On the Automatic Effects of Advertising: the Uncontrollability of Evaluative Conditioning Effects

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Changing brand attitudes by pairing brands with affective stimuli is called evaluative conditioning. A long-standing debate concerns whether this process operates automatically or is under consumers’ conscious control. Process dissociations in four experiments show that both controllable and uncontrollable learning mechanisms contribute to final brand evaluations.

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In the lab, learning is typically studied with brands that are artificially created to have minimal prior associations. However, in the real world, prior associations typically exist. The next two papers study systematic influences of pre-existing associations. Like the first paper, the third paper assumes that consumers draw spontaneous inferences during associative learning. This is studied in the context of co-branding an unknown brand with a known brand (the pre-existing associations). This paper argues that consumers learn more than a simple association between the two brands. Instead, they also infer associations between each brand and the benefits of these brands. The paper shows that when an unknown brand pairs up with a known one, the unknown brand could benefit or suffer, depending on how the brand-benefit associations are affected.

The fourth paper studies the real-world problem of a brand having pre-existing negative emotional associations. The paper assumes that learning positive emotional associations could work as an anti-dote, but asks which type of positive emotions would be the most effective anti-dote.

Investigating Deliberative and Spontaneous Inferences as Outcomes of Associative Learning with High versus Low Contingency Awareness

EXTENDED ABSTRACT

In his insightful theoretical critique, De Houwer (2007) advocates an effects-based perspective regarding the meaning of evaluative conditioning (EC): evaluative conditioning can be defined as an observed change in liking that is due to the pairing of stimuli (p. 233). Embracing this effects-based perspective is stimulating a host of new research questions about associative learning. This perspective motivates competing theorizing about what causes the transfer of liking that takes place when stimuli co-occur (cf. De Houwer 2007; Jones, Olson & Fazio 2010). Additionally, recent studies featuring “non-evaluative” US’s as part of a conditioning procedure are beginning to show effects more diverse than a simple transfer of liking (e.g., Forderer & Unkelbach 2011; Galli & Gorn 2011; Glaser & Walther 2013; Meersmans et al. 2005; Miller & Allen 2012). Said another way, conventional EC methods and procedures are now being utilized to examine a wide array of questions about associative learning beyond simple, direct affect transfer from US to CS.

Our research approaches associative learning as a formidable process that can include the spontaneous inferences people draw from co-occurring stimuli. Referring to the process as “formidable” reflects the theorizing of Kardes, Posavac & Cronley (2004), who assert that spontaneous inferences will have a significant impact on other judgments, yielding attitudes characteristic of the central/systematic route to persuasion rather than the peripheral/heuristic route. This challenges the longstanding view (e.g., Petty & Cacioppo 1981) that conditioning mechanisms only apply in the peripheral route to persuasion.

In the experiment described here we investigated the effects caused with conventional EC procedures on deliberative and spontaneous inferences and implicit and explicit attitudes. To probe subjects’ self-generated inferences this experiment included several innovative features: 1) the US’s used in this study were selected through extensive pre-testing to possess inference-provoking potential in one specific product domain; 2) spontaneous inferences are assessed through a unique Implicit Association Test (IAT); 3) con-
tingency awareness is treated as an experimental manipulation rather than being assessed post hoc.

The experiment was presented to subjects as a study in how they process visual information as consumers. The EC procedures follow Olson & Fazio (2001) with several alterations. Target stimuli (the CS’s) were real but unfamiliar bottled water brands (not Pokemon characters). The US’s were visual images of natural scenery chosen through pre-testing to evoke inferences of purity and freshness, rather than general positive words and pleasant pictures. The conditioning procedure had 5 blocks of trials with 86 images presented per block. Numerous filler images appeared in each block. In the conditioning treatment, the brand Isbre was paired with the natural images 8 times per block, for a total of 40 pairings across the 5 blocks. In the control group, Isbre bottled water was paired with neutral images 40 times across the 5 blocks. Contingency awareness (CA) was manipulated through instructions to subjects. For the high CA condition, subjects were told to identify any reoccurring patterns in the images presented and to press the spacebar when a red dot appeared on the screen. In the low CA condition, subjects were told to count backward by 3’s from 300 and press the spacebar when a red dot appeared on the screen. The common spacebar task ensures consistent attentiveness in the two conditions (Gibson 2008). Following the conditioning procedure subjects completed separate IAT’s to assess implicit beliefs and attitudes; and then measures for explicit beliefs and brand attitudes. A “strong measure” of CA (adapted from Field & Moore 2005) taken at the end of the study was used to validate a successful manipulation.

This experiment provides a test of a key assertion from Kardes et al. (2004) that spontaneous inference formation is more likely when one’s motivation and ability to deliberate are high. Subjects’ motivation and especially their ability to deliberate are influenced as a result of the contingency awareness manipulation. Moreover, deliberative and spontaneous inferences are tracked via measurement of explicit and implicit beliefs. The data show that with high CA, both deliberative and spontaneous inferences are present in the treatment versus the control group, but they are largely unrelated and each has unique downstream effects on explicit versus implicit attitudes, respectively. Simply stated, deliberative and spontaneous inferences appear to operate in separate systems. In the low CA condition no treatment effects were observed on any of the dependent measures. These findings regarding the necessity of contingency awareness to the observed outcomes are consistent with research on what has recently been labeled “non-evaluative” conditioning (For- derer & Unkelbach 2011; Kim, Allen & Kardes 1996; Meersmans et al. 2005).

On the Automatic Effects of Advertising: The Uncontrollability of Evaluative Conditioning Effects

EXTENDED ABSTRACT

Changing brand attitudes by pairing brands with affective stimuli is called evaluative conditioning (EC). EC is defined as the change in liking of conditioned stimuli or brands (CS) caused by their pairing with valenced, unconditioned stimuli (US). This basic procedure of pairing brands with positive stimuli lies at the heart of branding and advertising strategies and is therefore of central importance to consumer research (Shimp, Stuart, & Engle, 1991; Stuart, Shimp, & Engle, 1987; Sweldens, van Osselaer, & Janiszewski, 2010). Whereas there is no doubt that EC effects can be established through conscious propositional reasoning, a long-standing disagreement in the literature concerns whether there can also be a contribution of an unconsciously operating automatic process in the attitude acquisition (Hofmann, De Houwer, Perugini, Baeyens, & Crombez, 2010; Sweldens, et al., 2010). A process is defined as automatic if it occurs in the absence of awareness, is uncontrollable and is not influenced by intentionality or processing resources (Bargh, 1994).

In a recent contribution (Hütter, Sweldens, Stahl, Unkelbach, & Klauer, 2012) we showed that previous methods were biased towards the conclusion that EC effects require conscious awareness of the CS – US pairings. We developed a new method based on the process dissociation procedure (Jacoby, 1991), providing evidence that EC can, in fact, establish attitudinal effects without explicit memory for the pairings. In the current research, we present a new method to assess the automaticity of the learning process by focusing on the uncontrollability of the EC effect. Specifically, we developed a process dissociation procedure that allows dissociating the effects of controlled processes from uncontrollable processes during the conditioning phase. In the standard condition, participants are informed that the USs are informative about the CSs. Participants thus believe that the valence of the USs can be trusted to form an attitude about the CSs. In order to separate controllable from uncontrollable processes involved in this task, a reversal condition was designed. The reversal instructions still stated that the valence of the USs is informative for the CS, but that it should actually be opposite in valence from what is presented. Participants thus believe that the valence of the US needs to be reversed to form accurate attitudes about the CS. To the extent that the valence transfer in an EC procedure is controllable, participants should be able to reverse the US valence in the generation of their CS attitudes. To the extent that the valence transfer is automatic and uncontrollable, participants will not be able to execute this reversal. Hence, the reversal condition is implemented so that controllable and uncontrollable processes lead to differential evaluations of the CSs.

We first conducted two experiments which implemented the standard and reversal conditions in a between-subjects (Experiment 1) and a within-subject (Experiment 2) design. A multinomial processing tree model was then applied to distinguish the relative contributions of controllable valence transfer (estimated by the c-parameter) from automatic uncontrollable valence transfer (estimated by the u-parameter). We used both types of designs as an opportunity for parameter validation. In Experiment 3, we increased participants’ motivation to control the effects of affective stimuli on brand attitudes by offering financial rewards for complying with task instructions (i.e., successfully applying the valence of the affective stimuli in the standard condition and reversing it in the reversal condition). Experiment 4 features a cognitive load manipulation to validate the parameter estimates. A controllable process is hypothesized to be susceptible to cognitive load. An automatic, uncontrollable process on the other hand should not be affected by reductions in cognitive processing capacity.

In all experiments we found a significant u-parameter, which specifies an automatic uncontrollable EC effect on attitudes. Moreover, the u-parameter estimates did not differ between experiments, increasing confidence in their robustness. While the controllable (c) component was sensitive to the complexity of the conditioning phase, task experience, and the availability of cognitive resources, the automatic uncontrollable (u) component was insensitive to any of these procedural factors as well as participants’ motivation to exert control over the acquisition process. Interestingly, the explicit evaluative ratings of the CSs do indicate a reversed EC effect in the reversal condition (albeit smaller in size than the normal EC effect in the standard condition). A researcher looking only at these evaluative ratings would have no means to distinguish the controllable from the uncontrollable components in the emergence of the total EC effect.
Riding Coattails: When Co-branding Helps versus Hurts Less-known Brands

EXTENDED ABSTRACT

New brands often partner with established brands to leverage existing associations. Conventional wisdom holds that such partnerships disproportionately benefit the less-known (Aaker and Keller 1990; Boush and Loken 1991; Broniarczyk and Alba 1994; Levin and Levin 2000). A popular account for this is the Human Associative Memory (HAM) model, according to which an unknown brand is relatively devoid of associational content and is therefore a blank slate ready to receive the presumably positive associations from an established brand. Although there is intuitive appeal to this account, the HAM model presumes a static association between entities in which the consumer need only learn that the two brands are partnering together. Most consumer exposures to co-branding, however, are much more dynamic since the consumer learns not only of the existence of a partnership, but also of expected product benefits stemming from the partnership. When these dynamic effects are incorporated, research on consumer associative learning has found that the transfer of associations can deviate from the predictions of the HAM model.

Associative learning models predict that consumers will not simply strengthen the association between the component co-brands, but each component co-brand may also interact when forming associations with the outcome (e.g., the benefit the new co-branded product delivers). This cue interaction may lead the two brands to become asymmetrically associated with the benefit. Competitive cue interaction effects can bias consumers’ predictions of which product features predict product performance for a given brand (e.g., Cunha, Janiszewski, and Laran 2008; Cunha and Laran 2009; van Osselaer and Alba 2000). In co-branding arrangements, competitive cue interaction could ironically cause the established brand to dominate associations with the benefit, thus undermining the advantage of co-branding for the less-known brand.

We draw upon the animal learning literature to propose that facilitative cue interaction effects are also possible (Urcelay and Miller 2009). In contrast with cue competition effects, facilitative effects would actually enhance the strength of association between a less-known brand and the outcome and thereby benefit the less-known brand. We propose that time delay between the presentation of cues (brands) and outcomes (product features) influences the breadth of stimulus generalization such that narrower (broader) generalization operates when time intervals are shorter (longer) time delays. When generalization is narrower, effects consistent with cue competition are predicted because little is generalized about the less-known brand when it co-brands with a well-known brand. When generalization is broader, effects consistent with cue facilitation are expected because more is generalized about the less-known brand when it co-brands with a well-known brand.

In Experiment 1 participants were presented with a series of three learning trials. In the compound condition, an unknown breakfast cereal brand was paired with a well-known cereal brand (Kellogg’s) as stimuli for the launch of three new co-branded cereals (one per learning trial), with each cereal delivering a different level of dietary fiber content per serving. The elemental condition replicated the compound condition with the key difference that the unknown cereal brand was presented alone in each of the three learning trials (i.e., no co-branding). In each trial, following presentation of the brand(s), subjects were given feedback about the amount dietary fiber each cereal delivered. In the control condition, no dietary fiber information was presented. Subjects were then asked to indicate the likelihood they would try a new cereal offered by the unknown brand. In the control condition, no differences in willingness to try the new brand were observed as a function of whether the new brand was presented in a co-branded format versus presented by itself. After receiving feedback about the cereals, however, subjects were less likely to try the new brand when it was presented in a co-branded format than when it was presented by itself, a cue competition effect.

Experiment 2 used time-delay as a moderator of stimulus generalization to demonstrate both cue competition and cue facilitation. When there was no delay between presentation of brand and outcome information, cue competition and its negative effects for the less-known brand were replicated. With a 5-second delay, however, participants reported greater willingness to try the less-known brand when it was partnered with the well-known brand, a facilitative cue interaction. Furthermore, this result suggests a single process account that can explain when co-branding helps versus hurts less known brands.

In Experiment 3, we verify that a focus on learning co-branding outcomes produces benefits for less-known brands owing to facilitative cue interaction effects and not to a HAM process. Experiment 3 manipulated whether the well-known brand has expertise in the product category, and the critical dependent measure was willingness to try a new product offered in a different category, a learning transfer task. Subjects learned information about the quality chocolate produced by an unknown and a well-known brand. They were then asked their willingness to try a sugar cookie produced by the less-known brand (a transfer task requiring stimulus generalization). In the no-delay condition, the negative effect of co-branding was again replicated. In the delay condition, however, the effect of co-branding was positive further supporting an underlying cue-interaction process.

From a theoretical standpoint, identifying the conditions under which cue interaction is competitive versus facilitative allows us to unify the diverging findings from the co-branding literature under a single theoretical model, rather than a dual-process account. From a practical standpoint, a better understanding of cue interaction effects will help marketers learn when to expect a less-known-brand to strengthen (vs. weaken) its position after co-branding with a well-known brand.

Emotional Counter-Conditioning of Brand Attitudes

EXTENDED ABSTRACT

We investigate a situation when a brand’s image suffers from negative emotional associations, such as for the Škoda car brand in the UK, which presumably was associated with embarrassment...
(Srivastava & Malaviya 2003), or McDonald’s, which might have been associated with disgust after a rumor that its hamburgers contained worm meat. How can such a brand improve its image? Fixing the deficiencies that initially gave rise to the negative emotional associations and communicating these objective improvements is often insufficient (Tybouts, Calder, & Sternthal 1981), presumably because the emotional associations linger. Changing the brand name may at times solve the problem, but is often not feasible. From a psychological perspective, is there an alternative?

Building on psychotherapy, we propose emotional counter-conditioning as a “therapy” to improve brand image. Intuitively speaking, if a brand elicits negative feelings, eliciting positive feelings in the presence of the brand may result in “re-associating” the brand with these positive feelings, and that may be an effective way to improve attitudes toward the brand. Surprisingly, the experimental evidence that emotional meaning beyond valence can be conditioned focuses on just two negative emotions, fear and disgust (see Maren 2001; Mason and Richardson 2010; Mineka and Oehlberg 2008). Thus it is not clear whether emotional meaning in general can be transferred by means of conditioning, and for counter-conditioning there is even less evidence. Even more importantly, we are not aware of any research that develops a general theoretical position as to the type of emotion that would be most effective for counter-conditioning. Building on appraisal theories of emotions (cf. Clore, Schwarz, and Conway 1994), we develop such position. We introduce the concept of specific counter-emotions, emotions that differ in valence but share a similar appraisal structure. For example, the pleasure from eating food, i.e., sensory pleasure, shares a similar appraisal structure with the disgust one feels from tasting a spoiled food item. For instance, both attribute the negative feeling to a sensory event, here the taste of food. The joy one feels when experiencing a pleasurable event with friends, i.e., (social) joy, shares a similar appraisal structure with the sadness one feels when loosing a friend. According to our main hypothesis, tainted brand attitudes can be more effectively improved through conditioning by pairing the brand with specific counter-emotions (specific counter-conditioning) rather than with other positive emotions (nonspecific counter-conditioning).

In a conditioning experiment we manipulated attitudes toward spring water bottles labeled with different brand names. In a first stage we initially paired these brands with images eliciting negative emotions (disgust, sadness). In a second stage, we counter-conditioned these brands with positive emotions (sensory pleasure, joy) and measured brand attitudes one week later. As predicted, specific counter-emotions were most effective at improving brand attitudes. That is, attitudes toward a “disgust brand” were improved more when counter-conditioned with sensory pleasure than with joy. Contrary, attitudes toward a “sadness brand” were improved more when counter-conditioned with joy than with sensory pleasure. Thus, the concept of specific counter-emotions provides a guideline managers can use to select a positive emotion as “anti-dote”. They can then use specific counter-conditioning to complement objective improvements of deficiencies.

As an additional finding, the superiority of specific counter-conditioning replicated when we attempted to deteriorate positive brand attitudes with negative emotions (e.g., as in anti-smoking ads). If smoking is motivated by seeking a feeling of confidence or pride by associating with a respected group who smokes (e.g., peers, cool cowboys, actors), the common strategy of eliciting disgust or fear of disease is unlikely to counter feelings of pride. Our theorizing indicates that ads provoking embarrassment and shame may be more effective in undermining the motives behind teen smoking.

Emotions are multi-dimensional constructs, but respondents have difficulty articulating these dimensions. They also have difficulty articulating the extent to which they associate specific emotions with a brand. We addressed this difficulty by having our respondents provide similarity judgments of brands (counter)conditioned with different negative and positive emotions, which is easier for them. From these similarity judgments we derived perceptual maps and uncovered emotional dimensions, including brand attitude.

REFERENCES


