

Whence Brand Evaluations?

Investigating the Relevance of Personal and Extrapersonal Associations in Brand Attitudes

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Abstract

A recent conceptualization of the structure of attitudes proposes that people may hold associations that contribute to their personal attitudes about an object (personal associations) but also highly salient associations that do not contribute to their attitudes toward the object (extrapersonal associations; Olson and Fazio 2004). We conducted three studies with brands in the automobile industry to investigate the applicability of this new association typology to consumer attitude domains. Study 1 suggests the presence of extrapersonal associations for all brands investigated, by showing that some highly salient brand associations indeed contribute to brand attitudes but other similarly salient associations do not. Experimental data in Study 2 indicate that an individual difference, consumer expertise with the category, impacts the accessibility of personal associations in a brand evaluation context. Study 3 further strengthens the validity of the new typology by showing that it can meaningfully explain the different types of associations made accessible by persuasive messages. Taken together, our three studies provide strong support for Olson and Fazio's (2004) framework and highlight its value for a better understanding of the nature of the brand associations that shape consumer brand attitudes.

Extended Abstract

A recent conceptualization of attitude structure in social psychology proposes that individuals may have in their memories different types of salient associations about an object, each type with a different role in personal attitude formation (Olson and Fazio 2004). According to this conceptualization, some of these salient associations, called *personal associations*, contribute directly to the formation of personal attitudes about the object. However, other associations, called *extrapersonal associations*, may be accessible in memory, but because individuals may not necessarily endorse them, these associations do not contribute directly to the formation of personal attitudes about the object. Those extrapersonal associations may be based on a variety of sources, including cultural knowledge, social influence or media information (Karpinski and Hilton 2001).

As this new typology bears potentially important implications for attitude conceptualization and measurement, it has promptly generated considerable research interest. Thus, experiments across several attitude domains highlight the importance of the personal-extrapersonal distinction for a better understanding of the associations affecting the outcomes of different attitude measures (De Houwer, Custers, and De Clercq 2006; Han, Olson, and Fazio 2006; Olson and Fazio 2004). The purpose of the present research is to investigate the validity and boundary conditions of Olson and Fazio's (2004) framework in a consumer attitude domain—brand evaluations. We present three studies on different car brands that are globally supportive of the new typology.

Study 1 suggests the presence of extrapersonal associations for all brands investigated, by showing that some highly accessible brand associations indeed do contribute to global attitudes about those brands, but others do not. In particular, we found that, for each of the car brands used in the study, at least one of the thoughts among the first five reported by the respondents did not correlate significantly with the overall attitude toward the brand.

Study 2 shows that an individual difference, consumer expertise with the category, impacts the accessibility of personal associations in a brand evaluation context. An important difference with respect to Study 1 is that, instead of using thought protocols, Study 2 assessed the personal-extrapersonal nature of associations with an implicit procedure by implementing the Implicit Association Test. We administered two different versions of the Implicit Association Test (IAT): the traditional IAT (Greenwald, McGhee, and Schwartz 1998) and the personalized IAT (Olson and Fazio 2004). The traditional IAT, according to Olson and Fazio (2004), is potentially affected by extrapersonal associations that are accessible at the time of categorizing the target object. Olson and Fazio (2004) devised a “personalized” version of the IAT that should be affected by personal associations to a greater extent than the traditional IAT. Our study found that increasing levels of category expertise lead to a greater correspondence of IAT measures with explicit attitude measures in the personalized (but not in the traditional) IAT.

Study 3 further highlights the value of the new typology for consumer research by showing that it can meaningfully explain changes in brand knowledge structures in a persuasion context. As in Study 2, we find that individuals with different levels of expertise use knowledge in different ways when they report their brand evaluations. Further, this study finds that personal associations (those used in the construction of brand evaluations) are made accessible by either strong or weak messages, depending on whether individuals are experts or novices, respectively.

Taken together, our three studies provide strong support for the value of Olson and Fazio's (2004) framework and provide a better understanding of the nature of the brand

associations that form consumer brand attitudes. We conclude the paper with a discussion of the theoretical implications of our results with respect to recent research on the personal-extrapersonal distinction between associations. For instance, our results contribute to our knowledge on attitude structure and provide valuable results for current conceptualizations of attitude processes (Fabrigar, MacDonald, and Wegener 2005). Recently, Gawronski and Bodenhausen (2006, 2007) advanced a distinction between two kinds of evaluative processes: associative and propositional. Associative processes are claimed to provide the basis for primitive affective reactions in evaluative judgments, while propositional processes involve thoughtful assessments of the validity of evaluative statements. Gawronski and Bodenhausen (2006) argue that the personal-extrapersonal distinction is likely to operate at the propositional level but less so at an associative level. Indeed, the explicit attitude measures used in our three studies likely implied some level of propositional reasoning and thus support this view. However, our second study using different variants of the Implicit Association Test corroborates recent findings in other research (Olson and Fazio 2004; Han et al. 2006) suggesting that the distinction between personal and extrapersonal information may, in some domains at least, also operate at a low-thought, associational level. Our findings suggest that attitudes for long-standing, established brands are likely to be part of such domains. However, the new typology may not apply to, for example, freshly formed attitudes toward new brands. Further research is certainly warranted to investigate which consumption domains are more or less likely to entail the relevance of the personal-extrapersonal distinction at both associative and propositional levels.

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As this new typology bears potentially important implications for attitude conceptualization and measurement, it has promptly generated considerable research interest. Thus, experiments across several attitude domains highlight the importance of the personal-extrapersonal distinction for a better understanding of the associations affecting the outcomes of different attitude measures (De Houwer, Custers, and De Clercq 2006; Han, Olson, and Fazio 2006; Olson and Fazio 2004). The purpose of the present research is to investigate the validity and boundary conditions of Olson and Fazio's (2004) framework in a consumer attitude domain—brand evaluations.

We present three studies on different car brands that are globally supportive of the new typology. Study 1 suggests the presence of extrapersonal associations for all brands investigated, by showing that some highly salient brand associations indeed do contribute to global attitudes about those brands, but others do not. Study 2 shows that an individual

difference, consumer expertise with the category, impacts the accessibility of personal associations in a brand evaluation context. Study 3 further highlights the value of the new typology for consumer research by showing that it can meaningfully explain changes in brand knowledge structures in a persuasion context. Taken together, our three studies provide strong support for the value of Olson and Fazio's framework and provide a better understanding of the nature of the brand associations that form consumer brand attitudes. We conclude the paper with a discussion of the theoretical implications of our results with respect to recent research on the personal-extrapersonal distinction between associations.

STUDY 1

The purpose of our first study was to provide an initial test of Olson and Fazio's (2004) typology in a consumer behavior context by focusing on consumer brand evaluations. We tested a basic proposition of the personal-extrapersonal association framework, namely that consumers do not necessarily rely on all their accessible brand associations to form global attitudes toward the brand. We therefore advance the following hypothesis:

Hypothesis 1: Some highly accessible brand associations are related to consumer brand attitudes while other, similarly accessible associations are not related to brand attitudes.

It is important to note that the distinction we make between personal and extrapersonal associations goes beyond the notion of idiosyncratic thoughts (Coulter and Punj 2007) in that, unlike idiosyncratic thoughts, extrapersonal associations are brand-centric even if they do not have significant weight on brand attitudes.

Participants and Procedure

Forty-two undergraduate students at a European business school took part in two separate surveys in exchange for class credit, with a three-day delay between the two sessions. This delay was introduced to ensure that participants would not guess the purposes of our research. Target brands were four well-known car brands commanding substantial awareness

and market share in Europe: Peugeot, Fiat, BMW and Toyota. We purposefully selected four brands with varying price levels and prestige connotations, with Fiat being the least expensive/prestigious to BMW being the most expensive/prestigious. In the first session, respondents participated in a thought listing task; that is, they were asked to write down any thought that would come to their mind when they saw the four car brands. To do so, the brand name was presented on top of the page and respondents were asked to write down any thought coming to mind about that brand. Boxes were provided for each thought and they could use as many boxes as necessary. After they completed this first step, participants were asked to self-code the valence of each of the thought they wrote down, using a scale ranging from -3 (very negative) to +3 (very positive). They were then thanked and dismissed. Three days later, participants completed another survey ostensibly presented as an unrelated study on diverse international brands. The survey contained ten brands, comprising the four target car brands and six other filler brands from unrelated categories. This procedure was used to minimize the risk that participants would relate this survey to the survey completed in session 1.

Participants were provided with six items (unpleasant-pleasant; bad-good; unfavorable-favorable, not nice-nice; negative-positive; I don't like-I like) on seven-point scales to report their attitudes toward the brands. Respondents were then debriefed and dismissed.

Results

Descriptive Statistics. Overall, the data showed a consistent picture. Respondents reported on average 5.42 thoughts per brand. The number of thoughts reported per brand ranged from 4.50 for Toyota to 5.98 for Peugeot. The total number of thoughts reported per brand ranged from 1 to 10. Mean thought valence ranged from -.02 for Fiat to 1.19 for BMW. Peugeot and Toyota respectively scored 1.08 and .66. Overall, the most liked brand was Peugeot, with a mean attitude rating of 5.10; it was followed by BMW (4.97), Toyota (4.23) and Fiat (4.11).

Correlations between Thought and Attitude Reports. We averaged the six items used by the respondents to report their brand evaluation in session 2 into one single brand attitude measure (all α 's > .90). We first examined the correlation between mean thought valence and overall attitude toward the brand. As it was expected, the mean valence of thoughts reported by respondents was positively correlated with brand attitudes, ($r = .613$). Those correlations, however, varied substantially from .482 for BMW to .708 for Peugeot. The correlations for Toyota and Fiat were respectively .595 and .665. These figures may suggest that, even if most respondents reported many personal associations (i. e. associations that shape their attitude toward those brands), the salience of some extrapersonal associations may have contributed for some brands having lower thought-attitude correspondence than others. As a next step, for each of four brands, we investigated the correlation between the valence of the five top-of-mind associations reported by the respondents and the overall attitude towards the brand. Table 1 presents a summary of those correlations.

TABLE 1
CORRELATIONS BETWEEN THOUGHT VALENCE AND BRAND ATTITUDE MEASURES

	Thought 1	Thought 2	Thought 3	Thought 4	Thought 5
BMW	.490** (42)	.312* (42)	.289 (41)	.383* (38)	.484** (29)
FIAT	.376* (42)	.658** (42)	.379* (39)	.331 (34)	.342 (26)
PEUGEOT	.300 (42)	.263 (42)	.430** (41)	.533** (39)	.562** (35)
TOYOTA	.484** (42)	.540** (40)	.443** (38)	.073 (31)	.128 (21)

Notes. * $p < .05$, ** $p < .01$. Cell sizes are in parentheses.

We found that, for each of the car brands, at least one of the thoughts among the first five reported by the respondents did not correlate significantly with the overall attitude toward the brand. The most striking case in this respect is Peugeot, for which the very first and second thoughts are not significantly correlated with overall attitude toward the brand, while the subsequent three are with correlations ranging from .43 to .562. For Fiat, the first three

thoughts reported are correlated to the brand attitude measure, while the remaining two thoughts are not. For BMW, all thoughts but the third are associated with the brand attitude measure, but with rather low correlations ranging from .312 to .49. Finally, for Toyota, the first three thoughts are associated with the brand attitude measure, while the others are not. These data evidence the likely presence of potentially more than one extrapersonal association for each brand under scrutiny, providing support for Hypothesis 1.

Discussion

Overall, results provide initial support for Olson and Fazio's framework in a consumer behavior context. We used a spontaneous thought listing task to assess consumers' brand associations with specific brands and then related the valence of those associations with global attitude measures. Consistent with our expectations, not all brand associations that were accessible contributed significantly to global attitudes towards the brand. The likelihood of the presence of extra-personal associations was further confirmed by the presence of thoughts with attitude-inconsistent valence for all brands.

STUDY 2

Our first study provided initial correlational evidence for the applicability of Olson and Fazio's typology in a consumer context. For the brands under scrutiny, several top-of-mind associations were positively correlated with brand attitudes, evidencing the high accessibility of attitude-shaping personal associations. However, it also appeared that for those same brands, a substantial proportion of highly salient associations did not contribute significantly to global brand attitudes. This latter finding points to the likely accessibility of attitude-irrelevant extrapersonal associations for all four brands investigated. Our second study aims at extending the construct validity of those findings by using alternative brand association measures and by including an individual difference variable, expertise with the

product category, as a potential moderator of the applicability of the framework in consumption domains.

Extant research indicates that greater expertise with a category leads to more specific knowledge about exemplars in that category (Alba and Hutchinson 1987, 2000; Sujan 1985; Sujan and Dekleva 1987). For instance, novices are more prone to use stereotypes rather than specific information in product judgments, but the converse holds for experts (Alba and Hutchinson 1987; Maheswaran 1994). Furthermore, increasing levels of expertise with a product category lead to brand evaluations that are predominantly based on concrete attribute knowledge stemming probably from personal experience (Dillon et al. 2001). For these reasons, we argue that the number of personal associations (i.e., attitude-relevant associations) in memory is positively related to the level of consumer expertise with the product category. We therefore propose that:

Hypothesis 2: As consumer level of category expertise increases, so should the number of personal associations about a brand in a product category.

An important difference with respect to Study 1 is that, instead of using thought protocols, Study 2 assessed the personal-extrapersonal nature of associations with an implicit procedure by implementing the Implicit Association Test. We administered two different versions of the Implicit Association Test (IAT): the traditional IAT (Greenwald, McGhee, and Schwartz 1998) and the personalized IAT (Olson and Fazio 2004). The traditional IAT, according to Olson and Fazio (2004), is potentially affected by extrapersonal associations that are accessible at the time of categorizing the target object. Olson and Fazio (2004) devised a “personalized” version of the IAT that should be affected by personal associations to a greater extent than the traditional IAT. We therefore expected that:

Hypothesis 3: Increasing levels of category expertise lead to a greater correspondence of IAT measures with explicit attitude measures in the personalized (but not in the traditional) IAT.

Method

Pretest. The Mercedes and Fiat brands were selected for this study. Forty-nine undergraduate students participated in a pretest asking them to list “any word than come to mind” about different brands, including Mercedes and Fiat. The purpose of this task was to elicit word stimuli for the IAT, as explained below.

Experiment. Ninety-six undergraduates participated in exchange for course credit. The study comprised two sessions, with an interval of two weeks between the two. In the first session, each participant completed a randomly assigned IAT (traditional or personalized), in which the target objects were the Mercedes and Fiat brands. In the traditional IAT condition, we followed Greenwald et al.’s (1998) IAT procedure whereby participants completed a Mercedes/Fiat IAT implemented on Inquisit 2.0 software. They were instructed to sort words appearing in the middle of the computer screen into categories as quickly as they could. The words appeared in random order and were either positive valence attributes (*peace, paradise, joy, pleasure, love, happiness*), negative valence attributes (*disaster, grief, accident, pain, bad, agony*), words pertaining to Mercedes (*Stuttgart, Benz, SLK, Daimler, Germany, German*) or words pertaining to Fiat (*Turin, Punto, Panda, Agnelli, Italy, Italian*). After practice blocks, participants sorted words in the compatible trial block (*Mercedes and pleasant; Fiat and unpleasant*) and the incompatible trial block (*Mercedes and unpleasant; Fiat and pleasant*); the order of these blocks was randomized. Response latencies were calculated following conventional practice (Greenwald et al. 1998). Then, means of log-transformed response latencies were computed separately for the compatible trial block as

well as for the incompatible trial block. Differences of means between the incompatible block and the compatible block served as implicit measures of preferences of *Mercedes* over *Fiat*.

In the personalized IAT condition, we followed one of the variants developed by Olson and Fazio (2004). The method implemented differed from the traditional IAT in two important respects. First, no error feedback was given to participants. Second, the category labels were changed from *pleasant* to *I like* and from *unpleasant* to *I don't like*. Thus, the compatible block of the personalized IAT consisted of combined tasks with the labels *Mercedes and I like* and *Fiat and I don't like*; the incompatible block featured the labels *Mercedes and I don't like* and *Fiat and I like*. The purpose of these more focused labels on personal likes and dislikes was to limit the potentially strong normative effects on the IAT, thus reducing the effect of extrapersonal associations (Han et al. 2006).

In the second session, participants completed a questionnaire including evaluations of the *Mercedes* and *Fiat* brands on the six-item scales used in Study 1 ($\alpha = .93$ and $.91$, respectively). After that, they wrote down the reasons for their evaluation of each brand into boxes provided for each thought. The total number of those attitude-relevant thoughts served as a measure of the number of personal associations. Participants next reported their expertise on cars on the four items implemented in Study 1. The average score on this scale served as a global measure of expertise with cars ($\alpha = .93$).

Results

We obtained useable data from 89 respondents. Participants wrote on average more personal thoughts about Mercedes (5.53) than Fiat (4.72), $t(88) = 5.81, p < .001$. As expected, the number of personal thoughts reported was positively correlated with expertise level for both Mercedes ($r = .305, p < .01$) and Fiat ($r = .256, p < .05$). These results provide support for Hypothesis 2.

We regressed explicit brand evaluation on the IAT effect, expertise, IAT type (0: traditional IAT; 1: personalized IAT), and on the following cross-products: IAT effect \times expertise, IAT effect \times IAT type, expertise \times IAT type and IAT effect \times expertise \times IAT type, $R^2 = .14$ (Aiken and West 1991). The only significant effect to emerge was the three-way interaction, $t(88) = 2.01, p < .05$. Following conventional practice, we probed this interaction at low (one SD below mean) and high (one SD above mean) expertise levels across the two IAT conditions. At the low expertise level, traditional IAT effects and explicit brand evaluations were not significantly associated ($t(88) = 1.56, p = .12$); in the same way, personalized IAT effects and explicit brand evaluations were not either ($t(88) = .34, p = .73$). A different pattern emerged at high expertise level: traditional IAT effects and explicit brand evaluations were not positively associated ($t(88) = -.86, p = .39$); however, personalized IAT effects and explicit brand evaluations were ($t(88) = 1.90, p = .06$). In line with our expectations, higher expertise levels led to a greater correspondence between personalized IAT effects (i.e., personal associations) and explicit brand evaluations in the personalized, but not in the traditional IAT. These results provide support for Hypothesis 3.

Discussion

Findings from our second study further corroborate those previously obtained in our first study, and provide additional evidence for the relevance of Olson and Fazio's framework in a consumer behavior context. In addition, the use of the personalized vs. standard version of the IAT improved the construct validity of our findings. We also extended previous results by incorporating an expertise dimension. Following our predictions, higher (vs. lower) expertise levels lead to a stronger relation between personalized IAT score and their explicit brand evaluations. In other words, experts' attitudes seemed less contaminated by extrapersonal associations than novices'.

STUDY 3

Our first two studies provided evidence for the applicability of Olson and Fazio's association typology to brands in context-free brand evaluations. Our third study aims at replicating and extending these findings in a persuasion context. That is, we investigate the extent to which our framework can explain different patterns in brand knowledge structures after persuasion attempts with varying credibility (Petty and Wegener 1999). In addition, we investigate how category expertise moderates the relationship between personal/extrapolational associations and brand attitudes in this context.

What happens if a more or less credible persuasion attempt precedes assessments of brand knowledge and attitudes? Our focus here is not so much on the occurrence of real attitude change as on the types of associations that are activated following a low (vs. high) credibility message. A low-credibility argument will, at best, activate some attitude-irrelevant (i. e. extrapolational) thoughts in consumers' minds. For example, if a tabloid article reports an unbelievable story about BMW experiencing brake flaws, this piece of information will probably not affect consumer attitudes much. However, the association "BMW-brake problem" may temporarily linger on when reporting thoughts about the BMW brand, and may ultimately figure on a brand thought list provided by the consumer. This thought should nevertheless not be related to subsequent attitude measures about BMW (evidenced by a weak relation between the valence of that thought and subsequent attitude measures). On the other hand, a strong, high-credibility argument will likely provide salient thoughts that will be integrated into the brand attitude report, evidenced by a strong relation between thought valence and subsequent attitude measures. For example, if a respected automobile magazine provides a detailed technical report on BMW having brake problems, some readers are likely to integrate that information into their attitude-forming personal associations about the brand.

We expect those mechanisms to be moderated by consumer expertise with the category. Extant research on expertise attest to the more elaborate personal knowledge associated with higher levels of expertise (e. g., Alba and Hutchinson 2000). Also, research on attitude accessibility indicates that higher levels of personal expertise lead to stronger and more accessible attitudes (Fazio 1995). This would also mean that attitudes, as suggested by Study 2, are strongly embedded in a greater number of personal associations for higher levels of expertise and less so at lower levels of expertise. We expected that a low credibility message would be more easily believed by novices than by experts. That is, that message would more easily affect novices', rather than experts' brand knowledge structures. Specifically, we expected that a low credibility message would create new personal associations for novices that they would then integrate into their attitude reports. This could be evidenced by a strong relationship between the valence of some highly salient thoughts measured after exposure to the message and subsequent attitude measures. On the other hand, we expected novices not to possess the necessary knowledge to process a highly credible expert, communicating a potentially more technical message. We therefore expected a strong message to produce extrapersonal, rather than personal associations for them. This would be evidenced by a particularly weak relationship between the valence of some salient thoughts (produced after exposure to the message) and subsequent attitude measures. We therefore predict that:

Hypothesis 4. For novices, extrapersonal associations will be more accessible after exposure to a high (vs. low) credibility message.

With increasing levels of expertise, we expected an opposite pattern to emerge. Namely, that experts would not be affected by the low-quality arguments of a low-credibility message; such a message would probably only make extrapersonal (i. e. attitude-irrelevant) associations accessible at the time of the attitude assessment. However, the professional

technical arguments of a high-credibility message would likely be integrated into the knowledge structures of experts (i. e., would become personal associations). We therefore propose that:

Hypothesis 5. For experts, extrapersonal associations will be more accessible after exposure to a low (vs. high) credibility message.

Method

A total of 197 undergraduate students took part in this experiment in exchange for course credit. Participants read and responded to experimental materials relative to a European car brand, Fiat. Participants were randomly assigned to either the low/high message credibility conditions. In order to be as realistic as possible, we developed positive messages of varying strength about a recently launched, quite successful model, the new version of the mythical Fiat 500 from the 60s. Messages in both conditions were presented identically in a short paragraph and contained the same number and type of arguments about the new Fiat 500. In the low credibility message condition, the source of the message was identified as an internet user from a general chat forum. The message was poorly written, included grammatical mistakes, used “smileys” as punctuation and imprecise descriptions of the features of the car (e. g., “room for everything”, “get good mileage”). In the high credibility message condition, the source of the message was identified as an internet user from a specialist automobile forum. The message was carefully worded and the descriptions of the features of the car were detailed in precise technical terms (e. g., “ergonomic interior”, “100-HP 1.6l fuel engine”). Participants then responded to the message on a series of seven-point scales. They first rated the message on four items pertaining to perceived credibility (uninteresting–interesting, weak–strong, not convincing–convincing, not credible–credible). On the next page, boxes were provided to respondents to write down “any word coming to mind” about the Fiat brand. After they completed this step and turned to the next page,

respondents were asked to go back to the previous page and code the valence of each of the words they wrote, using a scale ranging from -3 (very negative) to +3 (very positive). They then reported their attitude toward Fiat on six items (unpleasant-pleasant; bad-good; unfavorable-favorable, not nice-nice; negative-positive; I don't like-I like). Participants next reported their expertise on cars on the four-item scale implemented in Study 2. Participants were then thanked for their participation and debriefed about the purposes of the research.

Results

Manipulation Checks. Thirty participants failed to complete the thought coding task, resulting in 167 data for further analyses. Participants in the high (vs. low) credibility condition evaluated the message as more interesting ($M = 4.73$ vs. $M = 3.05$, $F(1, 165) = 38.12$, $p < .001$), stronger ($M = 4.12$ vs. $M = 2.64$, $F(1, 165) = 37.27$, $p < .001$), more convincing ($M = 4.13$ vs. $M = 2.48$, $F(1, 165) = 44.80$, $p < .001$) and more credible ($M = 4.41$ vs. $M = 2.77$, $F(1, 165) = 37.08$, $p < .001$). These figures indicate that the message credibility manipulation occurred as intended.

Brand Thoughts. On average, participants wrote 5.52 thoughts related to Fiat after reading the persuasive message about the new 500 model. No differences were observed in this respect across the experimental conditions ($F < 1$), indicating similar levels of processing independently of the perceived credibility of the message. As expected, the number of thoughts reported was positively correlated with expertise ($r = .363$, $p < .001$), validating prior research evidencing richer general domain knowledge associated with increasing levels of expertise. The average valence of thoughts was positive ($M = .23$, $t(166) = 2.348$, $p < .01$) and was unaffected by either message credibility ($F(1, 165) = .026$, $p = .873$) or expertise ($r = -.04$, $p = .604$). These results are consistent with the expectation that the message would be globally positively perceived in both conditions.

Brand Attitudes as a Function of Brand Thoughts. The focal relationship of our interest is the link between brand thought valence and brand attitudes depending on message strength and expertise. We presented participants with either a low/high credibility message about a new Fiat model. We did not expect those brief messages about a specific model to radically change well-established consumer attitudes about the Fiat brand in general. However, depending on participant level of expertise, we expected a more or less credible message to differentially affect the accessibility of personal vs. extrapersonal associations about Fiat.

To test these predictions, we focused our investigations on the two top thoughts reported by respondents (their two most accessible thoughts) and performed regression analyses using Aiken and West's methods (1991). Continuous data were first mean-centered. For each thought, we regressed brand attitude on thought valence, expertise, and message credibility (weak: 0, strong: 1), as well as all the two-way and three-way interactions between these independent variables. We obtained a significant three-way interaction between thought valence, expertise and message credibility for the regressions on the first two thoughts mentioned by participants. For the first thought, thought valence ($t(159) = 5.34, p < .001$), expertise ($t(159) = 1.99, p = .047$), and the three-way cross-product of thought valence, expertise and message credibility ($t(159) = 2.23, p < .05$) were significant predictors of brand attitudes, $R^2 = .28$. We obtained a similar pattern of results when investigating the link between valence of the second thought and brand attitudes across expertise levels and experimental conditions. Thought valence ($t(159) = 4.17, p < .001$), expertise ($t(159) = 2.21, p < .05$), and the three-way interaction of thought valence, expertise and message credibility ($t(159) = 1.79, p = .075$) were again significant predictors of brand attitudes, $R^2 = .22$. Note that in both regressions, the positive relationship between expertise and brand attitudes

confirms prior research suggesting expertise leading to stronger and potentially more extreme attitudes (Fazio 1995; Judd and Brauer 1995).

To probe the three-way interactions, we conducted slope tests at low (one *SD* below the mean) vs. high (one *SD* above the mean) expertise levels across the two experimental conditions. As expected, for novices, the valence of the first thought was significantly related to brand attitudes in the low message credibility ($t(159) = 4.05, p < .001$) but not in the high message credibility condition ($t(159) = .71, p = .48$). Regarding the second thought, its valence was significantly related to brand attitudes in both low ($t(159) = 3.23, p < .001$) and high credibility ($t(159) = 2.06, p < .05$), though less so in the high versus low credibility condition as indicated by the slope differences ($t(159) = 2.21, p < .05$). These results support Hypothesis 4 as they suggest that there will be more extrapersonal associations for novices after exposure to the high (vs. low) credibility message.

As expected, the slope tests at high expertise yielded very different results. At high expertise levels, the valence of the first thought was significantly related to brand attitudes in both the low ($t(159) = 3.51, p < .001$) and high credibility message conditions ($t(159) = 4.42, p < .001$). Most importantly, the critical difference between the two slopes was significant ($t(159) = 1.99, p < .05$), indicating that the first thought was more likely to be an extrapersonal association after exposure to the low (vs. high) credibility message. Concerning the second thought, the valence of the thought was significantly related to brand attitudes in both the low ($t(159) = 2.35, p < .05$) and high credibility conditions ($t(159) = 4.81, p < .001$). The difference between the two slopes was again significant ($t(159) = 2.21, p < .05$), showing that, just like the first thought, the second thought was also more likely to be an extrapersonal association after exposure to the low (vs. high) credibility message. These findings support Hypothesis 5 and show that high (vs. low) credibility message has greater potential to shape personal attitude structures for highly expert consumers with cars.

Discussion

The purpose of this third study was to validate Olson and Fazio's (2004) association typology in a persuasion context. As in Study 2, we find that individuals with different levels of expertise use knowledge in different ways when they report their brand evaluations. In particular, this study finds that personal associations (those used in the construction of brand evaluations) are made accessible by more or less credible messages, depending on whether individuals are experts or novices, respectively.

GENERAL DISCUSSION

To our knowledge, the present research is the first of its kind to investigate the validity and boundary conditions of Olson and Fazio's (2004) framework in a consumer context. In Study 1, we investigated a basic proposition of the new typology, namely that some highly salient brand associations indeed do contribute to global attitudes about those brands, but others do not. In Study 2, we demonstrated that an individual difference, consumer expertise with the category, moderates the applicability of the personal-extrapersonal typology to brand evaluations, whereby increasing levels of expertise lead to a greater reliance on personal associations to form brand attitudes. In Study 3, we sought to further extend the value of the new typology for consumer research by showing that it can meaningfully explain changes in brand knowledge structures in a persuasion context. Taken together, our three studies support the value of Olson and Fazio's framework in consumer research and provide important implications and research directions for a better understanding of the nature of brand associations forming consumer brand attitudes.

Our results contribute to the existing knowledge on attitude structure and provide valuable results for current conceptualizations of attitude processes (Fabrigar, MacDonald, and Wegener 2005). Recently, Gawronski and Bodenhausen (2006, 2007) advanced a distinction between two kinds of evaluative processes: associative and propositional.

Associative processes are claimed to provide the basis for primitive affective reactions in evaluative judgments, while propositional processes involve thoughtful assessments of the validity of evaluative statements. Gawronski and Bodenhausen (2006) argue that the personal-extrapersonal distinction is likely to operate at the propositional level but less so at an associative level. Indeed, the explicit attitude measures used in our three studies likely implied some level of propositional reasoning and thus support this view. However, our second study using different variants of the Implicit Association Test corroborates recent findings in other research (Olson and Fazio 2004; Han et al. 2006) suggesting that the distinction between personal and extrapersonal information may, in some domains at least, also operate at a low-thought, associative level. Our findings suggest that attitudes for long-standing, established brands are likely to be part of such domains. However, the new typology may not apply to, for example, freshly formed attitudes toward new brands. Further research is certainly warranted to investigate which consumption domains are more or less likely to entail the relevance of the personal-extrapersonal distinction at both associative and propositional levels.

A related issue is the origin of personal vs. extrapersonal associations. Olson and Fazio's (2004) framework does not specify the bases on which those differential associations may form. The only distinction it introduces is the one between salient associations that do (vs. those that do not) contribute to personal evaluations of objects. Future research should engage in an in-depth investigation of whether personal experience with products and brands, do, as we proposed in this paper, facilitate the formation of personal associations. Our results, especially those in Study 3 also suggest that different forms of persuasion can play a crucial role in the formation of associations that differently relate to personal attitudes. Therefore, studying the influence of advertising and media on the formation of personal vs. extrapersonal knowledge is certainly another important direction for future inquiry.

The present research also has implications for methodological research on attitude antecedents. For example, the new conceptualization of attitude structures introduced by Olson and Fazio (2004) may prove useful in our understanding of why test-retest correlations on attitudes are sometimes weak. It may be that, for instance, depending on the time when the attitude measures are taken, personal or extra-personal elements have been activated recently in the respondent's mind. In such circumstances, when researchers measure attitude inconsistencies, this may be due to a noise created by extra-personal associations whose effect can be potentially isolated and reduced using more focussed labelling of attitude measures (e. g., *like and dislike* vs. *pleasant and unpleasant* in the IAT).

To better understand the processes by which the types of associations affect explicit brand evaluations, the next steps of this research program involve experiments manipulating the salience of personal vs. extrapersonal associations through priming. We expect a priming of personal associations to have a differential effect on experts such that their brand attitudes (as measured by the IAT and explicit scales) should be more based on personal associations than in a control condition. Conversely, we expect a priming of extrapersonal associations to have a differential effect on novices such that their brand attitudes (as measured by the IAT and explicit scales) should be more based on personal associations than in a control condition.

In the present research, we investigated the validity and boundary conditions of Olson and Fazio's (2004) framework in a consumer attitude domain—brand evaluations. Our findings are globally supportive of the value of this new typology in consumption contexts. As such, we believe the present research project promises important new directions for our understanding of the different influences consumers rely upon when constructing and reporting judgments about brands.

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