ELECTRIC CAR EXTENSIONS OF EXISTING CAR BRANDS: IMPACT ON BRAND EXPERIENCE, EXTENSION EVALUATION AND PARENT BRAND FEEDBACK

Ingrid Moons¹ & Patrick De Pelsmacker²

¹ Faculty of Design Sciences, University of Antwerp, Antwerp, Belgium

² Faculty of Applied Economics, Marketing Department, University of Antwerp, Antwerp, Belgium Correspondence: Patrick De Pelsmacker, University of Antwerp, Faculty of Applied Economics, Prinsstraat 13, 2000 Antwerpen, Belgium Tel: 32-3265-4022. E-mail: Patrick.depelsmacker@uantwerpen.be

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Abstract

Background and objectives: Established car manufacturers have launched or are going to launch electric cars as an

extension of their model range. The objective of the present study is to investigate the responses of consumers to

different types of electric car extensions (rational and emotional) of existing parent brands varying in experiential

connotations. The impact of these extensions on anticipated car experience, the attitude towards the extension, and

parent feedback effects are studied.

Methods: In a Belgian sample of 840 respondents, an online survey was administered. Participants were exposed to

different types of electric extensions of existing car brands, and were asked to indicate their response in terms of

anticipated experiences, perceived fit of the extension with the parent brand, evoked emotions and cognitions, attitude towards te extension, attitude towards the parent brand, and usage intention of the electric extension. The

data are analyzed using analysis of variance and regression analysis.

Results: For some brands, extension-parent brand experience fit leads to more positive responses to the extension,

but non-fitting extensions leave the parent brand experience largely unaffected. The most important determinant of

extension evaluation is the extent to which the extension generally evokes positive emotions and positive cognitions

and fits the parent brand, regardless of the evoked experiences of the extension.

Conclusions: Extension-parent brand fit leads to more positive responses and reinforces brand image in terms of

anticipated experiences. None of the extensions lead to differences in parent brand attitude feedback. The most

important driver of extension evaluation for each brand is the emotional response to the extension. If consumers

appreciate a brand's efforts for the environment, extension attitudes become more positive, regardless of the original

experience connotations of the brand.

Keywords: Electric cars, brand extension, brand experience, parent brand feedback

1. Introduction and research questions

Different major car manufacturers, such as Nissan (Leaf) and Opel (Ampera) have developed fully electric car alternatives that are already for sale. When an established car brand launches an electric variant, it is extending its product line. A brand is a psychological carrier of meaning (e.g. Aaker 2004; Keller 2008). Car brands carry a symbolic meaning and (anticipated) brand experience is an important component of this meaning (Brakus et al. 2008). The purpose of the present study is to investigate how adding various experience types of electric car models to the product line of existing car brands with existing brand experience connotations, affects the perceived anticipated experiences of these extensions and of the parent brand. We also investigate how brand experience characteristics affect the attitude towards electric extensions and parent brands for existing car brands. Brand experience has not been studied often as a factor in brand extension studies. The study adds to our understanding of the effect of extensions varying in anticipated experience, on the evoked experiences and evaluations of existing car brands and provide insights into how different positioning of electric extensions can have a differential effect on brand experience.

Product categories and brands can either be functional (e.g., lawnmowers) or symbolic (e.g., cars) (de Ruyter and Wetzels, 2000; Park and Young, 1986). A functional product possesses mainly product-related or concrete, functional associations Products with a symbolic positioning usually entail non-product-related or abstract, image-based associations (Bhat and Reddy, 2001; de Ruyter and Wetzels, 2000). Brand experience is a major symbolic component of brand identity and image. Brand experience can build unique and favorable associations in consumer memory and thus plays a major role in brand positioning and advertising (Diamantopoulos et al., 2005; Pandey, 2013). Brakus et al (2008) showed that brand experience affects consumer satisfaction and loyalty. Positive brand experience not only affects past satisfaction judgments but also future directed use intentions (Mittal and Kamakura 2001; Reicheld 1996).

Brakus et al (2009) define brand experience as subjective consumer responses that are evoked by specific brand-related experiential attributes. They demonstrate that brand experience can be broken down into four dimensions: sensory, affective, intellectual and behavioural, which are differentially evoked by various brands. They developed a scale to measure these four different brand experiences. In a design context, Norman (2004) argues that the emotional reaction to design and/or to an existing or new product are related to three emotional processing levels: visceral, behavioral and reflective. The first level, i.e. visceral affect, is perception-based and relates to visceral aspects that are related to product appearance. The second level, i.e. behavioral emotion, is expectation-based and corresponds with behavioral aspects that have to do with the pleasure and effectiveness of use. The third level i.e. reflective emotion is intellectually based and corresponds with reflective dimensions that are concerned with self-image, personal satisfaction and memories. These three emotional responses to a large extent coincide with the conceptualization of Brakus et al. (2009). In the present study we left out the 'affective' experience component of the Brakus framework because it proved to overlap considerably with the sensory one.

The core of user experience is the actual experience of usage. However, people can have indirect experience before their first encounter, through expectations formed from existing experience of related technologies (the current car), brand, advertisements, presentations, demonstrations, opinions of others. For the moment, actual experience of usage

of the branded electric car is impossible, because of its limited market penetration. This study can thus not reach any further than exploring the anticipated user emotions and experiences that might be provoked by the manipulation of product aspects of the branded electric car. Therefore, the Brakus et al. (2009) and the Norman (2004) frameworks are very relevant to study the effect of different types of car designs on consumers' responses to brands and brand extensions.

Adding an electric car model to a product line of an existing car brand is an extension. Extension evaluation is positively affected when consumers perceive the extension to fit with the parent brand (Martinez and Pina 2003; Patro and Jaiswal 2003; Martinez and de Chernatony 2004; Lau and Phau, 2007; Jeong and Jung, 2013). Perceived fit between the parent brand and the extension can also be an important antecedent of positive or negative parent brand image and evaluation after an extension (Martínez and de Chernatony 2004; Martínez et al. 2009; Dens and De Pelsmacker 2010; Swaminathan et al. 2003; Keller and Sood 2003; Martínez and Pina 2003). According to categorization theory, people faced with an evaluative task will first attempt to classify the object within a certain category on the basis of salient cues by computation of individual feature matches and mismatches (Park et al., 2002). If the categorization is successful, affect and beliefs associated with the category in memory will be transferred to the object. Also, beliefs about a category (i.e. the parent brand) change in response to the degree that a new instance (i.e. an extension) is inconsistent with a person's existing brand schema (Milberg and Sinn 2008; Keller and Sood 2003). Especially in case of symbolic products, the fit at the level of imagery or experience is often a determinant of brand extension success than the degree of physical similarity (Lau and Phau 2007; Batra et al. 2010; Bhat and Reddy 2001; Jeong and Jung 2013). On the other hand, most research shows that extensions that are non-fitting do not lead to parent brand dilution effects (Lau and Phau 2007; Diamantopoulos et al. 2005). Parent brands may be immune to such dilution effects when these brands have a high familiarity and have well-established brand images.

One of the aims of this study is to design branded electric car concepts and positioning that evoke different types of anticipated experience. These designs are used to measure the effect of various experience types of electric cars on the perceived experience of the extension and the parent brand and how these extensions affect extension and parent brand evaluations:

- 1. RQ1: How do different experience types of electric car extensions for existing car brands affect the anticipated experience of the extensions and the parent brands?
- 2. RQ2: How do different experience types of electric car extensions for existing car brands affect the responses to and attitude towards the extension and the parent brand?
- 3. RQ3. How do responses to the electric car extension and perceived experience characteristics of the extension affect the attitude towards the extension and towards the parent brand for different existing car brands?

2. Method

Pretests

A focus group and two online quantitative studies resulted in a selection of four brands that evoke different experiences. Saab is most frequently associated with the sensory brand experience dimension, and is least associated with intellectual experiences. BMW is most strongly associated with behavioural experiences and least associated with intellectual experiences. Toyota is most strongly associated with intellectual experiences, and Volvo most strongly evokes both behavioural and intellectual experiences.

In a second series of pretests, product features of electric cars were generated that evoke different experiences. From six brainstorming sessions it became clear that it was only possible to develop attributes that clearly distinguished between cars that evoked either a rational (intellectual) or an emotional (sensory) type of car. It was therefore decided to develop two electric car story boards along the lines of these two types. Per type, the six most frequently mentioned attributes were selected and for each of them a story board was made in which these six attributes were shown (pictures) and explained (text). In a pretest with 125 participants, these two unbranded story boards were tested to check to what extent they evoked different car experiences. The rational car type (M=3.08) indeed scored higher on the 'intellectual' dimension than the emotional type (M=2.83), and the emotional car type scored higher on both the sensory (M=2.58) and the behavioural (M=2.43) dimension than the rational type (M=2.52) and M=2.27, resp.). However, none of these differences reaches conventional levels of significance. Although relevant, the two car types only slightly differ in terms of evoked experiences.

Main study

The main study was a 4 X 4 between subjects design tested in a sample of 840 Belgian consumers. For each of the four brands (factor 1) four conditions (factor 2) were tested: a rational electric car stimulus, an emotional one, an electric car extension without showing a stimulus, and a condition in which only brand responses were measured without any reference to an electric extension. The first three conditions contained 60 participants each (male-female owners of a driver's license and aged between 18 and 65). Each group contains 30 owners and 30 non-owners of the brand concerned. The fourth condition (only brand measures) contained 30 respondents in each of the four groups, half of them owners of the brand, and half of them non-owners of the brand. Each of the participants in the first two conditions (rational and emotional stimulus) were exposed to a set of 8 pictures: one general picture of a car with six distinct characteristics, six pictures highlighting the details of each of the six characteristics, and the general picture again. They were told that the brand was going to launch an electric extension like the one they just saw. In the third condition, no stimulus was shown and the participants were just told that the brand was going to launch an electric extension. In the fourth condition, no mention of an electric car was made.

The following dependent variables were measured in the first three conditions of factor 2: attitude towards the electric extension, emotional response to the extension, cognitive response towards the extension, anticipated experience of the branded extension, fit of the extension with the parent brand, attitude towards the parent brand after the electric extension, and parent brand experience after the electric extension. The latter three scales measure parent

brand feedback effects. In the fourth condition only parent brand attitude and brand experience were measured (see appendix for details of measures).

3. Results

RQ1 explores to what extent different types of electric car extensions for existing car brands affect the anticipated experiences of the extensions and the parent brands. The experience scores of the first three conditions were compared per brand, and their effect on extension and parent brand feedback experiences were studied. For Alfa, adding an emotional stimulus makes the extension experience more sensory and more behavioural, and adding a rational stimulus makes the Alfa experience more intellectual than presenting no stimulus. For BMW, adding an emotional stimulus or no stimulus, and adding an emotional stimulus makes the car experience more intellectual than adding no stimulus. For Toyota, adding an emotional or a rational stimulus makes the car experience more sensory and more intellectual than presenting no stimulus, and adding an emotional stimulus makes the car experience more behavioural. Adding any extension to a Volvo does not affect its anticipated experiences (Table 1). Extending an existing brand with different electric car types thus significantly affect anticipated experiences. There is no effect of adding stimuli on parent brand feedback experiences.

Table 1. Differences between emotional, rational and no-stimulus electric extensions in terms of extension brand experience– ANOVA results

| Depend | dent | A | lfa | BM | IW | Тоу | ota | 7 | /olvo |
|-----------|-----------|---|------|--|------|---|------|--------|-------|
| variab | variables | | | | | | | | |
| | | scores | p | scores | p | scores | p | Scores | p |
| ExSensory | Е | 2.73 (>N) | .049 | 2.94 | .002 | 2.80 (>N) | .003 | 2.82 | .301 |
| | R | 2.65 | | (>R,N) | | 2.62 (>N) | | 2.82 | |
| | N | 2.28 (<e)< th=""><th></th><th>2.45 (<e)< th=""><th></th><th>2.22</th><th></th><th>2.59</th><th></th></e)<></th></e)<> | | 2.45 (<e)< th=""><th></th><th>2.22</th><th></th><th>2.59</th><th></th></e)<> | | 2.22 | | 2.59 | |
| | | | | 2.30 (<e)< th=""><th></th><th>(<e,r)< th=""><th></th><th></th><th></th></e,r)<></th></e)<> | | (<e,r)< th=""><th></th><th></th><th></th></e,r)<> | | | |
| ExBehav | Е | 2.43 (>N) | .089 | 2.63 | .001 | 2.55 (>N) | .073 | 2.58 | .416 |
| | R | 2.33 | | (>R,N) | | 2.33 | | 2.61 | |
| | N | 2.05 (<e)< th=""><th></th><th>2.15 (<e)< th=""><th></th><th>2.18 (<e)< th=""><th></th><th>2.40</th><th></th></e)<></th></e)<></th></e)<> | | 2.15 (<e)< th=""><th></th><th>2.18 (<e)< th=""><th></th><th>2.40</th><th></th></e)<></th></e)<> | | 2.18 (<e)< th=""><th></th><th>2.40</th><th></th></e)<> | | 2.40 | |
| | | | | 2.01 (<e)< th=""><th></th><th></th><th></th><th></th><th></th></e)<> | | | | | |
| ExIntell | Е | 2.88 | .005 | 3.20 (>N) | .057 | 3.31 (>N) | .043 | 3.19 | .660 |
| | R | 3.14 (>N) | | 2.95 | | 3.24 (>N) | | 3.25 | |
| | N | 2.51 (<e)< th=""><th></th><th>2.76 (<e)< th=""><th></th><th>2.89</th><th></th><th>3.09</th><th></th></e)<></th></e)<> | | 2.76 (<e)< th=""><th></th><th>2.89</th><th></th><th>3.09</th><th></th></e)<> | | 2.89 | | 3.09 | |
| | | | | | | (<e,r)< th=""><th></th><th></th><th></th></e,r)<> | | | |

E=emotional, R=rational, N=no stimulus. Cells indicate significance based on two-by-two Bonferroni post-hoc tests, e.g. in the first cell, first column: EXSensory E: 2.73 (>N) means the emotional stimulus leads to a more sensory brand experience than no stimulus.

In a second analysis, brand measures without electric extension (condition 4 of factor 2) were compared to electric extensions with a rational and an emotional stimulus. For Alfa, adding a rational or an emotional extension makes the brand experience less sensory. Since sensory is a distinct dimension of Alfa, it appears that adding an electric car makes the extension less fitting with the brand. Adding a rational extension makes the BMW experience less sensory and behavioural than adding an emotional extension, which in turn makes its experience less sensory and behavioural than a BMW without an extension. Sensory and behavioural are two distinct dimensions of BMW. Consequently, adding a rational electric extension seems not very fitting with BMW. Adding an emotional extension is more fitting, but still decreases the sensory and behavioural experiences evoked by the brand itself. Not adding an extension seems the better option. Adding an emotional or a rational electric extension makes Toyota look more intellectual. The evoked experiences of Volvo are unaffected by adding any electric extension. All in all, adding an electric extension to Alfa and BMW seems a bad idea in terms of fit with the parent brand. Toyota has a somewhat non-outspoken experience profile, and would benefit from an electric extension in terms of enhanced anticipated experiences. In terms of anticipated experiences, Volvo neither benefits nor suffers from an electric extension (Table 2).

Table 2. Differences between emotional and rational electric extensions and brand control measure (without electric extension) in terms of extension brand experience – ANOVA results

| Dependent | | Alf | a | BMW | | Toyota | l | Volve |) |
|-----------|---|---|-------|--|-------|---|------|--------|------|
| variables | | | | | | | | | |
| | | scores | p | scores | p | Scores | p | Scores | p |
| EXSensory | Е | 2.73 (<b)< th=""><th><.001</th><th>2.94 (>R, <b)< th=""><th><.001</th><th>2.98</th><th>.466</th><th>2.82</th><th>.553</th></b)<></th></b)<> | <.001 | 2.94 (>R, <b)< th=""><th><.001</th><th>2.98</th><th>.466</th><th>2.82</th><th>.553</th></b)<> | <.001 | 2.98 | .466 | 2.82 | .553 |
| | R | 2.65 (<b)< th=""><th></th><th>2.45 (<e,b)< th=""><th></th><th>2.62</th><th></th><th>2.82</th><th></th></e,b)<></th></b)<> | | 2.45 (<e,b)< th=""><th></th><th>2.62</th><th></th><th>2.82</th><th></th></e,b)<> | | 2.62 | | 2.82 | |
| | В | 3.99 (>E,R) | | 3.94 (>E,R) | | 2.57 | | 3.03 | |
| EXBehav | Е | 2.43 | <.001 | 2.63 (>R, <b)< th=""><th><.001</th><th>2.55</th><th>.406</th><th>2.58</th><th>.621</th></b)<> | <.001 | 2.55 | .406 | 2.58 | .621 |
| | R | 2.33 | | 2.15 (<e,b)< th=""><th></th><th>2.39</th><th></th><th>2.61</th><th></th></e,b)<> | | 2.39 | | 2.61 | |
| | В | 3.38 | | 3.52 (>E,R) | | 2.39 | | 2.77 | |
| EXIntell | Е | 2.88 | .271 | 3.20 | .269 | 3.31 (>B) | .003 | 3.19 | .802 |
| | R | 3.14 | | 2.95 | | 3.24 (>B) | | 3.25 | |
| | В | 2.82 | | 2.92 | | 2.63 (<e,r)< th=""><th></th><th>3.11</th><th></th></e,r)<> | | 3.11 | |

E=emotional, R=rational, B=only brand. Cells indicate significance based on two-by-two Bonferroni post-hoc tests, e.g. in the third cell, first column: ExSensory E: 2.73 (<B) means the emotional stimulus leads to a less sensory brand experience than the brand without electric extension.

To answer RQ2, how do different experience types of electric car extensions affect the attitude, emotions and cognitions towards the extension and the attitude toward the parent brand after the electric extensions, responses are compared across the three extension conditions. For Alfa, and to a certain extent also for Toyota, adding a rational or emotional extension increases the attractiveness of the extension, compared to not profiling the extension. For BMW, clearly an emotional extension outperforms a rational one in terms of emotional and cognitive response and attitude towards the extension. For Volvo, clearly a rational extension outperforms an emotional one or an electric car

without a specific profile. This partly supports the notion that extension-parent brand fit leads to more positive responses. BMW is sensory and behavioural brand. Adding an emotional extension makes the brand more attractive than a rational one. Volvo is an intellectual brand. Adding a rational extension leads to more positive extension responses (emotions and cognitions) than an emotional one. For Alfa and Toyota, the picture is less clear (Table 3). None of the extensions lead to differences in parent brand attitude, for any brand. Additionally, a series of regression analyses was carried out to test to what extent the evoked experiences of the extension has an effect on extension-parent brand fit (Table 4). When the extension is perceived to be more sensory and intellectual, it is considered to be better fitting with Alfa and BMW. When the extension is perceived to be just more intellectual, it is seen as more fitting with Toyota and Volvo. This generally confirms the idea that experience fitting extensions are generally perceived as more fitting. This is somewhat less the case with Alfa and BMW. A more intellectual extension leads to a higher perceived brand fit for both brands. Since 'intellectual' is not a basic experience characteristic for either brand, the conclusion is that, for these two brands, a to a certain extent a less experience fitting extension leads to a greater perception of extension-parent brand fit.

Table 3. Differences between emotional, rational and no-stimulus electric extensions in terms of attitude, emotions and cognitions towards the extension– ANOVA results

| Dependent | | A | lfa | BMW | | Toyota | | Volvo | |
|--------------|---|--|-------|---|------|--|------|---------------------------------------|------|
| variable | s | | | | | | | | |
| | | scores | P | Scores | P | scores | p | scores | p |
| AttExtension | Е | 3.14 (>N) | .012 | 3.55 (>R,N) | .014 | 3.86 (>R,N) | .003 | 3.64 | .227 |
| | R | 3.27 (>N) | | 3.18 (<e)< td=""><td></td><td>3.68 (<e)< td=""><td></td><td>3.76</td><td></td></e)<></td></e)<> | | 3.68 (<e)< td=""><td></td><td>3.76</td><td></td></e)<> | | 3.76 | |
| | N | 2.68 (<e,r)< td=""><td></td><td>3.05 (<e)< td=""><td></td><td>3.31 (<e)< td=""><td></td><td>3.49</td><td></td></e)<></td></e)<></td></e,r)<> | | 3.05 (<e)< td=""><td></td><td>3.31 (<e)< td=""><td></td><td>3.49</td><td></td></e)<></td></e)<> | | 3.31 (<e)< td=""><td></td><td>3.49</td><td></td></e)<> | | 3.49 | |
| EmoExtension | Е | 3.57 (>N) | <.001 | 3.76 (>R,N) | .010 | 3.97 (>R,N) | .001 | 3.89 (<r)< td=""><td>.114</td></r)<> | .114 |
| | R | 3.49 (>N) | | 3.46 (<e,< td=""><td></td><td>3.85 (<e)< td=""><td></td><td>3.98 (>E,N)</td><td></td></e)<></td></e,<> | | 3.85 (<e)< td=""><td></td><td>3.98 (>E,N)</td><td></td></e)<> | | 3.98 (>E,N) | |
| | N | 2.93 (<e,r)< td=""><td></td><td>>N)</td><td></td><td>3.47 (<e)< td=""><td></td><td>3.70 (<r)< td=""><td></td></r)<></td></e)<></td></e,r)<> | | >N) | | 3.47 (<e)< td=""><td></td><td>3.70 (<r)< td=""><td></td></r)<></td></e)<> | | 3.70 (<r)< td=""><td></td></r)<> | |
| | | | | 3.29 (<e,r)< td=""><td></td><td></td><td></td><td></td><td></td></e,r)<> | | | | | |
| CogExtension | Е | 3.27 (>N) | .001 | 3.48 (>N) | .136 | 3.57 (>N) | .064 | 3.54 | .081 |
| | R | 3.34 (>N) | | 3.38 | | 3.45 | | 3.57 (>N) | |
| | N | 2.84 (<e,r)< td=""><td></td><td>3.22 (<e)< td=""><td></td><td>3.26 (<e)< td=""><td></td><td>3.33 (<r)< td=""><td></td></r)<></td></e)<></td></e)<></td></e,r)<> | | 3.22 (<e)< td=""><td></td><td>3.26 (<e)< td=""><td></td><td>3.33 (<r)< td=""><td></td></r)<></td></e)<></td></e)<> | | 3.26 (<e)< td=""><td></td><td>3.33 (<r)< td=""><td></td></r)<></td></e)<> | | 3.33 (<r)< td=""><td></td></r)<> | |

E=emotional, R=rational, N=no stimulus. Cells indicate significance based on two-by-two Bonferroni post-hoc tests, e.g. in the first cell, first column: EmoExtension = 3.57 (>N) means the emotional stimulus leads to a more positive emotion towards the extension than no stimulus

Table 4. Extension-parent brand fit as a function of extension experiences – regression analyses

| to to Entremotor purcher stune | | circuision cirperie | 1000 108100001 | 111111 5 0 5 |
|--------------------------------|--------------|---------------------|----------------|----------------|
| Independent variables | Alfa | BMW | Toyota | Volvo |
| EXSensory | .360 (<.001) | .271 (.011) | .165 (.128) | .122 (.294) |
| EXBehav | .010 (.926) | .086 (.881) | 099 (.355) | .121 (.242) |
| EXIntell | .256 (.001) | .275 (.001) | .390(<.001) | .323 (<.001) |

| R ² | .318 | .317 | .198 | .264 |
|----------------|------|------|------|------|
| | | | | |

Cells are standardized Betas (significance level in brackets)

All models are significance at p>.001.

Finally, RQ3 explores how responses to the electric car extension and perceived experience characteristics of the extension affect the attitude towards the extensions and towards the parent brands. This is done by means of a series of regression analyses in which the attitude towards the extension are predicted by the anticipated experiences of the extension, the emotional and cognitive reactions towards the extension and extension-parent brand fit (Table 5). A second set of regression analyses predicts the attitude towards the parent brand by means of the attitude towards the extension, extension-parent brand fit and extension brand experiences (Table 6).

The most important driver of **extension evaluation** for each brand is the emotional response to the extension. Also positive cognitions and brand fit play a significant role for all brands. The attitude towards the extension determines parent brand attitude for Alfa and Toyota. To a certain extent extension-parent brand fit determines **parent brand feedback attitude**, except for Alfa. The extent to which the extension renders the brand more 'intellectual' determines the parent brand attitude to a certain extent, except for Toyota. The latter is a remarkable result. Anticipated intellectual experiences are most closely related to the environmental claim embedded in electric cars. Alfa, BMW and Volvo appear to benefit from an electric extension the more the extension makes them look 'intellectual', no matter what their current evoked experiences are.

Table 5. Attitude towards the electric brand extension as a function of emotional and cognitive responses to the extension, parent brand fit and extension experience – regression analyses

| Independent variables | Alfa | BMW | Toyota | Volvo |
|-----------------------|--------------|--------------|--------------|--------------|
| EmoExtension | .458 (<.001) | .473 (<.001) | .484 (<.001) | .342 (<.001) |
| CogExtension | .320 (<.001) | .159 (.011) | .134 (.019) | .191 (<.001) |
| Parentfit | .198 (<.001) | .087 (.127) | .214 (<.001) | .223 (<.001) |
| EXSensory | 004 (.968) | .026 (.740) | .056 (.412) | .129 (.125) |
| EXBehav | 051 (.549) | .130 (.066) | .103 (.123) | 057 (.436) |
| EXIntell | 019 (.777) | .098 (.119) | .085 (.169) | .135 (.055) |
| R² | .615 | .658 | .698 | .640 |

Cells are standardized Betas (significance level in brackets).

All models are significant at p>.001.

Table 6. Attitude towards the parent brand as a function of the attitude towards the extension, parent brand fit and extension experience – regression analyses

| Independent variables | Alfa | BMW | Toyota | Volvo |
|-----------------------|-------------|-------------|--------------|-------------|
| Attextension | .228 (.011) | .036 (.697) | .370 (<.001) | .077 (.403) |
| Parentfit | .037 (.685) | .217 (.008) | .255 (.001) | .294 (.001) |
| EXSensory | .207 (.112) | .259 (.025) | .022 (.828) | .028 (.814) |
| EXBehav | 244 (.053) | 188 (.073) | .052 (.602) | 050 (.634) |
| EXIntell | .189 (.044) | .223 (.014) | 041 (.645) | .241 (.015) |
| R ² | .156 | .242 | .319 | .261 |

Cells are standardized Betas (significance level in brackets).

All models are significant at p>.001.

3. Discussion and conclusion

Adding an electric extension to a well-established brand significantly alters the anticipated experience of the extension. An emotional extension makes Alfa and BMW more sensory, which fits with their general brand experience perception. Adding any type of electric extension makes Toyota more sensory and intellectual, which partly fits with its general brand experience connotations. Adding a rational or an emotional extension does not improve traditional brand experiences for Alfa and BMW. Adding an electric extension makes these brands less sensory and less behavioural, although, in the case of BMW, an emotional extension performs better than an rational one. For Toyota, however, adding any extension improves the anticipated intellectual brand experience. In terms of attitudinal responses to the extensions, an emotional extension outperforms a rational one for BMW, and a rational extension outperforms an emotional for Volvo. This is clearly in line with the traditional experiences evoked by these two car brands. Brand fit is determined by enhanced sensory and intellectual experience perceptions in case of Toyota and Volvo. These results partly support the notion that extension-parent brand fit leads to more positive responses or reinforces brand image (in terms of anticipated experiences (Martínez and de Chernatony 2004; Dens and De Pelsmacker 2010; Martínez and Pina 2003). None of the extensions lead to differences in parent brand attitude feedback. This confirms previous research (Lau and Phau, 2007).

The most important driver of extension evaluation for each brand is the emotional response to the extension. This confirms the important role emotions play in consumer behaviour, even for high involvement innovative products (Bagozzi et al., 1999, Moons and De Pelsmacker, 2012). Also brand fit and positive cognitions have a significant effect on extension attitudes. What makes people appreciate an electric extension for any car brand is the extent to which it fits the parent brand, but even more the extent to which it leads to positive feelings and thoughts, and adds

to the intellectual experience of the car brand. The attitude towards the parent brand after launching an electric extension is partly influenced by the attitude towards the extension and brand fit. This confirms traditional parent brand feedback effects. The results also suggest that consumers appreciate a parent brand more if it launches an extension that not so much enhances the brand's distinctive experience dimensions, but rather scores well on the intellectual experience dimension. In the context of electric cars, this suggests that, if consumers appreciate a brand's efforts for the environment, extension attitudes become more positive, regardless of the original experience connotations of the brand. Non-fitting extensions can indeed have positive brand effects by using an extension strategy that modifies the original brand image in a positive sense (Pandey, 2013).

Future research could extend the investigation to more car brands. The electric car extension was limited to two types of experiential design and positioning, using a limited number of concrete attributes to evoke these experiences. Electric car propositions could also be differentiated on the basis of rational, utilitarian and functional elements rather than brand personality ones. The importance and appeal of these more functional attributes relative to experience elements could also be studied. Finally, the study could be replicated for different product categories and in different countries.

The results of this study inform designers and marketers of car brands on how to design their electric car model and which arguments to use in marketing and advertising in order to maximize the chances of success without jeopardizing the existing brand image. It appears that extending their product range with an electric model does not jeopardize their original brand images in terms of brand experiences. The extension should to a certain extent be brand experience fitting to evoke positive attitudinal responses, and it should trigger the idea that the brand is thought-provoking in terms of its efforts for a cleaner environment. Most importantly, brand extensions should evoke positive emotional responses, as these are the main drivers of a positive electric car extension attitude.

References

- Aaker, D. (2004). Brand Portfolio Strategy. New York: Free Press.
- Bagozzi, R.P., Gopinath, M., Nyer, P.U. (1999). The role of emotions in marketing, *Journal of the Academy of Marketing Science*, 27(2), 184-206.
- Batra, R., Lenk, P., Wedel, M. (2010). Brand extension: brand-category personality fit, *Journal of Marketing Research*, 47(2), 335-347.
- Bhat, S., Reddy, S.K. (2001). The impact of parent brand attribute associations and affect on brand extension evaluation, *Journal of Business Research*, 53 (3), 111-122.
- Brakus, J.J., Schmitt, B.H. and Zhang, S. (2008). Experiental Attributes and Consumer Judgments, in *Handbook on Brand and Experience Management*, B. H. Schmitt and D. Rogers, eds. Northampton, MA: Edward Elgar.
- Brakus, J.J., Schmitt, B.H. and Zarantonello, L. (2009). Brand Experience: What it is? How is it measured? Does it affect loyalty?, *Journal of Marketing*, 73(3), 52-68.
- Cauberghe, V., De Pelsmacker, P. (2011). Adoption intentions toward interactive digital television among advertising professionals, Journal of Interactive Advertising, 11(2), www.jiad.org.
- Dens, N., De Pelsmacker, P. (2010). Attitudes toward the extension and parent brand in response to extension advertising, *Journal of Business Research*, 63 (11), 1237-1244.
- de Ruyter, K., Wetzels, M. (2000). The role of corporate image and extension similarity in service brand extensions,

- Journal of Economic Psychology, 21 (6), 639-659.
- Diamantopoulos, A., Smith, G., Grime, I. (2005). The impact of brand extensions on brand personality: Experimental evidence, *European Journal of Marketing*, 39 (1/2), 129-149.
- Jeong, S., Jung, K. (2013). Effects Of Brand Personality Attitude, Perceived Quality On Brand Extension Evaluations And Brand Personality Changes, http://wbiconpro.com/london%20management/Chi(431).pdf, accessed 20 February 2013).
- Keller, K.L. (2008). Strategic Brand Management. Building, measuring and managing brand equity, Upper Salddle, River NJ: Prentice Hall.
- Keller, K. L., Sood, S. (2003). Brand equity dilution, MIT Sloan Management Review, 45 (1), 12-15.
- Lau, K.C., Phau, I. (2007). Extending symbolic brands using their personality: Examining antecedents and implications towards brand image fit and brand dilution, *Psychology & Marketing*, 24 (5), 421-444.
- Martínez, E., de Chernatony, L. (2004). The effect of brand extension strategies upon brand image, *Journal of Consumer Marketing*, 21 (1), 39-50.
- Martínez, E., Montaner, T., Pina, J.M. (2009). Brand extension feedback: The role of Advertising, *Journal of Business Research*, 62 (3), 305-313.
- Martínez, E., Pina, J.M. (2003). The negative impact of brand extension on parent brand Image, *Journal of Product & Brand Management*, 12 (7), 432-446.
- Milberg, S. J., Sinn, F. (2008). Vulnerability of global brands to negative feedback effects, *Journal of Business Research*, 61 (6), 684-690.
- Mittal, V. and Kamakura, W.A. (2001). Satisfaction, Repurchase Intent, and Repurchase Behavior: Investigating the Moderating Effect of Customer Characteristics, *Journal of Marketing Research*, 38 (1), 131-42.
- Moons, I., De Pelsmacker, P. (2012). Emotions as determinants of electric car usage intention, *Journal of Marketing Management*, 28 (3-4), 195-237.
- Norman, D. A. (2004). Emotional Design, New York: Basic Books.
- Pandey, A. (2009). Understanding consumer perception of brand personality, accessed 20 February 2013.
- Park, J.-W., Kim, K.-H., Kim, J. (2002). Acceptance of brand extensions: Interactive influences of product category similarity, typicality of claimed benefits, and brand relationship quality, *Advances in Consumer Research*, 29 (1), 190-198.
- Park, C. W., Young, S. (1986). Consumer response to television commercials: The impact of involvement and background music on brand attitude formation, *Journal of Marketing Research*, 23 (1), 11-24.
- Patro, S. K., Jaiswal, A.K. (2003). Consumer evaluations of brand extensions: Evidence from India, *Journal of the Academy of Business and Economics*, 1, 1-13.
- Reicheld, F. (1996), "The Loyality Effect: The Hidden Force Behind Growth, Profits and Lasting Value," Boston, MA: Harvard Business School Press.
- Swaminathan, V., Fox, R. J., Reddy, S.K. (2001). The impact of brand extension introduction on choice, *Journal of Marketing*, 65 (4), 1-15.

Appendix: scales, scale items, sources, and alphas

| Scale and items | Source | Alpha |
|---|------------------------|-------|
| 1. Attitude towards the branded electric extension (AttExtension) | Cauberghe and De | .92 |
| I am positive about the electric BRAND shown | Pelsmacker (2011) | |
| The electric BRAND shown is a good car | | |
| I like the electric BRAND shown | | |
| 2. Emotions towards the branded electric extension (EmoExtension) | Cauberghe and De | .85 |
| The electric BRAND shown evokes positive feelings in me | Pelsmacker (2011) | |
| I would find it very pleasant it to drive the electric BRAND shown | | |
| • Driving the electric BRAND shown could frustrate me (r) | | |
| • Driving the electric BRAND shown could easily bore me (r) | | |
| • The electric BRAND shown gives me a negative feeling (r) | | |
| 3. Cognitions towards the branded electric extension (CogExtension) | Moons and De | .82 |
| This electric BRAND provides me with a lot of advantages | Pelsmacker (2012) | |
| I find this electric BRAND innovative | | |
| The media will promote this electric BRAND | | |
| • The government will take measures to stimulate the use of this electric | | |
| BRAND | | |
| 4. Anticipated experience of the branded extension | Brakus et al. (2009) | |
| Sensory (EXSensory) | | .91 |
| Will make a strong impression on my senses | | |
| • Will stimulate my senses | | |
| • Will be an emotional car | | |
| Behavioural (EXBehav) | | .84 |
| Will incite me to active driving | | |
| Will make me feel things fysically | | |
| Intellectual (EXIntell) | | .73 |
| Will stimulate me to drive consciously | | |
| Will stimulate my curiosity and problem-solving capacity | | |
| 5. Fit between the electric extension and the parent brand (Parentfit) | Dens and De Pelsmacker | .94 |
| This is very fitting for BRAND | (2010) | |
| This is very logical for BRAND | | |
| This is very appropriate for BRAND | | |
| 6. Attitude towards parent brand after electric extension (ParentAb) | Cauberghe and De | .94 |
| Same scale as 1, but applied to brand in general after electric extension | Pelsmacker (2011) | |
| 7. Parent brand experience after electric extension | Brakus et al. (2009) | >.86 |
| Same scale as 5, but applied to brand in general after electric extension | | |
| 8. Attitude towards parent brand | Cauberghe and De | .91 |

| Only in condition 4, same scale as 7 without mentioning electric extension | Pelsmacker (2011) | |
|--|----------------------|------|
| 9. Parent brand experience after electric extension | Brakus et al. (2009) | >.79 |
| Only in condition 4, same scale as 9 without mentioning electric extension | | |

All scales are five category Likert scales

- Anderson, C. A., Gentile, D. A., & Buckley, K. E. (2007). *Violent video game effects on children and adolescents: Theory, research and public policy.* http://dx.doi.org/10.1093/acprof:oso/9780195309836.001.0001
- Beck, C. A. J., & Sales, B. D. (2001). *Family mediation: Facts, myths, and future prospects*. Washington, DC: American Psychological Association. http://dx.doi.org/10.1037/10401-000
- Bernstein, T. M. (1965). The careful writer: A modern guide to English usage (2nd ed.). New York, NY: Atheneum.
- Bjork, R. A. (1989). Retrieval inhibition as an adaptive mechanism in human memory. In H. L. Roediger III, & F. I. M. Craik (Eds.), *Varieties of memory & consciousness* (pp. 309-330). Hillsdale, NJ: Erlbaum.
- Cress, C. M. (2009). Curricular strategies for student success and engaged learning [PowerPoint slides]. Retrieved from http://www.utoempugeemport.org/2000/TGL_post/presenter_powerpoints/Christing// 20Cross// 20. % 20Cross//
 - $http://www.vtcampuscompact.org/2009/TCL_post/presenter_powerpoints/Christine \% 20 Cress \% 20-\% 20 Curricular \% 20 Strategies.ppt$
- Driedger, S. D. (1998, April 20). After divorce. Maclean's, 111(16), 38-43.
- Gibbs, J. T., & Huang, L. N. (Eds.). (1991). *Children of color: Psychological interventions with minority youth*. San Francisco, CA: Jossey-Bass.
- Gilbert, D. G., McClernon, J. F., Rabinovich, N. E., Sugai, C., Plath, L. C., Asgaard, G., ... Botros, N. (2004). Effects of quitting smoking on EEG activation and attention last for more than 31 days and are more severe with stress, dependence, DRD2 A 1 allele, and depressive traits. *Nicotine and Tobacco Research*, 6, 249-267. http://dx.doi.org/10.1 080/1462220041 0001676305
- Goleman, D. (2009). What makes a leader? In D. Demers (Ed.), *AHSC 230: Interpersonal communication and relationships* (pp. 47-56). Montreal, Canada: Concordia University Bookstore. (Reprinted from *Harvard Business Review*, 76(6), pp.93-102, 1998).
- Guignon, C. B. (1998). Existentialism. In E. Craig (Ed.), *Routledge encyclopedia of philosophy* (Vol. 3, pp. 493-502). London, England: Routledge.
- Klimoski, R., & Palmer, S. (1993). The ADA and the hiring process in organizations. *Consulting Psychology Journal: Practice and Research*, 45(2), 10-36. http://dx.doi.org/10.1037/1061-4087.45.2.10

Kubrick, S. (Director). (1980). The Shining [Motion picture]. United States: Warner Brothers.

MacIntyre, L. (Reporter). (2002, January 23). Scandal of the Century [Television series episode]. In H. Cashore (Producer), *The fifth estate*. Toronto, Canada: Canadian Broadcasting Corporation.

McLuhan, M. (1970a). Culture is our business. New York, NY: McGraw-Hill.

McLuhan, M. (1970b). From cliche to archetype. New York, NY: Viking Press.

Mellers, B. A. (2000). Choice and the relative pleasure of consequences. *Psychological Bulletin*, *126*, 910-924. http://dx.doi.org/10.1037/0033-2909.126.6.910

Postman, N. (1979). Teaching as a conserving activity. New York, NY: Delacorte Press.

Postman, N. (1985). Amusing ourselves to death: Public discourse in the age of show business. New York, NY: Viking.

Semenak, S. (1995, December 28). Feeling right at home: Government residence eschews traditional rules. *Montreal Gazette*, p. A4.