimate areas such as the lower waist or buttocks. We used the side of the confederate's forearm for the touch (mid way between wrist and elbow), rather than the hand. Touch with the hand can indicate a desire to communicate (e.g., poke, tap), as hands are purposive devices that are typically used on objects (Ackerman, Nocera, and Bargh 2010).

The no-touch condition was identical to the touch condition except the confederate walked past in close proximity to the participant (approximately 10 centimeters) rather than touching them. The bag was displayed on a wall of similar products which allowed the confederate to look at products without raising suspicion. Research indicates that a distance of 10 cm is perceived as close by English consumers. Remland, Jones and Brinkman (1995) in an observational study of naturally occurring interactions in shopping areas, train stations, and bus stations found that English people maintain an average interpersonal distance of 38.5 cm. Thus a 10cm gap should be perceived as close by the participant.

To verify this assumption, a pretest ($n = 126$) was conducted to measure whether a 10cm gap between a participant and a stranger would be perceived as close by the participant compared with a distance of 40 cm. Perceived closeness was tested using a mean of two scales ("not at all close to me/extremely close to me," "not at all near to me/very near to me," $r = .76$). Results showed that a confederate standing 10 cm from the participant's right shoulder was regarded as significantly closer in personal distance ($M = 5.30$) than a confederate standing at a distance of

40 cm from the participant ($M = 3.21$, $F(1, 118) = 83.18$, $\eta^2 = .41$). No differences for confederate or participant gender were found in perceived closeness ($p > .30$).

Dependent Variables

Brand evaluation was measured on four seven-point scales anchored by “positive/negative,” “favorable/unfavorable,” “high quality/low quality,” and “good/bad.” Items were averaged to form a brand evaluation index ($\alpha = .94$). For willingness to pay (WTP), we used the Becker-DeGroot-Marschak procedure (1964 see also Prelec and Simester 2001) where participants have the ability to buy the product and have no incentive to overstate or understate their true WTP. First, participants stated their WTP. Second, the price of the bag was decided by calculating a random number of reasonable WTPs. Third, a winner was selected. Fourth, if the WTP stated by the participant was higher than the random number price then the bag was sold to that participant (bag sold to participant for £10, retail price = £19.99).

Product beliefs were measured on four seven-point scales (good material quality, easy to wear, zippered compartment, nice design). Items were averaged to form a product beliefs index ($\alpha = .85$). Shopping time was measured in seconds from when the participant entered and exited the store. Store evaluation involved four seven-point scales (“positive/negative,” “favorable/unfavorable,” “high quality/low quality,” and “good/bad”). Items were averaged to form a store evaluation index ($\alpha = .93$).

For cognitive responses, participants were asked to list all thoughts that crossed their minds while they were in the store. Two independent judges coded cognitive response data for the total

number of thoughts, AIT-related thoughts, product or brand-related thoughts and other, irrelevant thoughts, as well as positive, negative, or neutral in valence (+, -, 0). Interjudge reliability was 95% with discrepancies resolved by discussion.

Manipulation and Assumption Checks

As a manipulation check, we used three measures. First, AIT-related thoughts. Second, a customer proximity measure (Argo, Dahl, and Manchanda 2005) of three seven-point scales anchored by “close/far,” “near/distant,” and “next to me/away from me.” Items were averaged to form a customer proximity index ($\alpha = .90$). Third, amongst a series of filler items of in-store characteristics (e.g., lighting, signs) was a seven-point scale measuring attention paid to other customers in the store anchored at “paid a lot of attention/paid very little attention.” Spatial confinement was assessed on two reverse scored seven-point scales anchored by “not wide/wide,” and “narrow/not narrow” from Levav and Zhu (2009). Items were averaged to form a spatial confinement index ($r = .73$).

To test if familiarity with the brand and/or store may have influenced participant responses, brand familiarity and store familiarity were rated on separate single items (not at all familiar/very familiar seven-point scales). We also assessed confederate attractiveness on two seven-point scales anchored by “attractive/unattractive” and “good looking/not at all good looking.” Items were averaged to form a confederate attractiveness index ($r = .79$).

RESULTS

Manipulation and Assumption Checks.

We performed a 2 (touch: touch, no touch) \times 2 (confederate: male, female) \times 2 (participant: male, female) between-subjects ANOVA on AIT-related thoughts, attention to other customers, customer proximity, spatial confinement and confederate attractiveness. This revealed only a main effect for touch on AIT-related thoughts with more AIT-related thoughts in the touch relative to the no-touch condition ($M = .94$ vs. $.00$; $F(1, 136) = 60.75, p < .001, \eta^2 = .31$, see table 2 for means). Touched participants also paid more attention to other customers in the store ($M = 4.26$) than no-touch participants ($M = 3.43$; $F(1, 38) = 10.14, p < .01, \eta^2 = .07$). Further, no main effect for touch was evident for customer proximity between participants in the touch condition and the no-touch condition ($p = .22$). No significant differences were evident for spatial confinement ($p > .19$), suggesting that touch and gender differences did not induce differential aisle width perceptions. Interestingly a significant main effect for touch was evident for confederate attractiveness ($F(1, 136) = 7.70, p < .01, \eta^2 = .05$) with touched participants rating confederate attractiveness lower ($M = 3.70$) than participants in the no-touch condition ($M = 4.19$). Further, participant responses to the suspicion probe indicated that they were unaware of the study's hypotheses.

 Insert table 2 about here

Evaluations and In-Store Shopping Time.

We performed a 2 (touch: touch, no touch) \times 2 (confederate: male, female) \times 2 (participant: male, female) between-subjects ANOVA. This revealed a main effect for touch on brand evaluations, product beliefs, WTP and shopping time. Consistent with Hypothesis 1, the main effect test showed that touched participants rated the brand lower ($M = 3.32$) than participants in the no-touch condition ($M = 4.94$, $F(1, 136) = 63.41$, $p < .001$, $\eta^2 = .32$). There was also a main effect for confederate gender on evaluations with male confederates ($M = 3.83$) resulting in lower evaluations than female confederates ($M = 4.36$, $F(1, 136) = 8.85$, $p < .01$, $\eta^2 = .06$).

A similar pattern of results was evident for WTP (touch: $M_s = \text{£}9.71$ vs. $\text{£}16.10$, $F(1, 136) = 61.85$, $p < .001$, $\eta^2 = .31$; confederate gender: $M_s = \text{£}12.10$ vs. $\text{£}13.71$, $F(1, 136) = 3.94$, $p < .05$, $\eta^2 = .03$), product beliefs (touch: $M_s = 3.89$ vs. 4.90 , $F(1, 136) = 21.80$, $p < .001$, $\eta^2 = .14$; confederate gender: $M_s = 4.10$ vs. 4.68 , $F(1, 136) = 7.28$, $p < .01$, $\eta^2 = .05$), and shopping time (touch: $M_s = 82.26$ seconds vs. 157.67 seconds, $F(1, 136) = 111.47$, $p < .001$, $\eta^2 = .45$; confederate gender: $M_s = 111.60$ seconds vs. 128.33 seconds, $F(1, 136) = 5.49$, $p < .05$, $\eta^2 = .04$).

Consistent with hypothesis 2, this main effect for touch was qualified by a significant touch \times confederate gender interaction on evaluations ($F(1, 136) = 5.88$, $p < .05$, $\eta^2 = .05$). No other interactions were significant ($p > .17$). The touch effect was significant for the male confederate conditions ($F(1, 68) = 53.42$, $p < .001$, $\eta^2 = .44$), and to a weaker extent in the female confederate conditions ($F(1, 68) = 15.49$, $p < .001$, $\eta^2 = .19$). Participants touched by a male confederate gave lower evaluations ($M = 2.78$) than those not touched ($M = 4.88$). Female confederate touch also resulted in lower evaluations ($M_s = 4.99$ vs. 3.87).

 Insert figure 1 about here

A similar pattern of findings was evident for WTP, product beliefs, and in-store shopping time. A significant touch \times confederate gender interaction was evident for WTP ($F(1, 136) = 4.64, p < .05, \eta^2 = .03$), product beliefs ($F(1, 136) = 4.21, p = .05, \eta^2 = .03$), and shopping time ($F(1, 136) = 4.10, p < .05, \eta^2 = .03$). Touch had a significant effect for the male confederate conditions (WTP: $F(1, 68) = 49.68, p < .001, \eta^2 = .42$; beliefs: $F(1, 68) = 22.88, p < .001, \eta^2 = .25$; shopping time: $F(1, 68) = 101.01, p < .001, \eta^2 = .59$), where participants touched by males showed less favorable responses than those not touched (WTP: $M_s = \text{£}8.03$ vs. $\text{£}16.17$; product beliefs: 3.38 vs. 4.83; shopping time: 66.52 seconds vs 156.53 seconds). This touch effect was present to a lesser degree for female confederate touch for WTP ($F(1, 68) = 16.47, p < .001, \eta^2 = .20$) and shopping time ($F(1, 68) = 29.93, p < .001, \eta^2 = .31$), but not for product beliefs ($F(1, 68) = 3.38, p = .07$). As shown in figure 1, female stranger touch resulted in less favorable responses (WTP: $M_s = \text{£}11.39$ vs. $\text{£}16.03$; shopping time: 97.86 seconds vs. 158.81 seconds). Planned comparisons showed male touch resulted in more negative evaluations than female touch ($M_s = 2.78$ vs. $3.87, F(1, 70) = 12.86, p = .001$); a pattern that was repeated for WTP ($M_s = \text{£}8.03$ vs. $\text{£}11.39, F(1, 70) = 7.79, p < .01$), product beliefs ($M_s = 3.38$ vs. $4.40, F(1, 70) = 14.09, p < .001$), and shopping time ($M_s = 66.67$ seconds vs. 97.86 seconds, $F(1, 70) = 10.17, p < .01$).

Overall, touched participants reported less favorable evaluations, WTP, product beliefs, and stayed in the store for a shorter time than no-touch participants. These negative effects were stronger when participants were touched by a male stranger. No differential effects were detected with brand familiarity, store familiarity, and confederate attractiveness as covariates. No significant main effects or interactions were evident for store evaluations ($p > .22$) suggesting the AIT effect is brand-specific and does not also affect global store evaluations.

Regarding what may drive the AIT effect, table 3 displays correlations between the variables. This reveals that AIT thoughts ($r = -.23, p < .01$), negative thoughts ($r = -.37, p < .01$), and attention to other customers in the store ($r = -.17, p < .05$) are negatively associated with WTP. A similar pattern of results was evident for brand evaluations and shopping time. Further, touch was positively associated with more AIT thoughts ($r = .61, p < .01$), more negative thoughts ($r = .74, p < .01$), and negatively associated with perceptions of confederate attractiveness ($r = -.22, p < .01$). These analyses suggest that AIT results in consumers thinking about the AIT event and doing so in a negative manner.

Insert table 3 about here

DISCUSSION

This research examined the effect of accidental interpersonal touching (AIT) between consumers on evaluations and in-store shopping time. We investigated whether consumers who had been accidentally touched by a stranger while studying a product would give lower evaluations and leave a store earlier than those who were not touched. To the best of our knowledge this is the first study to examine how AIT influences evaluations and in-store shopping time. We showed that people touched by a stranger spend less time in the store and evaluate brands more negatively than untouched people. This effect is very strong for both males and females when they are touched by a male stranger. Touch from females is also shown to be negative, including where female strangers touch males and females touch other females. No customer gender differences were identified. How can researchers explain the AIT effect? In the

next section, we discuss potential avenues for future research that may prove useful in better understanding the mechanisms that underlie this phenomenon.

Potential Topics for Future Research on Accidental Interpersonal Touch

Coping and Cognitive Appraisals. One explanation for the AIT effect is indicated by how touched consumers spend less time in-store than people who are not touched. It is plausible that consumers are distancing themselves from the stranger who touched them. Thus, the AIT effect may involve coping strategies, such as avoidant behaviors to alleviate negative affective states (Luce 1998). For example, Lazarus and Folkman's (1984) appraisal-based model of coping suggests that cognitive appraisals (how a person construes an event) influence their emotional and coping responses to that event. Cognitive appraisals involve categorizing an event regarding its significance for well-being. Appraisals consist of primary appraisals (e.g., "Am I in trouble?") and secondary appraisals (e.g., What can and might be done to manage the situation). Primary and secondary appraisals influence the amount of stress an individual experiences and their emotional reaction. We speculate that AIT involves primary stress appraisals where the situation of being touched by a stranger is appraised as threatening. Lazarus and Folkman (1984) suggest that threat appraisals are characterized by negative emotions such as anxiety, fear or anger. Thus an appraisal perspective could prove useful for future research on AIT.

Assuming AIT results in negative emotions, a useful theoretical framework that could assist consumer researchers is the appraisal-tendency framework (Lerner and Keltner 2000). The appraisal-tendency framework examines how different emotions of the same valence (e.g.,

embarrassment and anxiety, both negative valence) can have different effects on judgments. This framework is consistent with research on emotion that suggests that emotions of the same valence differ in their antecedent appraisals (Lerner and Keltner 2000).

An emotion that appears useful for researching AIT is embarrassment. Embarrassment is a negative emotion that results from events that increase the threat of an unwanted evaluation from an audience (Dahl, Manchanda and Argo 2001). Embarrassment can be generated by inappropriate public behavior by other people with whom one is interacting, and can result in distancing behavior from the stressful situation rather than confrontation (Maltby and Day 2000). Hence it is plausible that AIT results in embarrassment which motivates consumers to distance themselves from the individual who has touched them.

Accidental Interpersonal Touch and the Role of Disgust. Another negative emotion relevant to AIT is disgust which involves revulsion in response to an offensive object (Rozin and Fallon 1987), or for AIT, offensive person. Disgust has been highlighted as having powerful effects on consumption (Ariely and Norton 2009). Tybur, Lieberman, and Griskevicius (2009) suggest disgust is comprised of three types: pathogen disgust (disgust elicited by objects likely to contain infectious agents), sexual disgust (motivating avoidance of potential sexual partners or threats to reproductive success), or moral disgust (motivating avoidance of social norm violators). We speculate that moral disgust (e.g., transgressing norms of interpersonal distance) and sexual disgust (e.g., interpreting AIT as sexually motivated) may drive AIT effects. Further, the disgust is elicited by the consumer being touched, and this affect may transfer to the product being evaluated. Thus, future research should investigate if disgust plays a central role here.

Affect-as-Information. The current research shows that AIT results in more negative brand evaluations, but store evaluations remain unaffected. A possible explanation of these findings which warrants future research is whether consumers use AIT-evoked affect as information about the product. Affect-as-information theory (Schwarz and Clore 1983) suggests that consumers use their current affect as a source of information which directly influences judgments. For example, people can employ a “how do I feel about it?” heuristic to infer evaluations from the valence of their feelings (Pham 1998). Thus, the affect-as-information account suggests that negative affect from AIT is misattributed to products being evaluated when the consumer is touched, resulting in affect-congruent judgments.

Future research could also explore the potential for positive affect resulting from AIT that would provide information to the consumer. For example, consider hedonic contexts where consumers may expect and even seek AIT, such as at a rock concert or in a football crowd. In such instances does AIT generate affect-congruent evaluations or is it discounted because of the expected close interpersonal context? Relatedly, we looked at evaluations of an unfamiliar product. Future research should examine the AIT effect where the consumer already holds a positive attitude toward the product. In such instances, consumers may discount the incidental affect or the affect may transfer to their evaluations of the less familiar store instead of the familiar brand.

Arousal. Despite prior research on touch, the notion that interpersonal touch can generate arousal has not been investigated. Shiv (2007) suggests that arousal can provide the mobilizing energy for action tendencies that are recruited by emotion. Hence building on the discussion of appraisals, arousal can influence the intensity of goals that a person activates from appraisal

tendencies in response to a specific emotion. For example, high-arousal anger can result in an individual feeling a stronger urge to punish another individual (Shiv 2007). For AIT, high-arousal (vs. baseline-arousal) may drive a consumer's reduced shopping time after AIT. With respect to cognitive processing, arousal disrupts the systematic processing of information by using cognitive resources for appraisal processes (Schachter and Singer 1962) or focusing attention on physical symptoms (Mandler 1975). Thus, if arousal is part of the emotional response to AIT, then systematic processing of informational stimuli would potentially be reduced.

Thayer (1989) suggests arousal comprises two-factors: tense arousal and energetic arousal. Tense arousal involves a reaction to a real or imagined threat and attention is focused on the threat stimulus whereas for energetic arousal, attention is task-directed. We speculate that AIT, especially from a male stranger, generates tense arousal which motivates consumers to distance themselves from the stranger. Thus future research should consider the role of arousal as a mechanism for AIT effects. Such research can adopt an arousal intensity (high-arousal vs. baseline-arousal) or arousal component (tense arousal vs. energetic arousal) perspective.

Male Same-Sex Touch, Perceived Homosexuality and Status. A question that arises from this research is why do men react so negatively to same-sex touch? Research suggests that men are more concerned than women that same-sex touch could result in them being perceived as homosexuals, and hence avoid such behavior (Derlega et al. 1989; Dolinski 2010). Derlega et al. (1989) found that participants viewing photographs of same-sex and opposite-sex pairs (dyads) regarded male same-sex touch as abnormal and sexually motivated. Prior studies also indicate that men hold more negative attitudes towards homosexuals than women, and that men with

negative attitudes to homosexuals are less comfortable with same-sex touching, and engage in less same-sex touching (Roese et al. 1992).

Similarly, research on masculinity indicates that men are subject to strong normative pressure to endorse traditional heterosexual norms (Connell 1995). In marketing, the influence of masculine expectations on men has been recognized (Holt and Thompson 2004). Martin and Gnoth (2009) suggest that males engage in normative masculine behavior when their collective self is salient, based on concerns of how they will be viewed by other men. Further they show that male expectations of how they will be classified by others in a collective self (vs. private-self) context mediate how men respond to male models in advertising. If we assume that shopping can occur in a collective-self context, then AIT research addressing self-construal, classification expectations, and attitudes towards homosexuality warrant further investigation. Further, a perspective useful for future research relates to status. Henley (1977) suggests that touch communicates status and dominance. Reciprocal touch communicates closeness, but nonreciprocal touch communicates status. Greenbaum and Rosenfeld (1980) argue that male same-sex interactions are strictly governed by concerns of status. Males are socialized to use touches that suggest equal status. They suggest the handshake is symbolic of equal status and can allay dominance threats that can occur between males. This area represents an intriguing approach for consumer researchers to assess whether dominance threat appraisals drive male responses to same-sex AIT.

The Role of Apology. An interesting avenue for future research relates to apology. Apologies can counter the perception that a transgression is linked to an underlying disposition of the offender, and can recognize that harm has been done to another person (Risen and Gilovich

2007). Effects of apologies include reduced avoidance behavior (McCullough, Worthington, and Rachal 1997), reduced negative affect towards a transgressor (Ohbuchi, Kameda, and Agarie 1989), and increased forgiveness (McCullough, Worthington, and Rachal 1997). However prior research has often adopted a dichotomous perspective of apology (apology vs no apology conditions). An exception is Fehr and Gelfand (2010) who examined self-construal and apology type. They found that independent people prefer apologies which emphasize compensation (e.g., an offer to restore equity). In contrast, relational people respond to empathy (e.g., demonstrating concern for one's suffering), and people with a collective self-construal respond to apologies which acknowledge that the transgressor has violated group norms. Relatedly, work on apologies and forgiveness suggests people from collectivist societies view the behavior of others as being influenced more by cultural norms than by their own personal choice (Takaku, Weiner, and Ohbuchi 2001). Thus, considering self-construal and norm salience could offer useful insights to AIT research.

In conclusion, the present research identifies a phenomenon that seeds a number of directions for future enquiry. Our research shows that the accidental interpersonal touch effect can have important consequences for brand evaluations, willingness to pay, product beliefs and in-store shopping time. We hope that the present research motivates others to explore this intriguing area.

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Table 1

Research on Interpersonal Touch in Marketing-Relevant Contexts

Reference	Type of touch	Context and research design	Touch manipulation	Key results
Crusco and Wetzel (1984)	Intentional	Restaurant Touch palm / touch shoulder / no touch design	Female confederate. Touch palm for .5 second. Touch shoulder for 1 – 1.5 seconds.	Touch increases tipping by 25%. No difference between types of touch.
Erceau and Guégen (2007)	Intentional	Second-hand automobile sales Touch/no touch design	Male confederate touched participant's forearm for 1 second.	Touch results in more positive evaluation of touch confederate.
Guégen and Jacob (2005)	Intentional	Restaurant Touch/no touch design	Female confederate touched forearm for 1 - 2 seconds.	Touch results in more tips. Effects for participant gender not significant.
Guégen, Jacob, and Boulbry (2007)	Intentional	Restaurant Touch with meal suggestion / no-touch with suggestion / control design	Male or female confederate touched forearm for 1 second.	Touch results in more compliance with meal suggestion. Effects for confederate gender and participant gender not significant.
Hornik (1992a)	Intentional	Retailing (study 1) Tipping (study 2) Retailing (study 3)	Touched participants' upper arm (duration not specified, study 1).	Touching results in more favorable store evaluations and more purchasing.
		Touch x Confederates gender x Confederates attractiveness x Participant gender design Touch x Participant gender design (study 3)	Male or female confederate touched participants' arm for 1 second (study 2). Female confederate touched upper arm (study 3).	Touching results in more tipping. Touch x Participant gender interaction. Touched female participants have more favorable evaluations of confederate. Touch increased compliance with a product demonstration taste request especially for female participants.
Hornik (1992b)	Intentional	Retailing Data from study 1 Hornik (1992a)	Touched participants' upper arm for 2 seconds.	Touch results in longer shopping time and more favorable store evaluations. Effects for participant and confederate gender non significant. No negative effect

				for male strangers touching participants.
Kaufman and Mahoney (1999)	Intentional	Drinking in bars by pairs of people Touch x Pair gender design	Female confederate touched shoulder for 2-3 seconds.	Touch results in more alcohol consumption when touched by waitress. Men drink more alcohol when waitress touches their social partner.
Levav and Argo (2010)	Intentional	Financial Risk-taking Touch/no touch design (study 1) Touch (shoulder, handshake, control) x Conferate gender (study 2) Prime (secure, insecure) x Touch (study 3)	Touched shoulder for 1 second with palm of female confederate's hand (studies 1 and 3). Shoulder touch or handshake by male or female confederate (study 2).	Shoulder touch by female leads to greater financial risk-taking. Results suggest female shoulder touch evokes feelings of security which influence risk-taking. No effects for touch or handshake by male.
Lynn, Le, and Sherwyn (1998)	Intentional	Restaurant tipping Touch (brief, prolonged, no touch) x Participant gender design	Male confederate touched shoulder for 2 seconds (brief) or 4 seconds (prolonged).	Touch results in larger tipping. No effect for participant gender.
Smith, Gier, and Willis (1982)	Intentional	Supermarket taste request for pizza. Touch/no touch x Participant gender x Conferate gender design	Confederates smiled and touched upper arm "lightly" (duration not specified).	Touch results in more compliance with taste request and higher incidence of purchase. No differences in evaluations.
Stephen and Zweigenhaft (1986)	Intentional	Restaurant tipping Touch x Participant gender design	Female confederate touched shoulder "briefly" (duration not specified).	Higher tips for touch on female participants only.

Table 2

Experiment Cell Means (Standard Deviations) as a Function of Touch, Participant Gender, and
 Confederate Gender

Variable	Touch				No touch			
	Male participants		Female participants		Male participants		Female participants	
	Male stranger (<i>n</i> = 18)	Female stranger (<i>n</i> = 18)	Male stranger (<i>n</i> = 18)	Female stranger (<i>n</i> = 18)	Male stranger (<i>n</i> = 18)	Female stranger (<i>n</i> = 18)	Male stranger (<i>n</i> = 18)	Female stranger (<i>n</i> = 18)
Brand evaluations (seven-point)	2.83 (1.42)	3.79 (1.54)	2.72 (1.16)	3.94 (1.22)	5.12 (.96)	5.28 (1.04)	4.63 (1.29)	4.71 (.94)
WTP (continuous)	£7.05 (5.63)	£11.28 (4.34)	£9.00 (4.03)	£11.50 (6.22)	£14.50 (5.46)	£16.44 (3.45)	£17.83 (4.27)	£15.61 (4.96)
Product beliefs (seven-point)	3.17 (1.09)	4.55 (1.18)	3.60 (.96)	4.25 (1.33)	5.18 (1.33)	5.17 (1.42)	4.47 (1.63)	4.76 (1.22)
Store evaluations (seven-point)	5.09 (1.35)	5.46 (1.09)	5.07 (1.57)	5.09 (.96)	5.38 (1.09)	5.62 (.78)	5.02 (1.57)	5.37 (1.09)
In-store shopping time (continuous)	74.94 (43.82)	113.78 (49.16)	58.39 (25.15)	81.94 (37.96)	151.72 (46.45)	141.78 (41.75)	161.33 (32.32)	175.83 (57.71)
AIT thoughts	.89 (.90)	1.22 (1.31)	.83 (.86)	.83 (.98)	.00 (.00)	.00 (.00)	.00 (.00)	.00 (.00)
Brand-related thoughts	2.50 (1.29)	2.83 (1.34)	2.28 (1.27)	2.50 (1.10)	2.55 (1.42)	2.44 (1.65)	2.44 (1.14)	2.56 (.70)
Total thoughts	3.61 (1.88)	4.27 (1.56)	3.50 (1.79)	3.72 (1.63)	2.67 (1.41)	2.61 (1.72)	2.61 (1.24)	2.72 (.82)
Customer proximity (seven- point)	2.41 (1.06)	2.37 (1.32)	2.59 (1.04)	2.46 (1.30)	2.67 (1.37)	2.75 (1.11)	2.61 (.95)	2.79 (1.24)
Attention to other customers (seven-point)	4.39 (1.57)	4.78 (1.47)	3.89 (1.96)	4.00 (1.18)	3.78 (1.73)	2.94 (1.59)	3.33 (1.41)	3.67 (1.49)
Spatial confinement (seven-point)	4.41 (1.04)	3.78 (1.59)	4.22 (1.31)	4.27 (1.68)	4.03 (.96)	4.16 (1.55)	4.17 (1.21)	3.78 (1.70)
Brand familiarity (seven-point)	1.78 (1.26)	2.55 (2.09)	2.06 (1.86)	2.11 (1.84)	1.89 (1.64)	1.72 (1.04)	2.06 (1.35)	2.17 (1.79)
Store familiarity (seven-point)	3.33 (1.57)	4.11 (1.71)	3.72 (1.36)	3.67 (2.22)	3.22 (2.10)	3.89 (1.97)	3.56 (1.58)	3.44 (2.23)
Confederate attractiveness (seven-point)	2.72 (1.58)	4.03 (1.10)	4.00 (.84)	4.06 (.99)	4.33 (.86)	4.27 (.84)	4.06 (1.17)	4.11 (.88)

NOTE.— Male (female) stranger represents the male (female) confederate. WTP = willingness to pay reported in pounds sterling (£). In-store shopping time reported in seconds. Standard deviations in parentheses.

Table 3
 Correlation Matrix

	Touch	PartG	ConG	Brand	WTP	Belief	Store	Time	AITT	BT	OTT	PosiT	NegT	NeuT	Total	Prox	Atten	Spatl	Attrac	
Touch	1.00																			
PartG	.00	1.00																		
ConG	.00	.00	1.00																	
Brand	-.54**	-.09	.20*	1.00																
WTP	-.54**	.10	.13	.36**	1.00															
Belief	-.35**	-.09	.20*	.61**	.33**	1.00														
Store	-.07	-.11	.10	.34**	.12	.31**	1.00													
Time	-.64**	-.01	.14	.40**	.40**	.29**	.02	1.00												
AITT	.61**	-.07	.05	-.22**	-.23**	-.09	.13	-.37**	1.00											
BT	.02	-.05	.05	.10	.10	.02	.01	-.05	-.09	1.00										
OTT	.10	.10	-.13	-.26**	-.04	-.04	-.07	-.07	.04	-.10	1.00									
PosiT	.09	-.27**	.27**	.10	.11	.09	.15	.12	-.01	.11	-.03	1.00								
NegT	.74**	.07	-.14	-.39**	-.37**	-.27**	-.04	-.49**	.47**	.07	.25**	-.16	1.00							
NeuT	-.36**	.01	.12	.20*	.20*	.19*	.01	.19*	-.10	.55**	.00	-.18*	-.54**	1.00						
Total	.42**	-.05	.08	-.20*	-.17*	-.08	.01	-.31**	.42**	.73**	.28**	.07	.45**	.40**	1.00					
Prox	-.11	.03	.01	.09	.03	.03	.05	.04	-.01	.67**	.16*	.15	.09	.46**	.68**	1.00				
Atten	.29**	-.08	.00	-.15	-.17*	-.13	-.11	-.23**	.15	.10	-.03	.13	.16*	-.06	.19*	.04	1.00			
Spatl	.05	.01	-.08	-.20*	-.05	-.18*	-.19*	-.08	-.02	-.27**	.02	.04	-.04	-.19*	-.22**	-.25**	-.09	1.00		
Attrac	-.22**	.09	.14	.22**	.13	.10	.10	.05	-.09	-.06	-.13	.00	-.24**	.12	-.14	-.05	-.05	-.13	1.00	

NOTE.— Touch = touch condition (0 = no touch, 1 = touch), ConG = touch confederate gender (0 = male, 1 = female), PartG = participant gender, Brand = brand evaluations, WTP = willingness to pay, Belief = product beliefs, Store = store evaluations, Time = shopping time, AITT = AIT-related thoughts, BT = brand-related thoughts, OTT = other, irrelevant thoughts, PosiT = positive thoughts, NegT = negative thoughts, NeuT = neutral thoughts, Total = total thoughts, Prox = customer proximity, Atten = attention to other customers, Spatl = spatial confinement, Attrac = confederate attractiveness.

* $p < .05$

** $p < .01$.

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FIGURE LEGEND PAGE

FIGURE 1

EXPERIMENT RESULTS: THE EFFECTS OF TOUCH AND CONFEDERATE GENDER ON
BRAND EVALUATIONS

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EXPERIMENT RESULTS: THE EFFECTS OF TOUCH AND CONFEDERATE GENDER ON
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HEADINGS LIST

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