

Conditioning Implicit and Explicit Brand Attitudes Using Celebrity Affiliates

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The notion of implicit attitudes is well established in psychology (Greenwald, Banaji, Rudman, Farnham, Nosek, and Mellot 2002; Greenwald, McGhee, and Schwartz 1998; Olson and Fazio 2001). Long have researchers recognized that some attitudes are automatic and not controllable by the individual (Moors and De Houwer 2006). In social psychology, affective experiences are an area commonly examined under an implicit attitude lens. Existing research suggests that implicit attitudes emerge from automatic affective reactions while explicit attitudes are more propositional or cognitive in orientation (Rudman 2004). The notion of implicit attitudes may not be new, but their uniqueness, function, and development present many research opportunities (Rydell and McConnell 2006). Methods of quantifying and measuring implicit attitudes such as the Evaluative Movement Assessment (EMA) and Implicit Association Test (IAT) have appeared and are being refined (Brendl, Markman, and Messner 2005; Greenwald et al. 1998). A general model of implicit/explicit attitude change has also now emerged (Gawronski and Bodenhausen 2006).

Implicit attitudes may be important in understanding and predicting consumer behavior, especially in situations where consumers are cognitively constrained. Further, they may be more persistent over time than explicit attitudes though potentially less vivid (Buttle, Ball, Zhang, and Raymond 2005). Both explicit and implicit attitudes may uniquely influence one's preference for a particular brand. Explicit attitudes towards a soda brand may form in a propositional manner based on product taste, image, or nutritional value. An attitude towards a brand formed in this manner is subject to change quickly from recent experience, advice, persuasion, etc. Implicit attitudes towards the soda brand, however, may form in an associative manner from such past pairings of the brand with pleasant memories of youth or a consistent celebrity endorser. These implicit attitudes may not be "top of mind" but guide behavior nonetheless and may be more resistant to persuasion (Gibson 2006).

In addition to providing a more complete explanation of consumer attitudes, the implicit/explicit distinction may shed new light on existing studies or require new interpretation of effects from procedures used by consumer researchers. In particular, while there are numerous studies in social psychology investigating classical conditioning effects on implicit attitudes, conditioning studies with brands have examined explicit attitude change only. This article reports the results of an experiment examining the effects of Pavlovian conditioning on implicit and explicit attitudes using real brands and real celebrities. Further, it provides a novel method for measuring implicit brand attitudes in comparison to the standard IAT (Greenwald et al. 1998).

The current research indicates that Pavlovian conditioning can have an effect on implicit brand attitudes. Results suggest that the changes in implicit and explicit attitudes towards a brand may lead to divergent inferred beliefs about that brand. Suggesting implications for the ongoing debate about Pavlovian versus evaluative conditioning and offering direction for future research involving implicit attitudes in consumer research, this article represents a small step in understanding how implicit/explicit attitudes change and in addressing nuances involved in their measurement.

BACKGROUND

Implicit and Explicit Attitudes

The associative-propositional evaluation (APE) model provides comprehensive theorizing regarding implicit and explicit attitude change (Gawronski and Bodenhausen 2006). The APE model considers implicit attitudes as arising from an associative process. That is, implicit attitudes arise from automatic affective reactions. When an individual encounters a particular attitude object, the activation of associations leads to an implicit attitude. The activation that occurs may arise from such varied sources as past experience, positive/negative affect, social or cultural bias, or need for cognitive consistency (Rudman 2004). The APE model suggests an activation leading to an implicit attitude generally is outside of the control of the individual and often is persistent over time.

Explicit attitudes in the APE model differ from implicit attitudes by arising from propositional processes. Explicit attitudes depend on judgments of the validity of "syllogistic inferences" about an attitude object in order to form or change. Explicit attitudes generally are consciously controllable because they arise from propositional processes involving truth judgments. In this manner, they are qualitatively different from implicit attitudes. Whereas implicit attitudes arise from automatic affective reactions to a source, explicit attitudes emerge and change based on judgments of truth.

One of the important aspects of the APE model is that it provides explanation for when implicit and explicit attitudes may be related versus when they may be independent. The APE model posits eight patterns of attitude change. While the particulars are beyond the scope of this article (see Gawronski and Bodenhausen 2006, 702-709), the notion that many different examples of implicit and explicit attitude change can be explained by the model makes it useful both for *a priori* hypothesis generation and *a posteriori* result(s) interpretation.

APE Model and Pavlovian Conditioning

Classical conditioning has been assessed by consumer researchers as a means for shaping attitudes using conventional Pavlovian procedures (Kim, Allen, and Kardes 1996; Shimp, Stuart, and Engle 1991). With this procedure, a conditioned stimulus (CS) precedes an unconditioned stimulus (US). This CS-US arrangement eventually leads to a conditioned response or attitude change after sufficient repetitions. In addition to a sufficient number of repetitions, Pavlovian conditioning generally requires contingency awareness in order to induce a change in explicit attitudes (Gawronski and Bodenhausen 2006). While Pavlovian conditioning is associative in nature, an individual needs to be cognizant of the CS-US arrangement in order for attitude change to occur (Priluck and Till 2004). Lack of contingency awareness generally yields a null effect for Pavlovian conditioning, at least for non-automatic phenomena such as explicit attitudes.

Evaluative conditioning, in contrast to Pavlovian, leads to a conditioned response after a series of overlapping conditioned and unconditioned stimulus pairings. Evaluative conditioning does not

necessarily require contingency awareness instead inducing conditioning effects via direct affect transfer from US to CS. Where order is important for Pavlovian conditioning, pairing and valence are critical for evaluative conditioning. This distinction between Pavlovian conditioning and evaluative conditioning is emerging as an important one in research about associative learning (De Houwer, Thomas, and Baeyens 2001; Walther, Nagengast, and Trasselli 2005).

Gawronski and Bodenhausen (2006) provide a thorough explanation of how evaluative conditioning works with regard to implicit/explicit attitude change but consider Pavlovian conditioning as propositional and more clearly relevant to explicit attitudes. Past research has disagreed about whether Pavlovian conditioning is propositional (Holyoak, Koh, and Nisbett 1989; Stuart, Shimp, and Engle 1987). The CS and US ordering in Pavlovian conditioning does follow a general “if...then” pattern, suggestive of propositional reasoning. Researchers favoring a unimodel of attitude change argue that all conditioning is propositional (Kruglanski and Dechesne 2006). If Pavlovian conditioning is strictly propositional, the APE model suggests that these procedures will have an effect on explicit but not implicit attitudes.

A larger question remains, however, about whether Pavlovian conditioning may influence implicit attitudes regardless of any change in explicit attitudes and/or presence of contingency awareness. In a basic sense, Pavlovian can also be viewed as an associative process (Walther et al. 2005). The CS-US arrangement eventually suggests to the individual a similarity or association perhaps not always an “if...then” relationship. Along these lines, some research has found that Pavlovian procedures can have effects on implicit attitudes for novel stimuli (Olson and Fazio 2001). This lends support to the contention that Pavlovian conditioning does not always require contingency awareness, just a consistent CS-US arrangement (Stuart et al. 1987). Hence, we propose and test:

H1: Pavlovian conditioning procedures will influence implicit brand attitudes regardless of contingency awareness.

Establishing that Pavlovian conditioning has an effect on implicit attitudes is insufficient to argue that qualitatively different judgment processes are at work. Recall that the APE model predicts that explicit attitudes arise from propositional processes while implicit attitudes flow from associative processes. Propositional processes involve truth judgments of “syllogistic inferences” about an attitude object (Gawronski and Bodenhausen 2006). Pavlovian conditioning may influence attitudes through both signal and evaluative learning, possibly leading to changes in both explicit and implicit attitudes (Olson and Fazio 2001; Walther et al. 2005). Explicit attitudes should be conditioned with a Pavlovian procedure if subjects are aware of the CS-US arrangement (Kim et al. 1996). Explicit attitudes require contingency awareness for conditioning to manifest (Priluck and Till 2004). Thus, we also test:

H2: Pavlovian conditioning procedures will have an effect on explicit brand attitudes only when contingency awareness is present.

Implicit attitudes arise from associative affective processes operating outside of the awareness of the individual. As a result, implicit attitudes should not co-vary with inferences used in the propositional construction of explicit attitudes. If implicit attitudes have a relationship with inferred brand beliefs, this would suggest that they might not be qualitatively different from explicit attitudes.

However, if implicit attitudes form independent of inferences about an attitude object, they would seem to be fundamentally different from explicit attitudes (Gawronski and Bodenhausen 2006). We posit that explicit attitudes will share a significant correlation with inferred beliefs but implicit attitudes will not have a significant correlation with the same.

H3: Inferred beliefs about a brand will be correlated positively with explicit brand attitudes but be uncorrelated with implicit brand attitudes.

METHOD

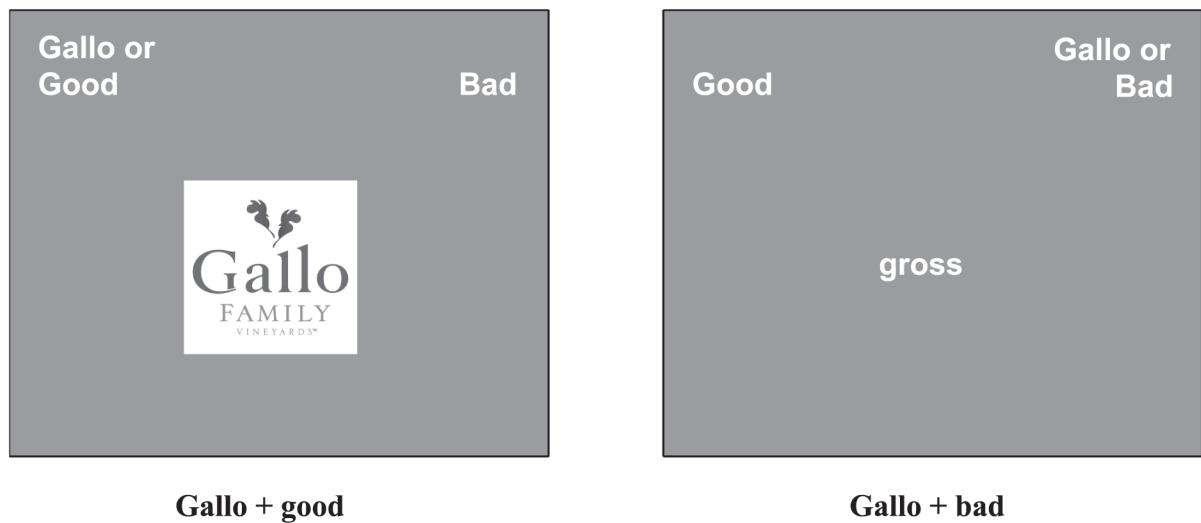
A laboratory experiment was employed to test the hypotheses that implicit and explicit brand attitudes would be conditioned with a Pavlovian procedure and differ in their relationship to subsequent inferred beliefs about the brand. A sample of 70 students (37 male and 33 female) at a large Midwestern university participated in return for course credit. Participants were told that the study was interested in their opinions about brands and celebrities. They were randomly assigned to the treatment or control condition and processed in groups of 1 to 4.

The experiment used conditioned and unconditioned stimuli chosen through extensive pretesting. Paris Hilton, Jessica Simpson, and Britney Spears were selected as unconditioned stimuli because of a shared celebrity quality. It is worth noting that the study was conducted prior to recent events that may set Britney Spears apart from Paris Hilton and Jessica Simpson. Pretesting showed that these celebrities carry different meaning for females versus males suggesting a need to consider conditioning effects by gender. A separate pretest examined these three celebrities and several others such as Dave Chapelle and Conan O'Brien paired with several brands including Chipotle Mexican Grill, Gallo Family Vineyards, Starbucks, and Marriott Hotels to identify a useful conditioned stimulus. This pretest suggested that Gallo did not have overall differences by gender ($t(26) < 0.6$) on close-ended responses to the celebrity and brand pairing. Gallo was thus selected as the conditioned stimulus in order to associate a relatively neutral brand with the controversial celebrity unconditioned stimuli. Based on this pretesting, we expected this pairing would create different effects of conditioning by gender.

The conditioning procedure followed that of Stuart et al. (1987) and was implemented via an on-screen presentation in MediaLab. In the treatment condition, one of four brands (Gallo versus three filler brands: Chipotle, Domino's, and Starbucks) always appeared before the unconditioned stimuli (the three female controversial celebrities versus nine female filler celebrities such as Rachel Ray and Reese Witherspoon). Participants viewed CS and US images for 7.5 seconds each, followed by a 2-second rest period (Stuart et al. 1987). The random control condition also viewed the same images as the treatment condition but did so with a wholly random ordering. In total, each participant viewed 40 brand images and 40 celebrity images. But again, the focal CS-US arrangement was Gallo, followed by Paris Hilton, Jessica Simpson, or Britney Spears, who were rotated throughout to create the ten repetitions.

After the conditioning procedure participants responded to a Single Category Implicit Association Test (SC-IAT) with Gallo as the focal object. A SC-IAT is procedurally similar to the Implicit Association Test (IAT) but has only one focal object instead of two (Karpinski and Steinman 2006). The traditional IAT is a method for approximating an individual's implicit attitude towards a matched pair of focal objects, for instance Coke and Pepsi (Greenwald et al. 1998). A researcher seeking individual implicit attitudes towards

FIGURE 1
Gallo SC-IAT Example Screens



Note: Participants responded to 96 presentations of both evaluative category arrangements with first 24 responses as practice. "E" and "I" keys corresponded to category on left and right respectively.

these brands would run an IAT where both Coke and Pepsi are positioned with such evaluative dimensions as "good" and "bad." Participants in such a study would sort valenced words and/or pictures for each of two evaluative dimension arrangements (Coke + good and Pepsi + bad; Pepsi + good and Coke + bad). The standardized difference in response time latencies for each arrangement may then be considered as the strength of an individual's association of Coke with "good" and "bad" and Pepsi with "good" and "bad." In order to estimate these associations, the traditional IAT requires a legitimate matched pair of focal objects such as Coke and Pepsi. While matched pairs may exist for some product categories, a true match is often difficult to justify. Results of an SC-IAT are not readily comparable to results of an IAT. However, use of a SC-IAT can remove the need for a matched pair of focal objects (Karpinski and Steinman 2006).

A SC-IAT is particularly useful in situations where a matched does not exist and/or comparison of implicit attitudes toward two different products or brands is not necessary. For this study, several other wine brands such as Robert Mondavi were considered. However, no brand appeared to be a defensible and equal match for Gallo. Putting the existing research on the SC-IAT into practice, this study estimated participant associations towards Gallo only, without needing another brand of wine for comparison. The SC-IAT was implemented via DirectRT reaction time measurement software and carried evaluative dimensions of "good" and "bad" with the object dimension labeled "Gallo" as depicted in Figure 1. The SC-IAT consisted of two stages (Gallo + good and Gallo + bad) with 96 sorts of target words and images completed for each. Each stage began with instructions about the sorting task and the appropriate key with which to do so. Gallo + good and Gallo + bad category labels appeared at the top of the screen during the instructions. Following the instructions, target words and images appeared on the center of the screen. Target words in the SC-IAT were those

used by Karpinski and Steinman (2006) and target images were Gallo-related pictures (See Appendix). Responses to each sort were mapped to the "e" and "i" keys.

Implicit attitudes were operationalized with *D*-scores of response time latencies from the SC-IAT. The use of a single target stimulus necessitated adaptation of the existing SC-IAT scoring guidelines lines Karpinski and Steinman (2006). The method of scoring the SC-IAT in this study made use of response times from both stages. The stages were divided into practice and trial by withholding the first 24 sorts from each analysis. Response latencies less than 350 milliseconds were eliminated. Responses in error were replaced with the stage mean plus a 400-millisecond penalty. Response latencies to the Gallo imagery for each participant were averaged. The mean of the Gallo + bad latencies was then subtracted from the mean of the Gallo + good latencies and divided by the standard deviation of all correct responses. This operation yielded *D*-scores where values greater than zero indicated more positive than negative associations with Gallo. Values less than zero indicated more negative than positive association with Gallo. This method of scoring followed the existing SC-IAT scoring procedure suggested but only considered response times for the Gallo imagery (Karpinski and Steinman 2006). Implicit attitudes scores using only the Gallo imagery had the same interpretive qualities as the conventional method of scoring a SC-IAT and contained less effect-obscuring noise but were still normally distributed ($K-S z=.735, p>.50$).

Following the SC-IAT, participants responded to items gauging their explicit attitude toward Gallo and selected inferred beliefs about the brand. Explicit attitudes and participant inferred beliefs about Gallo were operationalized with six items on a 7-point semantic differential scale. Explicit attitude items were "good/bad", "like/dislike", and "favorable/unfavorable". Inferred belief items were "domestic/imported", "cheap/expensive", and "trashy/

TABLE 1
Implicit and Explicit Attitude Means, Standard Errors, and Planned Contrasts

	Implicit		Explicit	
	Control	Treatment	Control	Treatment
Female	-.40 (.17)	.08 (.19)	13.76 (.75)	11.25 (.86)
Male	-.36 (.13)	-.15 (.15)	10.57 (.76)	11.61 (.75)
Contrast			<i>t</i> -value (Implicit)	<i>t</i> -value (Explicit)
Both Control>Both Treatment			-2.12*	.91
Male Control>Male Treatment			-.92	-1.01
Female Control>Female Treatment			-2.05*	2.21*
Remaining Cells>Female Treatment			-1.99*	.77

Note: * indicates significance at $p < .05$
Higher means indicate more positive attitudes.

classy". Explicit attitude items were summed and inferred belief items were kept separate for analysis. In addition to explicit attitudes and inferred beliefs, participants responded to a five-item postexperimental inquiry instrument that included items gauging contingency awareness (Allen 2004).

RESULTS

A non-significant correlation between implicit and explicit attitude measures supported the appropriateness of treating them as separate ($r(70) = -.14, p > .20$). Preliminary analyses suggested marginally significant differences between male and female on explicit attitudes ($t(68) = -1.87, p = .07$) but not implicit attitudes ($t(68) = -.54, p > .50$). Omnibus 2 X 2 ANOVAs of condition and gender supported the presence of an interaction for conditioning on explicit attitudes ($F(1,66) = 5.30, p < .05$) but not for implicit attitudes ($F(1,66) = .73, p > .30$). ANOVAs of gender and condition also supported a main effect of conditioning for implicit attitudes ($F(1,66) = 4.49, p < .05$) but not explicit attitudes ($F(1,66) = .84, p > .30$). Ten individuals in the treatment condition (9 males and 1 female) were contingency aware. With gender differences obtaining and contingency awareness relatively low, analysis proceeded as a series of planned contrasts by gender as outlined in Table 1.

Hypothesis 1 predicted that Pavlovian conditioning would have an effect on implicit attitudes regardless of contingency awareness. A significant overall conditioning effect emerged ($t(66) = 2.12, p < .05$), supporting Hypothesis 1. Closer examination indicates that conditioning had a significant effect on implicit attitudes for females ($t(66) = -2.05, p < .05$) but not for males ($t(66) = -.92, p > .30$), although their means followed a similar pattern. Females in the treatment condition had significantly higher implicit attitude scores than all others in the sample ($t(66) = -1.99, p = .05$).

Hypothesis 2 predicted that Pavlovian conditioning would have an effect on explicit attitudes presuming contingency awareness was present. An overall conditioning effect did not emerge for explicit attitudes ($t(66) = .91, p > .30$), but the gender by treatment interaction was significant. As with implicit attitudes, there was no

effect for males ($t(66) = -1.01, p > .30$). Conditioning did have a significant effect on explicit attitudes for females ($t(66) = 2.21, p < .05$) though only one female in the treatment condition was contingency aware. In general, explicit attitudes for females in the control condition were more favorable towards Gallo than for females in the treatment condition.

Hypothesis 3 predicted that inferred beliefs would correlate with explicit attitudes but not implicit attitudes. As hypothesized, explicit attitudes were correlated with two of the three inferred belief measures (aura $r(70) = .53, p < .01$; origin $r(70) = .03, n.s.$; cost $r(70) = .51, p < .01$) while inferred belief correlations with implicit attitudes were not significant as shown in Table 2. The presence of some significant correlations between inferred beliefs and explicit attitudes suggests that these attitudes might have formed from a propositional process. The lack of correlations with implicit attitudes suggests that the associative process leading to changes in these attitudes may have operated independent of the process leading to explicit attitude change and inferred belief generation, consistent with a dual process model (Gawronski and Bodenhausen 2006).

DISCUSSION

The results show that Pavlovian conditioning procedures elicited more favorable implicit brand attitudes and less favorable explicit brand attitudes for female participants. The results also show that explicit brand attitudes, but not implicit brand attitudes, influence deliberative inferred beliefs. This suggests that the complex and controversial nature of the celebrity affiliates may be primarily responsible for these mixed attitudinal and inferential responses. Deliberating about the controversial opinions and behaviors of the celebrity affiliates had some influence on explicit brand attitudes. Further and conversely, favorable associations regarding the physical attractiveness of the celebrity affiliates had a strong influence on implicit brand attitudes regardless of contingency awareness, but no influence on explicit brand attitudes. As a consequence, implicit and explicit brand attitudes were uncorrelated.

TABLE 2
Attitude, Contingency Awareness, and Inferred Belief Correlations

	Implicit Attitude	Explicit Attitude	Contingency Awareness	Aura	Origin
Explicit Attitude	-.14				
Contingency Awareness	-.05	.01			
Aura	-.17	.53**	.04		
Origin	-.11	.03	-.05	.14	
Cost	-.15	.51**	-.01	.63**	.26*

Note: ** indicates significance at $p < .01$

* indicates significance at $p < .05$

As inferred belief imputation requires deliberation, only explicit brand attitudes influenced participants' inferential reasoning.

The presence of an overall conditioning effect on implicit attitudes demonstrates support for Pavlovian conditioning being at least partially associative in nature and not solely propositional. This fits with existing research arguing that changes in these attitudes take longer as they emerge from associations (Rydell and McConnell 2006). The repeated associations created by the Pavlovian procedure were enough to create differences in participant implicit attitudes. The results also demonstrate that implicit attitudes were independent of inferred beliefs and explicit attitudes. If implicit attitudes emerged as positively correlated with inferred beliefs, there would be less basis for arguing that both propositional and associative processes were operating in response to the present conditioning procedure. However, implicit attitudes did not correlate with inferred beliefs and had a non-significant correlation with explicit attitudes. This suggests that implicit attitudes emerged from a process different from that of explicit attitudes, a central assertion of the APE model.

As expected, gender differences emerged and demonstrated an important pattern of differences between implicit and explicit brand attitudes. The Pavlovian procedure had an effect for females but not for males. These gender differences in implicit attitudes towards Gallo may have emerged from differences in the affect transferred from the three controversial celebrities. Considering Pavlovian conditioning as an associational learning paradigm suggests that this is what happened. Females in the treatment condition had significantly higher implicit brand attitudes than females in the control condition. Conversely, females in the control condition had significantly higher explicit attitudes than females in the treatment condition. The reversal of the pattern of means for females lends support to an implicit/explicit attitude distinction.

Gender differences likely emerged from the all-female set of USs used. Aforementioned pretests for selection of CS and US and past pretests for the same suggested that both males and females perceived Paris Hilton, Jessica Simpson, and Britney Spears to be controversial celebrities but with potentially differing associated meanings (Miller 2006). It appears that the pairing of Gallo with controversial celebrities did not transfer negative affective from US to CS for females in the treatment condition. Rather, the Pavlovian procedure with the brand and celebrity arrangement was enough to

associate Gallo with celebrities, an association that might have been positive in nature for females. For males, association between these celebrities and Gallo may not have been as relevant from an affiliation point-of-view.

Taken as a whole, these results suggest that meaning transferred from celebrity to brand may not operate at the implicit attitude level (McCracken 1989). For implicit attitudes in the present study, this association alone seems to have been enough to make Gallo more accessible and perceived as more favorable at the implicit level. Consistently associating a relatively neutral brand with relevant celebrities might be enough to increase its favorability regardless of the meanings associated with those celebrities (Skurnik, Yoon, Park, and Schwarz 2005). The Pavlovian procedure did transfer meaning from celebrity to brand for explicit attitudes as expected, with females in the control condition evaluating Gallo more favorably than those in the treatment condition. For explicit attitudes, the arrangement of Gallo with controversial celebrities was enough to for females in the treatment condition to evaluate the brand less favorably than females in the control condition. The reversal of attitude means, where females in the control condition held more favorable implicit attitudes and less favorable explicit attitudes is consistent with a dual process model (Gawronski and Bodenhausen 2006).

LIMITATIONS AND FURTHER RESEARCH

The APE model suggests that explicit attitudes and stated inferred beliefs might relate as both may use propositional reasoning. Implicit attitudes, however, need not relate to stated inferred beliefs, as their originating process is associative in nature. While this explanation fits with the current findings, the lack of correlation between inferred beliefs and implicit attitudes might have been measurement induced. The implicit attitude measure utilized a SC-IAT procedure while explicit attitude and inferred belief measures were operationalized with semantic differential scales. These scales followed the SC-IAT with explicit attitude measures preceding inferred belief measures. It is plausible that responses to explicit attitude measures were readily accessible and thus informed responses to the inferred belief measures. Implicit attitudes collected with response times may not have been as accessible to participants and thus failed to correlate in either direction with inferred beliefs. The only way to have avoided this alternative explanation fully

would be collection of inferred belief data in a manner similar to implicit attitudes. Utilizing an IAT-type measurement tool for addressing implicit inferred beliefs rather than attitudes may be an area ripe for future research.

Additionally, the nature of the distinction between Pavlovian conditioning and evaluative conditioning remains an area highly relevant to the APE model and implicit/explicit attitudes in general. The APE posits that Pavlovian conditioning will not have an effect on implicit attitudes but that evaluative conditioning may have an effect under certain conditions. The current study suggests that conditioning effects on implicit attitudes are possible with a Pavlovian procedure. Further comparison of Pavlovian conditioning and evaluative conditioning in order to gauge their effect on implicit and explicit attitudes is an important avenue for future research. Such investigation(s) may be able to inform the ongoing debate around these two types of conditioning. More generally, the APE is a very encompassing explanation for implicit and explicit attitude change but many of its propositions have not yet empirically tested. The assertions of the APE have broad implications for such areas as priming, conditioning, and persuasion.

The present study has some initial findings to suggest that implicit and explicit brand attitudes are worth considering separately. The non-significant relationship between the measures of these two types of attitudes suggests that both may help explain consumer judgment and decision-making. The differences in correlation between the attitude measures and inferred beliefs raise questions about whether researchers have been missing a great deal of diagnostic information involved in consumption behavior. While the consumer may say how much he/she likes a brand when asked, his/her underlying associations with the brand may be different from a voiced judgment. These implicit associations may lead to decisions to buy, use, or dispose of a brand different from what a consumer may indicate when directly asked. Considering implicit attitudes may help consumer researchers to paint a more complete picture of attitudes that inform judgment and decision-making.

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APPENDIX
SC-IAT Target Images and Words

target images	target words	
	<i>Good</i>	<i>Bad</i>
    	beautiful celebrating cheerful excellent excitement fabulous friendly glad glee happy laughing likable loving marvelous pleasure smiling splendid superb paradise triumph wonderful	angry brutal destroy dirty disaster disgusting dislike evil gross horrible humiliate nasty noxious painful revolting sickening terrible tragic ugly unpleasant yucky