# Electric Car Extensions of Car Brands: Impact on Brand Personality, Extension Evaluation and Parent Brand Feedback

Ingrid Moons Patrick De Pelsmacker

### 1 Introduction and Purpose of the Study

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; Esch, 2004; Keller, 2008). Car brands carry a symbolic meaning and brand personality is an important component of this meaning (Midgley, 1983). The purpose of the present study is to investigate how adding various personality types of electric car models to the product line of existing car brands with existing brand personalities, affects the perceived personalities of these extensions and of the parent brand. We also investigate how brand personality characteristics affect the attitude towards electric extensions and parent brands for existing car brands. Brand personality has not been studied often as a factor in brand extension studies (Diamantopoulos et al., 2005; Lau and Phau, 2007). The study adds to our understanding of the effect of extensions varying in personality, on the personality and evaluation of existing car brands and provide insights into how different positioning and advertising of electric extensions can have a differential effect on brand personality.

## 2 Literature Background and Research Questions

Product categories and brands can either be functional (e.g., lawnmowers) or symbolic (e.g., cars) (Midgley 1983; de Ruyter and Wetzels, 2000; Park and Young, 1986). A functional product possesses mainly product-related or concrete, functional associations (de Ruyter and Wetzels, 2000; Park et al., 1986). 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 personality is a major symbolic component of brand identity and image (Diamantopoulos et al., 2005). It is 'the set of human personality traits that are both applicable to and relevant for brands' (Azoulay and Kapferer, 2003, p. 151). Brand personality can build unique and favorable associations in consumer memory and thus plays a major role in advertising (Diamantopoulos et al., 2005; Pandey, 2013). The work of Aaker (1997) inspired the majority of the research on brand personality to date (Aaker, 1997, 1999, Aaker et al., 2001;

Kim et al., 2001). One of the major criticisms on the Aaker scale is that it is a mixture of personality and other image dimensions. Geuens et al. (2009) developed a scale that consists of only personality dimensions and is a better representation of the brand personality concept. The scale consists of five factors that show an affinity with the Big Five human personality dimensions: Responsibility, Activity, Boldness, Simplicity and Emotionality. The present study uses the Geuens et al. (2009) brand personality dimensions.

Adding an electric car model to a product line of an existing car brand is an extension. One of the factors that has emerged as most important in determining extension and parent brand feedback evaluation by consumers is the perceived fit between the extension and the parent brand (Aaker and Keller, 1990; Patro and Jaiswal, 2003). Extension evaluation is positively influenced when consumers perceive the extension to fit with the parent brand (Bottomley and Holden, 2001; Czellar, 2003; Martinez and Pina, 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; Aaker and Keller, 1990; Diamantopoulos et al., 2005; Dens and De Pelsmacker, 2010, Supphellen et al., 2004; 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 (Fiske and Pavelchak, 1986; Park et al., 2002). If the categorization is successful, affect and beliefs associated with the category in memory will be transferred to the object. Categorization theory is also frequently applied to understanding the dynamics of post-extension parent brand evaluations or feedback effects (Milberg and Sinn, 2008; Roedder John et al., 1998). 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 or brands, the fit at the level of imagery or personality is often a determinant of brand extension success than the degree of physical similarity (Batra et al., 2010; Bhat and Reddy (2001). Jeong and Jung (2013) investigated two dimensions of brand personality ('sincere' and 'prestige') and concluded that a non-fitting extension of sincere brands may alter brand personality, as opposed to extending a prestige brand in which case the extension leaves the brand personality unaffected. Also Lau and Phau (2007) found that extensions that had a high fit with the parent brand were most positively evaluated. On the other hand, most research to date shows that extensions that are non-fitting in terms of brand personality 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 well-established brand personalities.

Brand personality characteristics are relatively abstract associations that have to be evoked by concrete and specific attributes by means of design elements and advertising appeals. The challenge for existing brands is to emphasize those attributes that evoke a specific brand personality, and lead to a positive evaluation of the extension and to positive parent feedback effects. One of the aims of this study is to design branded electric car concepts and develop advertising story boards that evoke different types of personality. These story boards are used to measure the effect of various personality types of electric variants on the perceived personality of the extension and the parent brand and how these extensions affect extension and parent brand evaluations:

RQ1: How do different personality types of electric car extensions for existing car brands affect the personalities of the extensions and the parent brands?

RQ2. How do responses to the electric car extension and perceived personality characteristics of the extension affect the attitude towards the extension and towards the parent brand for different existing car brands?

### 3 Research Method

#### 3.1 Pretests

A focus group and two online quantitative studies resulted in a selection of four brands that have substantially different personalities. Alfa Romeo is most strongly associated with 'emotional' and 'bold', and least often with 'simple' and 'responsible'. BMW is most often referred to as responsible, active and bold, but not as simple. Toyota is described as simple and not at all active or emotional. Volvo's main characteristic is responsible, and not at all active, bold or emotional (Table 1). In a second series of pretests, possible product features of electric cars were generated that evoke different personalities. From six brainstorming sessions it became clear that it was impossible to develop attributes that were typical of each of the five personality dimensions. What came out clearly, though, was the distinction between attributes that evoke a more rational (simple, responsible) and a more emotional (active, emotional, bold) 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 60 participants, these two unbranded story boards were tested to check to what extent they evoked different car personalities. In this test, the rational car type indeed scores higher on the dimension 'responsible (p=.037), and that the emotional type scores higher on 'bold' (p=.097).

	Alfa	BMW	Toyota	Volvo	p
Responsible	2.94	3.81	3.84	4.44	<.001
	<b,t,v< td=""><td><v< td=""><td><v< td=""><td>&gt;A,B,T</td><td></td></v<></td></v<></td></b,t,v<>	<v< td=""><td><v< td=""><td>&gt;A,B,T</td><td></td></v<></td></v<>	<v< td=""><td>&gt;A,B,T</td><td></td></v<>	>A,B,T	
Active	3.83	4.20	3.10	3.47	<.001
	>T	>T,V	<a,b< td=""><td><b< td=""><td></td></b<></td></a,b<>	<b< td=""><td></td></b<>	
Bold	3.33	3.31	2.23	2.07	<.001
	>T,V	>T,V	<a,b< td=""><td><a,b< td=""><td></td></a,b<></td></a,b<>	<a,b< td=""><td></td></a,b<>	
Simple	1.80	1.48	3.63	2.65	<.001
	<t,v< td=""><td><t,v< td=""><td>&gt;A,B,V</td><td><t,>A,B</t,></td><td></td></t,v<></td></t,v<>	<t,v< td=""><td>&gt;A,B,V</td><td><t,>A,B</t,></td><td></td></t,v<>	>A,B,V	<t,>A,B</t,>	
Emotional	2.97	2.26	2.22	1.88	.001
	>B,T,V	<a< td=""><td><a< td=""><td><a< td=""><td></td></a<></td></a<></td></a<>	<a< td=""><td><a< td=""><td></td></a<></td></a<>	<a< td=""><td></td></a<>	

Table 1: Differences in brand personality between Alfa, BMW, Toyota, Volvo

Scores on 5-point scales in cells. Significance based on ANOVA-analyses with Bonferroni post-hoc tests. <B,T,V in the first cell means that Alfa (A) scores significantly (p<.05) lower on this brand personality characteristics than BMW (B), Toyota (T) and Volvo (V).

### 3.2 Main Study

The main study was a 4 X 4 between subjects design tested in a sample of 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 15 brand owners and 15 non-brand owners in each of the four groups. 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, fit of the extension with the parent brand, personality of the branded extension, attitude towards the parent brand after the electric extension, and parent brand personality after the electric extension. The latter three scales measure parent brand feedback effects.

In the fourth condition only parent brand attitude and brand personality were measured (see appendix for details).

### 4 Results

The first research question is to what extent different personality types of electric car extensions for existing car brands affect the personalities of the extensions and the parent brands. The personality scores of the first three conditions were compared per brand (ANOVA with post-hoc Bonferroni tests), and their effect on extension and parent brand feedback personalities are studied (Table 2). Adding an emotional or a rational stimulus, compared to just presenting an electric car extension without a stimulus, significantly alters the personality of the extension. For Alfa, adding either of the two stimuli makes the extension more responsible, more active and more sophisticated (less simple). For BMW and Volvo, as compared with a rational stimulus or no stimulus, an emotional stimulus makes the extension more responsible, active and bold, while a rational stimulus makes the extension less sophisticated than an emotional and an extension without a stimulus. For Toyota, adding stimuli makes the extension more responsible, active and bold. The effect of adding stimuli on parent brand feedback personalities is very limited. In a second ANOVA-analysis, brand personality scores were compared across three conditions: rational and emotional stimulus, and only brand measures without electric extension (Table 3). For Alfa owners, adding a rational extension makes the brand more active, and makes it more sophisticated and less bold and emotional. Since bold and emotional are two distinct dimensions of Alfa, it appears that adding an electric car makes the extension less fitting with the brand. Adding a rational extension makes BMW look less active, emotional and bold, but adding an emotional or a rational extension makes it more sophisticated. Responsible and active/bold are two distinct dimensions of BMW. Adding an emotional electric extension enhances the important dimension of sophistication. An emotional extension seems to be reasonably fitting for BMW. An emotional extension makes Toyota look more active, while any extension, but especially an emotional one, makes it more sophisticated. Since responsibility, and more importantly, simplicity are the key personality dimensions of Toyota, any electric extension does not seem very fitting. Finally, Volvo is seen as a simple and responsible brand. Adding any electric variant makes extension look less responsible, and adding an emotional extension makes it less simple. Consequently, if any, a rational extension seems to fit the brand best, but no electric extension seems even better.

Table 2: Differences between emotional, rational and no-stimulus electric extensions in terms of extension brand personality and parent feedback personality

Dependent variables		Alfa	a	BMV	W	Toyota		Volvo	
		scores	р	scores	р	scores	р	scores	р
PRespons	E R N	3.25 (>N) 3.46 (>N) 2.93 ( <e,r)< td=""><td>.004</td><td>3.60 (&gt;N) 3.44 3.18 (<e)< td=""><td>.032</td><td>3.59 (&gt;N) 3.55 (&gt;N) 3.21 (<e,r)< td=""><td>.022</td><td>3.54 3.64 3.45</td><td>.390</td></e,r)<></td></e)<></td></e,r)<>	.004	3.60 (>N) 3.44 3.18 ( <e)< td=""><td>.032</td><td>3.59 (&gt;N) 3.55 (&gt;N) 3.21 (<e,r)< td=""><td>.022</td><td>3.54 3.64 3.45</td><td>.390</td></e,r)<></td></e)<>	.032	3.59 (>N) 3.55 (>N) 3.21 ( <e,r)< td=""><td>.022</td><td>3.54 3.64 3.45</td><td>.390</td></e,r)<>	.022	3.54 3.64 3.45	.390
PActiv	E R N	3.63 (>N) 3.53 (>N) 2.93 ( <e,r)< td=""><td>.000</td><td>3.88 (&gt;R,N) 3.50 (<e) 3.39 (<e)< td=""><td>.006</td><td>3.90 (&gt;R,N) 3.61 (<e,>N) 3.18 (<e,r)< td=""><td>.000</td><td>3.71 (&gt;N) 3.76 (&gt;N) 3.40 (<e,r)< td=""><td>.030</td></e,r)<></td></e,r)<></e,></td></e)<></e) </td></e,r)<>	.000	3.88 (>R,N) 3.50 ( <e) 3.39 (<e)< td=""><td>.006</td><td>3.90 (&gt;R,N) 3.61 (<e,>N) 3.18 (<e,r)< td=""><td>.000</td><td>3.71 (&gt;N) 3.76 (&gt;N) 3.40 (<e,r)< td=""><td>.030</td></e,r)<></td></e,r)<></e,></td></e)<></e) 	.006	3.90 (>R,N) 3.61 ( <e,>N) 3.18 (<e,r)< td=""><td>.000</td><td>3.71 (&gt;N) 3.76 (&gt;N) 3.40 (<e,r)< td=""><td>.030</td></e,r)<></td></e,r)<></e,>	.000	3.71 (>N) 3.76 (>N) 3.40 ( <e,r)< td=""><td>.030</td></e,r)<>	.030
PBold	E R N	2.49 2.26 2.37	.342	2.81 (>R,N) 2.28 ( <e) 2.34 (<e)< td=""><td>.002</td><td>2.45 (&gt;N) 2.20 1.94 (<e)< td=""><td>.002</td><td>2.43 (&gt;N) 2.38 (&gt;N) 2.08 (<e,r)< td=""><td>.042</td></e,r)<></td></e)<></td></e)<></e) 	.002	2.45 (>N) 2.20 1.94 ( <e)< td=""><td>.002</td><td>2.43 (&gt;N) 2.38 (&gt;N) 2.08 (<e,r)< td=""><td>.042</td></e,r)<></td></e)<>	.002	2.43 (>N) 2.38 (>N) 2.08 ( <e,r)< td=""><td>.042</td></e,r)<>	.042
PSimple	E R N	2.27 2.53 2.68	.070	2.27 ( <n) 2.58 (<n) 2.46 (&gt;E,R)</n) </n) 	.149	2.29 2.54 2.59	.160	2.09 ( <n) 2.34 2.46 (&gt;E)</n) 	.061
PEmotional	E R N	2.14 ( <n) 2.37 2.30 (&gt;E)</n) 	.435	2.26 2.19 2.20	.906	2.24 2.28 2.16	.778	2.20 2.09 1.99	.403
PPRespons	E R N	2.93 3.09 3.14	.467	3.59 3.56 3.45	.661	3.71 3.78 (>N) 3.46 ( <r)< td=""><td>.087</td><td>3.86 3.80 3.90</td><td>.810</td></r)<>	.087	3.86 3.80 3.90	.810
PPActiv	E R N	3.56 3.73 3.46	.315	3.99 3.97 3.74	.215	3.52 3.45 3.28	.265	3.54 3.55 3.57	.985
PPBold	E R N	2.83 ( <r) 3.26 (&gt;E) 3.07</r) 	.105	3.26 3.07 3.20	.620	2.27 2.21 2.27	.904	2.25 2.33 2.27	.872

PPSimple	Е	1.98 ( <n)< th=""><th>.024</th><th>2.01</th><th>.717</th><th>2.76</th><th>.559</th><th>2.27</th><th>.612</th></n)<>	.024	2.01	.717	2.76	.559	2.27	.612
	R	1.93 ( <n)< td=""><td></td><td>1.92</td><td></td><td>2.77</td><td></td><td>2.34</td><td></td></n)<>		1.92		2.77		2.34	
	N	2.35 (>E,R)		2.04		2.91		2.42	
PPEmotional	Е	2.61	.436	2.49	.748	2.23	.996	2.23	.288
	R	2.74		2.38		2.23		2.14	
	N	2.86		2.38		2.22		2.00	

E=emotional extension, R=rational extension, N=no stimulus. Cells indicate significance based on two-by-two Bonferroni post-hoc tests, e.g. in the first cell, first column: PRespons E: 2.35 (>N) means the emotional stimulus leads to a more responsible brand personality than no stimulus.

Table 3: Differences between emotional and rational electric extensions and brand control measure (without electric extension) in terms of extension brand personality and parent feedback personality

Dependent variables		Al	fa	BMW		Toyota		Volvo	
		scores	р	scores	р	scores	р	scores	р
PRespons	E R B	3.25 3.46 >B 2.94 <r< td=""><td>.039</td><td>3.60 3.43 3.80</td><td>.157</td><td>3.59 3.55 3.84</td><td>.185</td><td>3.54 <b 3.64 <b 4.44 &gt;E,R</b </b </td><td>&lt;.001</td></r<>	.039	3.60 3.43 3.80	.157	3.59 3.55 3.84	.185	3.54 <b 3.64 <b 4.44 &gt;E,R</b </b 	<.001
PActiv	E R B	3.63 3.53 3.83	.319	3.88 >R 3.50 <e,b 4.20 &gt;R</e,b 	.001	3.90 >R,B 3.61 <e,>B 3.10 <e,r< td=""><td>&lt;.001</td><td>3.71 3.76 3.47</td><td>.246</td></e,r<></e,>	<.001	3.71 3.76 3.47	.246
PBold	E R B	2.49 <b 2.25 <b 3.33 &gt;E,R</b </b 	<.001	2.81 >R, <b 2.28 <e,b 3.31 &gt;R,E</e,b </b 	<.001	2.45 2.20 2.23	.208	2.43 2.38 2.07	.159
PSimple	E R B	2.28 >B 2.53 >B 1.80 <e,r< td=""><td>.006</td><td>2.27 &gt;B 2.58 &gt;B 1.48 <e,r< td=""><td>&lt;.001</td><td>2.29 <b 2.54 <b 3.63 &gt;E,R</b </b </td><td>&lt;.001</td><td>2.09 <b 2.34 2.65 &gt;E</b </td><td>.021</td></e,r<></td></e,r<>	.006	2.27 >B 2.58 >B 1.48 <e,r< td=""><td>&lt;.001</td><td>2.29 <b 2.54 <b 3.63 &gt;E,R</b </b </td><td>&lt;.001</td><td>2.09 <b 2.34 2.65 &gt;E</b </td><td>.021</td></e,r<>	<.001	2.29 <b 2.54 <b 3.63 &gt;E,R</b </b 	<.001	2.09 <b 2.34 2.65 &gt;E</b 	.021
PEmotional	E R B	2.14 <b 2.37 <b 2.97 &gt;E,R</b </b 	.003	2.26 2.19 2.26	.909	2.24 2.28 2.22	.951	2.20 2.09 1.88	.248

DDD	-	2.02	(2.4	2.60	444	2.51	70.6	2.06	000
PPRespons	Е	2.93	.624	3.60	.444	3.71	.726	3.86	.002
	R	3.09		3.56		3.78		<b< td=""><td></td></b<>	
	В	2.94		3.81		3.84		3.80	
								<b< td=""><td></td></b<>	
								4.44	
								>E,R	
PPActiv	Е	3.56	.372	3.99	.413	3.52 >B	.058	3.54	.908
	R	3.73		3.97		3.45 >B		3.55	
	В	3.83		4.20		3.10		3.47	
						<e,r< td=""><td></td><td></td><td></td></e,r<>			
PPBold	Е	2.83	.054	3.26	.511	2.27	.937	2.25	.399
	R	<r,b< td=""><td></td><td>3.08</td><td></td><td>2.21</td><td></td><td>2.33</td><td></td></r,b<>		3.08		2.21		2.33	
	В	3.26		3.31		2.23		2.07	
		>E		0.01		2.25		2.07	
		3.33							
DDC: 1	г	>E	(70	2.01	010	2.76 dD	< 001	2.27	1.00
PPSimple	Е	1.98	.678	2.01	.019	2.76 <b< td=""><td>&lt;.001</td><td>2.27</td><td>.168</td></b<>	<.001	2.27	.168
	R	1.93		>B		2.77 <b< td=""><td></td><td>2.34</td><td></td></b<>		2.34	
	В	1.80		1.91		3.63		2.65	
				>B		>E,R			
				1.48					
				<e,r< td=""><td></td><td></td><td></td><td></td><td></td></e,r<>					
PPEmotional	Е	2.61	.361	2.49	.554	2.23	.997	2.23	.172
	R	2.74		2.38		2.23		2.14	
	В	2.97		2.26		2.22		1.88	

E=emotional extension, R=rational extension, B=only brand. E.g. in the first cell, first column: PRespons R: 3.46 (>B) means the rational stimulus leads to a more responsible brand personality than the brand without electric extension.

RO2 explores how responses to the electric car extension and perceived personality characteristics of the extension affect the attitude towards the extensions and towards the parent brands. This is done by means of a regression analyses in which the attitude towards the extension is predicted by the personality of the extension, the emotional and cognitive reactions towards the extension and extension-parent brand fit (Table 4). A second regression analysis predicts the attitude towards the parent brand by means of the attitude towards the extension, extension-parent brand fit and extension brand personality (Table 5). The most important driver of extension evaluation for each brand is the emotional response to the extension. The second most important factor is the extent to which the extension is felt to increase the 'responsible' personality of the car. Also positive cognitions and brand fit play a significant role for all brands. Whether or not the electric extension personality fits with the parent brand personality does not really seem to matter in terms of parent brand feedback effects for most individual brands. There is, however, a marked effect of the attitude towards the extension, signaling significant parent brand feedback effects of the extension. It is remarkable that parent brand feedback for BMW is more positive the more the extension evaluation is perceived as less 'active'. For Volvo, parent brand feedback is more positive if the extension is seen as more bold and emotional.

Table 4: Attitude towards the electric brand extension as a function of emotional and cognitive responses to the extension, parent brand fit and extension personality – regression analyses

Independent	All brands	Alfa	BMW	Toyota	Volvo
variables					
EmoExtension	.435	.398	.482	.476	.347
	(<.001)	(<.001)	(<.001)	(<.001)	(<.001)
CogExtension	.173	.186	.165	.145	.180
	(<001)	(.006)	(.009)	(.007)	(.007)
Parentfit	.163	.146	.079	.127	.217
	(<.001)	(.014)	(.186)	(.008)	(<.001)
PRespons	.172	.172	.168	.227	.161
	(<.001)	(.014)	(.020)	(<.001)	(.030)
PActiv	.035 (.328)	.070	.021	.071	.026
		(.382)	(.799)	(.279)	(.724)
PBold	.054 (.018)	.041	.057	.075	.093
		(.426)	(.248)	(.077)	(.056)
PSimple	.046 (.055)	.039	.001	.110	.014
		(.451)	(.984)	(.013)	(.778)
PEmotional	.023 (.343)	.011	.035	.028	.004
		(.841)	(.475)	(.523)	(.938)
R <sup>2</sup>	.679	.645	.659	.733	.642

Cells are standardized Betas (significance level in brackets) All models are significance at p>.001.

### 5 Discussion and Conclusions

Adding an electric extension to a well-established brand significantly alters the personality of the extension. An emotional extension seems to be a very fitting extension for BMW and outperforms a rational one in terms of emotional and cognitive response and attitude towards the extension. A rational extension seems to fit Volvo best and outperforms an emotional one. This supports the notion that extension-parent brand fit leads to more positive responses. None of the extensions lead to important differences in parent brand attitudes. This also 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 behavior, even for high involvement innovative products (Bagozzi et al., 1999, Moons and De

Pelsmacker, 2012). 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 responsible personality 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. Part of the results suggest that consumers appreciate a parent brand more if it launches an extension that not so much enhances the brand's distinctive personality dimensions, but rather 'corrects' dimensions that are (too) outspoken or (too) less developed. Non-fitting extensions can have positive parent brand feedback effects by using an extension strategy that modifies the original brand personality in a positive sense (Pandey, 2013).

Table 5: Attitude towards the parent brand as a function of the attitude towards the extension, parent brand fit and extension personality – regression analyses

Independent variables	All brands	Alfa	BMW	Toyota	Volvo
AttExtension	.106	.099	036	.255	.120
	(.001)	(.091)	(.548)	(<.001)	(.114)
Parentfit	.074	.005	.135	.002	.122
	(.027)	(.934)	(.023)	(.978)	(.132)
PRespons	.355	.299	.404	.163	.386
	(<.001)	(<.001)	(<.001)	(.063)	(<.001)
PActiv	.303	.393	.371	.407	.075
	(<.001)	(<.001)	(<.001)	(<.001)	(.465)
PBold	036	.081	087	101	013
	(.255)	(.190)	(.116)	(.093)	(.846)
PSimple	093	167	021	121	069
	(.001)	(.001)	(.710)	(.025)	(.304)
PEmotional	.078	.061	.057	.088	.069
	(.007)	(.291)	(.296)	(.145)	(.304)
R <sup>2</sup>	.536	.635	.600	.547	.388

Cells are standardized Betas (significance level in brackets) All models are significance at p>.001.

The results of this study inform marketers of car brands on how to design their electric car model and which arguments to use in advertising in order to maximize the changes of success without jeopardizing the existing brand image. Future research could extend the investigation to more car brands. The electric car extension was limited to two types of personality design and advertising story boards, using a limited number of concrete attributes to evoke these per-

sonalities. 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 personality elements could also be studied. Finally, the study could be replicated for different product categories and in different countries.

### 6 References

- Aaker, D. A. and K.L. Keller (1990), "Consumer evaluations of brand extensions," in: *Journal of Marketing*, 54 (1), 27-41.
- Aaker, J.L. (1997), "Dimensions of brand personality," in: Journal of Marketing Research, 34 (3), 347-356.
- Aaker, J.L. (1999), "The Malleable Self: The Role of Self Expression in Persuasion," in: *Journal of Marketing Research*, 36 (1), 45-58.
- Aaker, J.L.; Benet-Matinez, V.; and J. Garolera (2001), "Consumption of symbols as carriers of culture: a study of Japanese and Spanish brand personality constructs," in: *Journal of Personality* and Social Psychology, 81, 492-508.
- Aaker, D. (2004), "Brand Portfolio Strategy," New York, Free Press.
- Azoulay, A. and J.N., Kapferer (2003), "Do brand personality scales really measure brand personality?," in: *Brand management*, 11, 143-155.
- Bagozzi, R.P.; Gopinath M. and P.U. Nyer (1999), "The role of emotions in marketing," in: *Journal of the Academy of Marketing Science*, 27(2), 184-206.
- Batra, R.; Lenk, P. and M. Wedel (2010), "Brand extension: brand-category personality fit," in: *Journal of Marketing Research*, 47(2), 335-347.
- Bhat, S. and S.K. Reddy (2001), "The impact of parent brand attribute associations and affect on brand extension evaluation," in: *Journal of Business Research*, 53 (3), 111-122.
- Bottomley, P. A. and S.J.S. Holden (2001), "Do we really know how consumers evaluate brand extensions? Empirical generalizations based on secondary analysis of eight studies," in: *Journal of Marketing Research*, 38 (4), 494-500.
- Cauberghe, V. and P. De Pelsmacker (2011), "Adoption intentions toward interactive digital television among advertising professionals," in: *Journal of Interactive Advertising*, 11(2), www.jiad.org.
- Czellar, S. (2003), "Consumer attitude toward brand extensions: An integrative model and research propositions," in: *International Journal of Research in Marketing*, 20 (1), 97-115.
- Dens, N. and P. De Pelsmacker (2010), "Attitudes toward the extension and parent brand in response to extension advertising," in: *Journal of Business Research*, 63 (11), 1237-1244.
- de Ruyter, K. and M. Wetzels (2000), "The role of corporate image and extension similarity in service brand extensions," in: *Journal of Economic Psychology*, 21 (6), 639-659.
- Diamantopoulos, A.; Smith, G. and I. Grime (2005), "The impact of brand extensions on brand personality: Experimental evidence," in: *European Journal of Marketing*, 39 (1/2), 129-149.
- Ehrenfeld, J.R. (2008), "Sustainability by design," New Haven, Yale University Press.
- Esch, F.R. (2004), "Strategie und Technik der Marken Führung," München, Vahln.
- Fiske, S. T. and M.A. Pavelchak (1986), "Category-based versus piecemeal-based affective responses: Developments in schema-triggered affect," in: Sorrentino R. M. and Higgins E. T. (Eds.), The handbook of motivation and cognition, volume 1: Foundations of social behavior), New York, Guilford, 167-203.
- Geuens, M.; Weijters, B. and K. De Wulf (2009), "A New Measure of Brand Personality," in: *International Journal of Research in Marketing*, 26 (1), 97-107.

- Jeong, S. and K. Jung (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 Saddle, River NJ, Prentice Hall.
- Keller, K. L. and S. Sood (2003), "Brand equity dilution," in: MIT Sloan Management Review, 45 (1), 12-15.
- Kim C.K.; Han D. and S.B. Park (2001), "The effect of brand personality and brand personification on brand loyalty.: Applying theory of social identification," *Japanese Psychological Research*, 43, 195-206.
- Lau, K.C. and I. Phau (2007), "Extending symbolic brands using their personality: Examining antecedents and implications towards brand image fit and brand dilution," in: *Psychology & Marketing*, 24 (5), 421-444.
- Martínez, E. and L. de Chernatony (2004), "The effect of brand extension strategies upon brand image," in: *Journal of Consumer Marketing*, 21 (1), 39-50.
- Martínez, E.; Montaner, T. and J.M. Pina (2009), "Brand extension feedback: The role of Advertising," in: *Journal of Business Research*, 62 (3), 305-313.
- Martínez, E. and J.M. Pina (2003), "The negative impact of brand extension on parent brand Image," in: Journal of Product & Brand Management, 12 (7), 432-446.
- Midgley, D. F. (1983), "Patterns of interpersonal information seeking for the purchase of a symbolic product," in: *Journal of Marketing Research*, 20 (1), 74-83.
- Milberg, S. J. and F. Sinn (2008), "Vulnerability of global brands to negative feedback effects," in: *Journal of Business Research*, 61 (6), 684-690.
- Moons, I. and P. De Pelsmacker (2012), "Emotions as determinants of electric car usage intention," Journal of Marketing Management, 28 (3-4), 195-237.
- Pandey, A. (2009), "Understanding consumer perception of brand personality," http://dx.doi.org/10.2139/ssrn.1441824, accessed 20 February 2013.
- Park, C. W.; Jaworski, B. J. and D.J. MacInnis (1986), "Strategic brand concept-image management," in: *Journal of Marketing*, 50 (4), 135-145.
- Park, J.-W.; Kim, K.-H. and J. Kim (2002), "Acceptance of brand extensions: Interactive influences of product category similarity, typicality of claimed benefits, and brand relationship quality," in: Advances in Consumer Research, 29 (1), 190-198.
- Park, C. W. and S. Young (1986), "Consumer response to television commercials: The impact of involvement and background music on brand attitude formation," in: *Journal of Marketing Re*search, 23 (1), 11-24.
- Patro, S. K. and A.K. Jaiswal (2003), "Consumer evaluations of brand extensions: Evidence from India," in: Journal of the Academy of Business and Economics, 1, 1-13.
- Roedder John, D.; Loken, B. and C. Joiner (1998), "The negative impact of extensions: Can flagship products be diluted?," in: *Journal of Marketing*, 62 (1), 19-32.
- Supphellen, M.; Eismann, Ø. And L.E. Hem (2004), "Can advertisements for brand extensions revitalize flagship products? An experiment," in: *International Journal of Advertising*, 23 (2), 173-196.
- Swaminathan, V.; Fox, R. J. and S.K. Reddy (2001), "The impact of brand extension introduction on choice," in: *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 ex-	Cauberghe and	.92
	tension (AttExtension)	De Pelsmacker	
•	I am positive about the electric BRAND	(2011)	
	shown		
•	The electric BRAND shown is a good car		
•	I like the electric BRAND shown		
2.	<b>Emotions towards the branded electric</b>	Cauberghe and	.85
	extension (EmoExtension)	De Pelsmacker	
•	The electric BRAND shown evokes positive	(2011)	
	feelings in me		
•	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 nega-		
	tive feeling (r)		
3.	Cognitions towards the branded electric	Moons and De	.82
	extension (CogExtension)	Pelsmacker	
•	This electric BRAND provides me with a lot	(2012)	
	of advantages		
•	I find this electric BRAND innovative		
•	The media will promote this electric BRAND		
•	The government will take measures to stimu-		
_	late the use of this electric BRAND		0.0
4.	Intention to use the branded electric exten-	Cauberghe and	.90
	sion (Intention) I have the intention to drive this electric	De Pelsmacker (2011)	
•	BRAND in the near future	(2011)	
•	I will promote the use of this electric BRAND with other people		
	I expect to drive this electric BRAND in the		
•	near future		
5.	Personality of the branded extension	Geuens,	
٥.	Responsible (PRespons)	Weijters and	.86
	1. Responsible	De Wulf	.00
	2. Down to earth	(2009)	
	3. Stable	(===)	
Ь			

Active (PActiv)	T	.85
4. Active		.83
5. Dynamic		
6. Innovative		
Bold (PBold)		.80
\ /		.00
7. Aggressive 8. Bold		
		.79
Simple (PSimple) 9. Ordinary		.19
10. Simple		
Emotional (PEmotional)		.91
11. Romantic		.91
12. Sentimental		
6. Fit between the electric extension and the	Dens and De	.94
parent brand (Parentfit)	Pelsmacker	.94
This is very fitting for BRAND	(2010)	
	(2010)	
This is very logical for BRAND  This is a server size for BRAND  This is a server size for BRAND.		
This is very appropriate for BRAND	C 1 1 1	0.4
7. Attitude towards parent brand after elec-	Cauberghe and De Pelsmacker	.94
tric extension (ParentAb)		
Same scale as 1, but applied to brand in general after electric extension	(2011)	
	Caulanaha and	06
8. Intention to use parent brand after electric	Cauberghe and De Pelsmacker	.96
extension (ParentPI)		
Same scale as 4, but applied to brand in general after electric extension	(2011)	
	Cayana	>.86
9. Parent brand personality after electric	Geuens,	>.80
extension (PPResponsible – PPEmotional)	Weijters and De Wulf	
Same scale as 5, but applied to brand in general after electric extension	(2009)	
10. Attitude towards parent brand	Cauberghe and	.91
Only in condition 4, same scale as 7 without men-	De Pelsmacker	.71
tioning electric extension	(2011)	
11. Intention to use parent brand	Cauberghe and	.88
Only in condition 4, same scale as 8 without men-	De Pelsmacker	.00
tioning electric extension	(2011)	
•	Geuens,	>.79
12. Parent brand personality after electric extension (PPResponsible – PPEmotional)	Weijters and	~.19
Only in condition 4, same scale as 9 without men-	De Wulf	
tioning electric extension	(2009)	
tioning electric extension	(2009)	