BRAND EXTENSION SIMILARITY CAN BACKFIRE WHEN YOU LOOK FOR SOMETHING SPECIFIC

Abstract:

Purpose – In this research we show that high similarity between a parent brand and an extension category can have a detrimental effect on how a brand extension is perceived to perform on specific attributes. This happens because similarity influences the perceived positioning of a brand extension: lower similarity extensions can be perceived as “specialized” products, whereas high similarity extensions are perceived as “all-in-one” products not performing exceptionally well on any specific attribute.

Design/methodology/approach – We test the hypothesized effect through three experimental studies. We manipulate similarity both within subjects (Study 1a) and between subjects (Study 1b and Study 2). Further, we test the effect for specific attributes that are physical/concrete in nature (Study 1a and Study 1b) as well as attributes that are abstract/imagery-related in nature (Study 2).

Findings – High compared to low similarity improves perceptions of overall performance (i.e., performance across all attributes). But as expected we also find that a high similarity brand extension is perceived to perform worse on the attribute on which a low similarity brand extension specializes, even when the parent brands of the extensions possess that attribute to the same extent. This perception of attribute performance carries on to influence brand extension purchase likelihood.

Practical implications – The degree of brand extension similarity has consequences for how brand extensions are perceived to be positioned in the marketplace. While high similarity
extensions receive positive evaluations, they might not be suitable when a company is trying to instil a perception of exceptional performance on a specific attribute.

**Originality/value** – We demonstrate a consequential exception to the marketing wisdom that brands should extend to similar categories. Whereas the degree of brand extension similarity has been repeatedly shown to have a positive effect on brand extension evaluation, we document a case when its effect is actually detrimental. Our focus on the dependent variable of perceived performance on specific attributes is novel in the brand extension literature.

**Keywords** Brand extension, positioning, specific attribute performance, perception.

**Paper type** Research Paper
1. Introduction

A considerable amount of academic work has investigated the factors that influence consumers’ brand extension evaluations (e.g., Aaker and Keller, 1990; Broniarczyk and Alba, 1994; Grime, Diamantopoulos and Smith, 2002; Völckner and Sattler, 2006). Arguably the main conclusion that has emerged in this stream of literature is that fit - understood as the similarity between the parent brand and the extension category - is the most important driver of consumers’ brand extension evaluation and success (Aaker and Keller, 1990; Park, Milberg and Lawson, 1991; Völckner and Sattler, 2007; Buil, de Chernatony and Hem, 2009).

Contrary to the dominant view that similarity is unconditionally favorable for brand extensions, we show that a high similarity between the parent brand and the extension category can have a negative effect on the perceived performance of brand extensions on specific attributes. Analysing how consumers judge product performance on specific attributes is of importance as consumers are often likely to make choices with a specific goal or attribute in mind (cf., Meyvis and Janiszewski, 2002; Chernev, 2007). For instance, consumers who have the goal of removing dandruff are likely to choose an anti-dandruff shampoo rather than a shampoo with generalist functionality. We provide evidence that a high level of similarity between parent brand and extension category can be detrimental if consumers have the goal of choosing a product that performs well on a specific attribute, rather than a product with an overall good performance on all its attributes.

We rely on insights regarding how consumers construct similarity judgements (Rosch and Mervis, 1975; Tversky, 1977; Loken and Ward, 1990) to argue such an effect occurs as a high level of similarity between the parent brand and the extension category makes a brand extension appear positioned as an “all-in-one” product. Such a product would be perceived to perform well on several core attributes for the category, but exceptionally on none (cf., Meyvis and Janiszewski, 2002; Chernev, 2007). Conversely, a brand extension based on
lower similarity between the parent brand and the extension category can be perceived to be positioned as a “specialized” product, performing exceptionally well on one specific attribute given the parent brand shares that attribute with the extension category.

We proceed as follows. Firstly, we provide a review of the brand extension literature to date and position our contribution within this field of inquiry. Subsequently, we present the theoretical rationale for how the perceived similarity between the parent brand and the extension product category is related to the perceived positioning of the brand extension, and the reasoning for why similarity influences the perceived attribute performance of a brand extension. We introduce our hypotheses and then present the results of three experiments through which we tested our conjectures. We conclude with a discussion of the contribution of the paper, its limitations, and the avenues it opens for further research.

2. Brand extension research

A significant number of scholars have investigated the factors that impact consumers’ responses to brand extensions. The fit between the parent brand and the extension category has been repeatedly shown to be a critical determinant of brand extension evaluation (Aaker and Keller, 1990; Bottomley and Holden, 2001; Völckner and Sattler, 2007), with fit being predominantly understood as the degree of similarity between the parent brand and the extension category (Park, Milberg and Lawson, 1991; Klink and Smith, 2001; Cutright, Bettman and Fitzsimons, 2013). However, existing research identifies many other factors that impact brand extension evaluation, either directly or through interactive effects with brand extension fit.

One such category of factors pertains to the characteristics of the parent or extending brand. For instance, the parent brand quality, attitude and affect all have a positive effect on brand extension evaluation (Keller and Aaker, 1992; Smith and Park, 1992; Yeung and Wyer,
2005). Other studies document the importance of the type of brand concept, i.e., symbolic vs. functional (Park, Milberg and Lawson, 1991), of the degree of relevance of parent brand’s associations (Broniarczyk and Alba, 1994), or the degree of breadth of the parent brand portfolio (Boush and Loken, 1991; Dawar, 1996; Meyvis and Janiszewski, 2004).

Many investigations demonstrate how consumers’ responses toward brand extensions depend on individual characteristics. Thus, brand extensions of a lower degree of fit are better evaluated the more innovative consumers are (Klink and Smith, 2001), the better their mood (Barone, Miniard and Romeo, 2000), if consumers are promotion rather than prevention oriented (Yeo and Park, 2006), if their thinking mode is holistic rather than analytical (Monga and John, 2007), the stronger their feelings of control (Cutright, Bettman and Fitzsimons, 2013) or the more creative they are (Wu, Wen, Dou and Chen, 2015). Not least, several studies find that brand extension evaluations vary with consumer culture (e.g., Bottomley and Holden, 2001; Buil, de Chernatony and Hem, 2009).

Further, existing evidence shows consumers’ responses are influenced by contextual factors such as the presence or absence of competing brands (Milberg, Sinn and Goodstein, 2010), of art in the presentation of the extension product (Hagtvedt and Patrick, 2008) or of reminders of money (Hansen, Kutzner and Wänke, 2013). Consumers’ evaluations of brand extensions are also influenced by the marketing mix execution: for instance, the types of attributes conveyed through advertising and the number of times an advertisement is repeated (Lane, 2000) or by the price with which the product is launched (Taylor and Bearden, 2002). From a strategic point of view, existing evidence shows that low fit extensions receive better evaluations if sub-branding rather than direct branding is used (Sood and Keller, 2012), or that a brand extension strategy yields better evaluations than a co-branding strategy especially when the extension involves a high degree of stretch (Samuelsen and Olsen, 2012).
Evidence also comes from empirical generalizations that look at the effect of factors that impact brand extension evaluation in an aggregated fashion. Völckner and Sattler (2006) find that the most important factors influencing brand extension evaluation are, in order of their importance: brand extension fit, the marketing support for the extension, consumers’ parent brand conviction, the retailer acceptance of the extension product and consumers’ experience with the parent brand. The same authors document the interplay of several factors that influence consumers’ responses to brand extensions, out of which fit and parent brand quality play the most important roles (Völckner and Sattler, 2007). Martínez and Pina (2010) also find brand extension evaluation is most strongly shaped by fit perceptions followed by how positive the parent brand image is.

A common denominator of most brand extension studies to date is the focus on the dependent variable of brand extension evaluation, measured as the overall evaluation of the extension product on attitudinal, purchase intention or quality-related items (e.g. Aaker and Keller, 1990; Park, Milberg and Lawson, 1991; Martínez and Pina, 2010). However, consumer research has been paying elevated attention to how products perform on specific attributes or traits (e.g. Chernev, 2004; Aaker, Vohs and Mogilner, 2010; Irmak, Vallen and Robinson, 2011) given consumers often judge and purchase products with such specific goals in mind. For example, a health-conscious consumer might buy juices based on their fruit content, or a family with small kids might look to purchase a car scoring high on the “safety” attribute. We are hereby interested in how consumers assess the performance of brand extensions on specific attributes. In line with the most common conceptualization adopted regarding brand extension fit in the literature, in the remainder of the current article we refer to this construct as similarity (i.e., the similarity between the parent brand and the extension category). We detail below the rationale for how the degree of similarity impacts the perception of brand extension attribute performance.
3. **Theory and hypothesis development**

The view of similarity in the brand extension literature is rooted in earlier work by Tversky (1977) or Rosch and Mervis (1975). Tversky’s (1977) “features of similarity” model holds that the similarity between two objects (A and B) is computed as a function of the common features of the objects, minus the distinctive features of A relative to B and of B relative to A. The terms of the formula are weighted, and, in calculating the similarity between two objects, the measure of common features is given a higher weight than the measures of distinctive features, such that common features are attached more importance than distinctive features in measuring similarity (cf., Loken and Ward 1990). Rosch and Mervis’ (1975) “family resemblance” represents the degree to which a category member has characteristics in common with all the other category members. The more characteristics a category member has in common with more other category members, the higher its “family resemblance” score will be. A category member’s degree of “family resemblance” can be derived from its degree of similarity (cf., Tversky, 1977) with the overall category, with the additional assumption that the common features or characteristics dominate the non-common or distinctive ones (cf., Loken and Ward 1990; Ratneshwar and Shocker 1991).

Therefore, the work of Tversky (1977) and Rosch and Mervis (1975) implies that the similarity between two objects or concepts is a positive function of the number of attributes they share. We therefore posit that, in a brand extension context, the similarity between the parent brand and the extension category is higher the more attributes or associations the parent brand and the extension product category have in common. Building on this observation we contend that, by definition, the degree of similarity impacts how a brand extension is perceived to be positioned. To exemplify, let us consider the extensions into mobile phones of a brand of laptops and of a brand of TVs (*Figure 1*). As laptops share more
attributes with mobiles phones than TVs do, the former brand extension would be perceived as significantly higher on similarity with its parent category than the latter. Given the match on several attributes or associations, high similarity suggests that the extension can deliver on a significant number of attributes that characterize the extension category, fostering the perception that the brand extension is positioned as an “all-in-one” product in the extension category. Comparatively, a lower similarity based on one or a limited number of common attributes would lead to a perception the brand extension is positioned as a “specialized” product in the extension category:

As shown by Chernev (2007), when consumers evaluate choice sets comprising both all-in-one and specialized options, the option specializing on a single attribute would be perceived as superior on that attribute compared to an all-in-one option, even when the performance of both options on the respective attribute is objectively the same. For instance, if a consumer had the goal of “cavity prevention”, a tooth paste specifically positioned on “cavity prevention” would be perceived as better on this attribute than a tooth paste positioned on both “cavity prevention” and “tooth whitening”. Chernev (2007) explains this effect as a type of compensatory reasoning (cf., Simonson and Tversky, 1992; Broniarczyk and Alba, 1994; Shiv, Carmon, and Ariely, 2005), and specifically as one where consumers equate the overall attractiveness of the alternatives in the choice set under the form of a zero-sum heuristic. Note that Chernev’s (2007) theorizing only applies in situations where consumers explicitly compare all-in-one with more specialized products. It makes no predictions for situations in which consumers evaluate either product in isolation.

A more general perspective, applicable both to choices and isolated evaluations, is based on a dilution effect account. The dilution effect has been thoroughly investigated in
psychology (Nisbett, Zukier and Lemley, 1981; Tetlock and Boettger, 1989; Tetlock, Lerner and Boettger, 1996) and holds that information that is irrelevant to a core attribute weakens the perception that a stimulus possesses that attribute. In a consumer domain, this account has been presented by Meyvis and Janiszewski (2002) as an explanation of the diluting effect of irrelevant product information. Meyvis and Janiszewski (2002) demonstrated that, when consumers’ goal is to achieve product performance on a key benefit (e.g., how fast a computer is), they look for information confirming the hypothesis that the product delivers the benefit and classify any information that is irrelevant for this benefit as not confirming. For instance, a computer presented to have a powerful microprocessor is perceived as faster than a computer that has a powerful microprocessor, features commercials on NBC and CBS, and can be ordered online (cf., Meyvis and Janiszewski, 2002). Thus, when looking for information that a product delivers a specific benefit, irrelevant information encountered in the information search process systematically weakens consumers’ belief that the product delivers this benefit. For “all-in-one” products, there is salient information or at least a suggestion that they perform well on several attributes, not just the attribute a consumer with a specific goal is looking for. The model proposed by Meyvis and Janiszewski (2002) predicts that the all-in-one information, even if evaluated positively in itself, might disconfirm the hypothesis of superior performance of the specific attribute, merely because it is irrelevant to the consumption goal underlying the search for that attribute.

Both these theoretical perspectives can be applied to a brand extension context given their implications for how consumers assess the attribute performance of “all-in-one” compared to “specialized” products, and given a brand extension’s degree of similarity has consequences for such product positioning. Taking the example of the extensions of a laptop brand and of a TV brand into mobile phones, Chernev’s (2007) perspective suggests that comparing these two options would lead to a perception the laptop brand extension performs
less well on “display performance”, an attribute on which the TV brand extension should be perceived to specialize (even though both laptops and TVs generally have good quality displays). Meyvis and Janiszewski’s (2002) perspective would suggest that, compared to the TV brand extension that specializes on “display performance”, the other attributes underlying the laptop brand’s extension all-in-all positioning are likely to systematically weaken the perception the product delivers on the “display performance” benefit. Conversely, the laptop brand extension should be having an edge compared to the TV brand extension in terms of “overall performance” (performance across all the product’s attributes). This rationale leads to forwarding the following hypotheses:

**H1:** Compared to a low similarity brand extension that specializes on a specific attribute, a high similarity brand extension is perceived to perform worse on the attribute on which the low similarity extension specializes.

**H2:** Compared to a low similarity brand extension that specializes on a specific attribute, a high similarity brand extension is perceived to perform better on overall performance (i.e., across all attributes).

We present three studies through which we tested our theory. In Study 1a participants were randomly assigned to different purchase goals (i.e., seeking either overall performance or performance on a specific attribute), and requested to directly choose between a high similarity extension and a low similarity extension. Study 1b tested whether the effect is applicable when brand extensions are evaluated in isolation and not in a choice context. It reiterated the design of the first study, but similarity was manipulated between-subjects and participants rated purchase likelihood and attribute performance given the purchase goal. Lastly, whereas in Studies 1a and 1b the focus was on a specific attribute of physical/concrete
nature in Study 2 we introduced a different experimental scenario and stimuli to show the effect generalizes to situations when the specific attribute is abstract/imagery-related rather than physical/concrete in nature (cf., Keller, 1993; Keller, 2008).

4. Study 1a

Design

We first tested our predictions by means of a choice experiment. We presented all participants with two brand extensions they needed to choose between, one high on similarity and likely to be positioned as an all-in-one option, and one low in similarity and likely to be positioned as a specialized option. The study had a $2 \times 2 \times 2$ mixed design. Brand extension similarity (high vs. low) was a within-subject factor. The purchase goal (specific attribute performance vs. overall performance) and a brand name assignment order counterbalancing factor were between-subject factors. The dependent variables were the perception of how the two options did on the specific attribute and on overall performance and the choice share between the two extension products.

We manipulated similarity by using the extension of a laptop brand versus the extension of a TV brand into mobile phones. A pre-test with 27 participants confirmed that laptops are generally perceived to be more similar to mobile phones than are TVs ($1 = \text{“Very dissimilar”} / 7 = \text{“Very similar”}$, $M_{\text{laptop}}=4.9$ vs. $M_{\text{TV}}=2.9$, $F(1,26)=58.5$, $p<.001$). We manipulated purchase goal by stating that, in choosing between the two brand extensions, participants should be concerned with either 1) the display performance or 2) the overall performance of the product.

We administered the experiment in a paper-and-pencil format to 64 students who were randomly assigned to the conditions. The procedure took about four minutes to complete. On the first page of an experimental booklet participants were told that they took part in a short
Study dealing with how people choose when they only have little information at hand. Then, they were presented with two brands, one of high-quality laptops and one of high-quality TVs, named either Scera or Myrto (the names are fictitious, and the assignment order of the Scera and Myrto names as brands of laptops/TVs was counterbalanced). On the same page purchase goal was manipulated by indicating to participants that they were interested in buying a mobile phone and that their main concern was either that the phone has a high performance across all its attributes (i.e., overall performance), or that it has a high display performance (i.e., specific attribute performance). Given that they went to a shop where the only two mobile phone models available were a Scera and a Myrto mobile phone, participants were requested to tick off which one of the two products that they would choose (“Please tick off the mobile phone you would choose knowing your main concern is display performance / overall performance”, cf. Chernev, 2007).

The subsequent page of the instrument comprised four items gauging each extension’s perceived display performance and overall performance (“How high is the display performance / overall performance of Scera / Myrto?”, 1= “very low” / 7= “very high”, cf., Chernev, 2007). On the last page participants answered two items about the perceived similarity between mobile phones and each of the product categories where the brands Scera and Myrto were established (1= “very dissimilar” / 7= “very similar”), to be used as manipulation checks.

Results

The manipulation check analysis revealed that the similarity score was only influenced by the manipulation of the degree of similarity (M_{laptop}=5.17 vs. M_{TV}=3.39, F(1, 60)=71.52, p<.001). The other factors and the factor interactions did not affect the similarity scores (p’s>.45).
We tested the hypotheses using ANOVA. Because respondents rated both the specific attribute and the overall performance of the options, the effects on perceived performance were analyzed in an aggregated manner by means of a $2\times2\times2\times2$ ANOVA. The first two factors were similarity (low vs. high) and the attribute level at which performance was assessed (specific attribute/display vs. overall). These factors were specified as within-subjects. The last two factors were purchase goal and the counterbalancing factor, and were specified as between-subjects. The dependent variable was perceived performance (either display performance or overall performance). Similarity had a marginally significant effect on the performance score ($M_{TV}=4.95$ vs. $M_{laptop}=5.23$, $F(1,60)=2.89, p<.1$). Attribute level had a significant main effect ($M_{display}=5.19$ vs. $M_{overall}=4.99$, $F(1,60)=4.83, p<.05$). The two main effects were qualified by a significant interaction ($F(1,60)=55.43$, $p<.001$) (Figure 2). All the other effects in the model were non-significant ($p$’s > .2). Planned contrasts suggested that the TV brand extension was evaluated significantly better than the laptop brand extension in terms of perceived display performance ($M_{TV}=5.44$ vs. $M_{laptop}=4.94$, $F(1,60)=6.03, p<.02$), supporting $H1$. The laptop brand extension was evaluated significantly better than the TV brand extension in terms of overall performance ($M_{laptop}=5.52$ vs. $M_{TV}=4.46$, $F(1,60)=32.73$, $p<.001$), lending support to $H2$.

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Figure 2
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We also looked at the choice share between the two extensions. The choice share depended on the purchase goal ($\chi^2=9.69$, $df=1$, $p<.01$) (Figure 3). This effect did not depend on the counterbalancing factor ($\chi^2=.56$, $df=1$, $p>.4$). The choice shares of the low similarity and the high similarity extensions were equal in the specific attribute performance condition (50% each), while the choice share was significantly higher for the laptop extension in the
overall performance condition (90% vs. 10%) and significantly higher than 50% ($z=7.18$, $p<.01$). Even though the choice share analysis does not reflect the same pattern as the analysis on the perceived performance dependent variable, the choice shares of the two extensions appeared as equal in the specific attribute performance condition.

Discussion

The results confirmed that the high similarity extension was perceived to perform worse on the attribute on which the low similarity extension specialized. While the high similarity laptop brand extension was perceived as better in terms of overall performance, the low similarity TV brand extension was rated higher on display performance, confirming our hypotheses. At the same time, participants chose the laptop brand extension significantly more often when overall performance was the purchase goal, while we found an equal choice share for the TV and the laptop brand extensions when specific attribute performance was the purchase goal.

With Study 1b we aimed to achieve two objectives. First, Study 1a manipulated similarity within subjects (participants were presented with both a low similarity and a high similarity extension), and therefore hypothesis guessing might have occurred. On the one hand, the significant effects we obtained might have been due to a demand effect. On the other hand, the equal choice shares in the specific attribute performance condition (instead of a higher share for the low similarity condition) might have been due to a reactance effect. To ensure hypothesis guessing does not occur, in Study 1b we used the same experimental stimuli but presented participants randomly with either the high similarity or with the low similarity extension (i.e., between subjects). Second, running Study 1b between subjects
allowed us to test whether the hypothesized effect also occurs when a brand extension is presented in isolation, and not only as part of a choice set.

5. Study 1b

Design

In Study 1b we presented participants with just one of the brand extensions (either the low similarity extension of the TV brand, or the high similarity extension of the laptop brand). The experiment had a 2×2 between-subject design, with the factors being brand extension similarity (low vs. high) and purchase goal (specific attribute performance vs. overall performance). The dependent variables were perceived performance of the extension at the attribute level corresponding to the purchase goal (i.e., display/specific attribute performance vs. performance across all attributes/overall performance) and the purchase likelihood given the purchase goal.

We administered the paper-and-pencil experiment to 99 students who were randomly assigned to one of four conditions and who were initially informed they are taking part in a short study concerned with how people make decisions when they have little information at hand. The procedure took about three minutes to complete and generally followed that used in Study 1a, with the exception that participants were presented with a high quality brand of either laptops or TVs named Scera. The participants read that, upon going to a shop, they come across a Scera mobile phone. They were subsequently asked to indicate the likelihood of purchasing a Scera mobile phone given their goal is to buy a mobile phone with either a high performance across all its attributes (i.e., the overall performance goal) or with a high performance of the display (i.e., the specific attribute performance goal) (“How likely would you purchase a Scera mobile phone knowing your main concern is display performance / overall performance?” 1= “not likely at all” / 7= “very likely”, based on Chernev, 2007).
The question on the subsequent page measured the perceived attribute performance (1= “very low” / 7= “very high”) at the attribute level consistent with the previous purchase goal (display vs. across all attributes). The last page contained the similarity manipulation check (1= “very dissimilar” / 7= “very similar”). These measures reiterated the procedure in Study 1a.

Results

The similarity score was only influenced by the similarity manipulation (M_{laptop}=4.08 vs. M_{tv}=3.21, F(1, 95)=12, p<.01). The purchase goal factor or the interaction between the factors did not affect the similarity score (p’s > .15).

In order to test the hypotheses, we ran an ANOVA analysis on the perceived performance (i.e., at the attribute level consistent with the purchase goal) dependent measure. We found a significant effect of purchase goal (F(1,95)= 12.94, p<.01), but no main effect of similarity (F(1,95)= .002, p>.9). The interaction between the experimental factors was however significant (F(1,95)= 9.69, p<.01) (Figure 4). Planned contrasts revealed that the low similarity extension was evaluated better than the high similarity one on specific attribute performance (M_{laptop}=4.09 vs. M_{tv}=4.92, F(1,95)= 5.16, p<.03), confirming H1. Meanwhile, the pattern was reversed for overall performance (M_{laptop}=3.96 vs. M_{tv}=3.16, F(1,95)= 4.47, p<.04), confirming H2.

We also ran a 2x2 ANOVA on the purchase likelihood score. Neither the main effect of purchase goal (F(1,95)=2.26, p>.1), nor that of similarity (F(1,95)=.52, p>.4) were significant. The interaction of the factors was however significant (F(1,95)=5.78, p<.02)
(Figure 5). Planned contrasts showed that the purchase likelihood scores were not significantly different (but in the expected order) in the specific attribute performance goal condition ($M_{laptop}=2.95$ vs. $M_{TV}=3.46$, $F(1,\ 95)=1.44, \ p=.23$), while being significantly different in the overall performance goal condition ($M_{laptop}=3.21$ vs. $M_{TV}=2.28$, $F(1,\ 95)=4.99, \ p<.03$).

Even though one of the planned contrasts on purchase likelihood did not reach significance, we sought to find evidence that similarity impacts purchase likelihood through its effect on perceived performance. We achieved this by means of mediation analyses based on bootstrapping (Hayes and Preacher, 2010; Zhao, Lynch and Chen, 2010). The procedure employed 5,000 bootstrap sub-samples. First, in the overall performance purchase goal condition the indirect impact of the degree of similarity on purchase likelihood through perceived overall performance was positive and significant ($\beta_{indirect} = .59$), with the 95% confidence interval not including 0 (.12 to 1.23); meanwhile, the direct effect was non-significant ($\beta_{direct} = .34, \ p>.29$). Conversely, in the specific attribute performance goal condition we found a significant and negative indirect effect of the degree of similarity on purchase likelihood through perceived specific attribute performance ($\beta_{indirect} = -.57$), with the 95% confidence interval not containing 0 (-1.25 to -.05); the direct effect was non-significant ($\beta_{direct} = .07, \ p>.8$). Therefore, the effect of similarity on purchase likelihood through perceived performance was positive when participants focused on overall performance, but negative when participants focused on specific attribute performance.
Discussion

With Study 1b we addressed two main objectives. First, in order to eliminate the possibility of hypothesis guessing, the experiment was run between subjects. Second, manipulating similarity between subjects allowed us to ascertain whether the effect occurs not only in choice contexts, but also when a brand extension is evaluated in isolation.

In line with our hypotheses, the high similarity extension was devalued compared to the low similarity extension in terms of specific attribute performance also when the two options were not presented together. Whereas the theoretical rationale based on Chernev (2007) supports the existence of the effect when options are presented in the same choice set, the theoretical rationale based on Meyvis and Janiszewski (2002) is applicable to both choice contexts and isolated evaluations. Indeed, with Study 1b we found the effect also holds when brand extensions are presented in isolation. Further, we found that the perception of attribute performance carries on to influence brand extension purchase likelihood. In particular, when participants looked for a specific attribute (i.e., display quality), we found that similarity influenced brand extension purchase likelihood negatively through its effect on perceived specific attribute performance.

Whereas our theoretical development and respectively Studies 1a and 1b focused on the performance of brand extension products on a physical/concrete attribute (i.e., the display performance of a mobile phone), in Study 2 we sought to show that the effect is robust and applies as well to specific attributes that are abstract/imagery-related rather than physical/concrete in nature (cf., Keller, 1993; Keller, 2008). According to Keller (2008), one type of brand associations/attributes with a high degree of abstractness is represented by brand personality dimensions (i.e., sincerity, excitement, sophistication, competence and ruggedness, cf., Aaker, 1997). Therefore, in Study 2 we used parent brands rated equally well in terms of a brand personality dimension (Aaker, 1997) and tested whether, given extensions
to the same category, the low similarity extension would be superior on the personality dimension compared to the high similarity extension.

6. **Study 2**

*Design*

The experiment used a 2×2 between-subjects design that paralleled that of Study 1b. However, it used different experimental stimuli and focused on a specific attribute that was abstract/imagery-related rather than physical/concrete in nature (i.e., a brand personality dimension). As the experiment used brand extensions emanating from fictional brands (with the same neutral name of Scera, similar to Study 1b), the personality of the parent brands was given by the product categories they belonged to (cf., Batra, Lenk and Wedel 2010). We ran a pre-test with 81 participants to identify product categories evaluated equally well in terms of the same personality dimension. Specifically, the participants rated 22 different product categories in terms of their personality dimensions (cf., Aaker, 1997; Batra, Lenk and Wedel 2010). Using the items developed by Aaker (1997) to measure brand personality dimensions (1 to 5 scales), we found that surfboards and sports cars are just as highly rated in terms of excitement (Msurfboard=3.85 vs.Msporscar=3.87, t(79)=.13, p>.8). These categories were used to represent the extension categories high and respectively low on similarity to the category of snowboards, which also rated highly in terms of excitement (Msnowboard=4.05). Therefore, the chosen personality dimension (i.e., excitement) was also important for the extension category (i.e., snowboards).

In the main study Scera (fictional brand name) was introduced as being either a brand of high-quality surfboards (high similarity condition), or a brand of high-quality sports cars (low similarity condition). To manipulate the purchase goal, participants were asked to imagine that they need to buy a snowboard for their winter vacations, and that for them an
essential concern is that the snowboard has either an image of overall performance (i.e., performance across all the attributes) or an image of being trendy and exciting (i.e., performance on specific attribute). The measures generally reiterated those used in the previous study. First, given that they came across a Scera snowboard in a shop, participants were requested to indicate the purchase likelihood (1= “not likely at all” / 7= “very likely”) depending on their purchase goal. Subsequently participants were requested to rate the perceived performance of the extension at the level consistent with the purchase goal (i.e., image of overall performance vs. image of being trendy and exciting, 1= “to a very low extent” / 7= “to a very high extent”). The similarity manipulation check measure was then introduced (1= “very dissimilar” / 7= “very similar”). Because results could be affected by participants’ familiarity with parent brand’s original product category (e.g., surfboards vs. sports cars), this factor was introduced as a covariate in the analysis (measure as 1= “not familiar at all” / 7= “very familiar”).

The experiment was administered to a total of 209 respondents who were recruited either online (via Amazon mTurk, 114 respondents) or through participation in a computer-based experimental lab session on a university campus (95 respondents). To ascertain the place of data collection did not unduly influence the results, this was also introduced as an independent factor in the analysis.

Results

The score on the similarity manipulation check was only influenced by the similarity manipulation (M\textsubscript{surfboard}=4.33 vs. M\textsubscript{sportscar}=2.94, F(1,201)=36.96, p<.01). The other two factors (i.e., purchase goal and the place of data collection), the two-way interactions or the three-way interaction did not influence the manipulation check score (all p’s > .15).
To test the hypotheses, we ran an ANCOVA analysis on the perceived performance dependent variable with parent brand’s category familiarity as a covariate. The main effect of the place of data collection was significant ($F(1,200)=8.42, p<.01$), and so was the interaction of this factor with similarity ($F(1,200)=5.35, p<.05$). The hypothesized interaction between similarity and purchase goal was significant ($F(1,200)=14.09, p<.01$) (Figure 6). Importantly, the interaction did not depend on the place of data collection ($F(1,200)=2.18, p>.14$). None of the other effects was significant ($p’s>.6$). Planned contrasts confirmed that the sports car extension was perceived to perform better on excitement image ($M_{sportscar}=4.91$ vs. $M_{surfboard}=4.13$, $F(1,200)=8.21, p<.01$), whereas the surfboard extension was perceived to perform better on overall performance image ($M_{surfboard}=4.82$ vs. $M_{sportscar}=4.05$, $F(1,200)=5.08, p<.05$). The results corroborate H1 and H2.

A parallel ANCOVA analysis on purchase likelihood revealed only two significant effects: the main effect of the place of data collection ($F(1,200)=13.47, p<.01$) and of the hypothesized interaction between similarity and purchase goal ($F(1,200)=3.58, p=.06$) (Figure 7). All the other effects in the model were non-significant ($p’s>.3$). The planned contrasts analysis showed that, when excitement image was the purchase goal, the purchase likelihood was higher for the sports car brand extension compared to the surfboard brand extension ($M_{sportscar}=4.53$ vs. $M_{surfboard}=4.01$, $F(1,200)=3.2, p=.075$). However, when overall image was the purchase goal, the mean for the surfboard brand extension was higher than that for the sports car brand extension but the difference was not significant ($M_{surfboard}=4.21$ vs. $M_{sportscar}=3.88$, $F(1,200)=.79, p=.37$).
Similar to Study 1b, we followed up with mediation analyses based on bootstrapping. The procedure employed 5,000 bootstrap sub-samples and used as covariate parent brand’s category familiarity. In the overall performance purchase goal condition the indirect impact of the degree of similarity on purchase likelihood through perceived overall performance image was positive and significant ($\beta_{indirect} = .50$), with the 95% confidence interval not including 0 (.02 to 1.02); meanwhile, the direct effect was non-significant ($\beta_{direct} = -.35, p > .15$).

Conversely, in the specific attribute performance goal condition we found a significant and negative indirect effect of the degree of similarity on purchase likelihood through perceived excitement image ($\beta_{indirect} = -.61$), with the 95% confidence interval not containing 0 (-1.10 to -.16); the direct effect was non-significant ($\beta_{direct} = .23, p > .24$). Similar to Study 1b we find that the effect of similarity on brand extension purchase likelihood through perceived performance was positive when participants focused on overall performance, but negative when participants focused on specific attribute performance.

Discussion

In Study 2 we tested our theory for the case when the focal attribute was of an abstract/imagery-related nature rather than of a physical/concrete nature. We asked participants to rate a high similarity extension (the extension of a surfboard brand into snowboards) and respectively a low similarity extension (the extension of a sports car brand into snowboards) on perceived attribute performance and purchase likelihood, while having a goal to purchase either a snowboard with an image of being trendy and exciting (i.e., specific attribute performance) or an image of performance across all attributes (i.e., overall performance). As hypothesized, the high similarity extension scored lower than the low similarity extension when participants rated the perceived performance on the specific attribute, while the pattern was reversed for overall performance.
Given the data in Study 2 was collected in two different contexts, in our analysis we
controlled for the place of data collection by including it as an experimental factor. This did
not affect the manipulations or the interaction between similarity and purchase goal, which
allowed us to successfully test our hypotheses. Further, in both Study 1b and in Study 2 we
found evidence that the effect of similarity on attribute performance carried on to influence
brand extension purchase likelihood. However, in these studies the planned contrasts testing
the overall effect of similarity on purchase likelihood (i.e., in the purchase goal conditions)
were not always significant. This suggests that considerations beyond the assessment of
attribute performance (e.g., other attributes that might be personally relevant in the extension
category, general interest in making purchases in the extension category) are likely to have
toned down the overall effect of the manipulations on the purchase likelihood dependent
variable.

7. Discussion

Fit understood as similarity between the parent brand and the extension category has
been repeatedly shown to drive brand extension evaluation and success (Aaker and Keller,
1990; Park, Milberg and Lawson, 1991; Völckner and Sattler, 2007; Buil, de Chernatony and
Hem, 2009). In the current work we demonstrate that a high degree of similarity can also have
detrimental effects in terms of brand extension’s perceived performance on specific attributes.
Our rationale is that, by definition, a high degree of similarity means the parent brand and the
extension category have many attributes in common, leading to a perception of the extension
being positioned as an all-in-one product. Meanwhile, a lower similarity brand extension can
be based on one or a limited set of common attributes between the parent brand and the
extension category, leading to a perception of specialized positioning.
The disadvantage of a high similarity all-in-one extension compared to a lower similarity specialized extension in terms of specific attribute performance can be explained through two theoretical views. On the one hand, Chernev (2007) suggests that, when consumers compare all-in-one vs. specialized products, the latter is perceived as superior on the attribute on which it specializes (even though the performance of the two products on that attribute is objectively the same). As suggested by Chernev (2007), this occurs because of consumers’ usage of a compensatory reasoning under the form of a zero-sum heuristic, according to which the overall attractiveness of the alternatives in the choice set is equated. On the other hand, Meyvis and Janiszewski (2002) suggest that, when consumers assess if a product delivers a certain benefit, they search for information confirming the hypothesis that the product delivers the benefit and classify any information that is irrelevant for this benefit as not confirming. For all-in-one products such as high similarity extensions there is salient information or at least a suggestion that they perform well on several attributes, and not just on the specific benefit consumers are looking for. While all-in-one information is evaluated positively in itself and leads to a perception of overall performance, it disconfirms the hypothesis of performance on the specific attribute, merely because it is irrelevant to the search for the respective benefit. The theory of Meyvis and Janiszewski (2002) is applicable to both choice contexts and to situations when a brand extension is evaluated in isolation.

We tested our hypotheses through three experimental studies. In Study 1a we presented participants with a choice set comprising the extensions into mobile phones of a brand of TVs (low similarity) and of a brand of laptops (high similarity). When rating perceived display performance (i.e., specific attribute performance), the TV brand extension scored higher than the laptop brand extension. The ratings were reversed when participants scored perceived performance across all attributes (i.e., overall performance). Study 1b used similar stimuli, but participants rated either the TV brand extension or the laptop brand
extension (i.e., similarity was manipulated between subjects). This allowed us to rule out hypothesis guessing, as well as to test if the effect also holds when a brand extension is evaluated in isolation. We found again that the TV brand extension excelled on display performance, while the laptop brand extension excellent on overall performance. Going on with Study 2 we tested if the effects hold for specific attributes that are abstract/imagery-related in nature (i.e., a brand personality dimension), and not just for physical/concrete attributes. Confirming our hypotheses, the sports car brand extension was rated higher on image of being trendy and exciting (i.e., specific attribute performance), while the surfboard brand extension was rated higher on image of overall performance (i.e., performance across all attributes). In both Study 1b and Study 2 we also found that the perception of attribute performance carries on to influence brand extension purchase likelihood. In other words, we found that the impact of similarity on brand extension purchase likelihood through perceived attribute performance is positive when consumers focus on overall performance, but negative when consumers focus on a specific attribute.

Theoretical contribution

Existing research provides numerous demonstrations that the similarity between the parent brand and the extension category drives brand extension evaluation and success (Aaker and Keller, 1990; Völckner and Sattler, 2006; Buil, de Chernatony and Hem, 2009; Martínez and Pina, 2010). The main contribution of our work is to demonstrate a consequential exception to the principle that brands stand only to benefit from extensions into similar categories.

Differently from the rich brand extension literature to date that focused on the variable of brand extension evaluation (i.e., overall assessment), our current focus is on the dependent variable of brand extension attribute performance given consumers often look for products
with a specific goal or attribute in mind (cf., Meyvis and Janiszewski, 2002; Chernev, 2007; Aaker, Vohs and Mogilner, 2010; Irmak, Vallen and Robinson, 2011). For instance, consumers might look for an anti-dandruff shampoo or for a toothpaste for cavity prevention, rather than for products with a generalist function. We hereby demonstrate that the degree of similarity can also have a detrimental effect, and that a high similarity can actually dilute the perception of performance on specific attributes. We provide evidence that the principle applies to both attributes of a physical/concrete nature (Study 1a and Study 1b) and to attributes of an abstract/imagery-related nature (Study 2). We debate that the effect of similarity on specific attribute performance occurs because a high degree of similarity makes the extension product appear as an “all-in-one” product, perceived to deliver well on several core attributes but exceptionally on none. Meanwhile, a brand extension based on a lower degree of similarity between the parent brand and the extension category can be perceived as a “specialized” product, performing exceptionally well on one specific attribute that the parent brand shares with the extension category.

In such lines, our paper makes another important conceptual contribution: it is the first one to make the case that consumers draw inferences about the positioning of a brand extension merely based on their knowledge of the parent brand and of the extension category and the perceived similarity between the two. Concretely, we debate that by definition a high similarity between the parent brand and the extension category leads to an “all-in-one” perceived positioning. At the same time, we debate that a lower similarity between the parent brand and the extension category (i.e., based on fewer shared attributes) leads to a “specialized” positioning. This also represents a distinctive perspective compared to existing research: extant brand extension studies that have looked at the issue of brand extension positioning (e.g., Klink and Smith, 2001; Maoz and Tybout, 2002) use the approach of
manipulating the perceived positioning of a given extension product through the presentation of either advertising messages or product attribute information.

Managerial implications

The dominant view is that, in order to ensure brand extension success, companies should take their brands to similar categories. Our results qualify such a view: whereas a high degree of similarity leads to a high evaluation and to a perception of good overall performance of the extension, it also means the product is not perceived to perform exceptionally on any specific attribute. A strong position on a specific attribute can be something desirable for targeting a specific customer segment in the market, for targeting consumption occasions or contexts, or for simply differentiating a market offering on that attribute or benefit. Should that be the case, companies can consider extending to less similar categories where they can leverage specific attributes. For instance Arm and Hammer, a brand traditionally known for baking soda, launched toothpaste with advanced tooth whitening properties based on the brand’s recognized baking soda ingredient. In a similar vein, the jewelry and accessory brand Bulgari launched hotels that capitalize on the brand’s personality of ultimate sophistication.

All in all, our results suggest that high similarity brand extensions might lose out in those contexts where consumers seek exceptional performance on specific attributes. Given such contexts, consumer preference is likely to be given to offerings with a distinguishable positioning on the specific attributes being sought. As documented here, such a positioning is likely to be delivered by less similar extending brands with fewer dimensions in common to the extension category, which however include the given specific attribute. Not least, an important managerial take-away of our work is that the degree of similarity between the parent brand and extension category bears consequences for a brand extension’s perceived
positioning: whereas a high degree of similarity leads to a perception of “all-in-one” positioning, a lower similarity between the parent brand and the extension category (i.e., based on fewer shared attributes) leads to a “specialized” positioning for a brand extension.

**Limitations and future research**

The research reported here demonstrated that a high similarity between parent brand and extension category can lead to a de-valuation of brand extension’s performance on specific attributes. To demonstrate the robustness of the effect, we focused on a specific physical/concrete attribute in Studies 1a and 1b (i.e., display performance) and respectively on a specific abstract/imagery related attribute in Study 2 (i.e., excitement as a dimension of brand personality). Future research can endeavor to replicate the effect for other attributes that are either physical/concrete in nature or abstract/imagery-related in nature. At the same time, replicating the effect for product categories other than the ones we employed in our studies would be important.

We offered two theoretical accounts for the effect we propose, one based on the work of Chernev (2007) that posits consumers equate the overall attractiveness of the options in a choice set, and the other based on Meyvis and Janiszewski (2002) that builds on the diluting effect of irrelevant product information. Even though we found the effect applies not only to choice contexts, but also to isolated evaluations, our purpose was not to prove which of the explanations is accountable for the effect. Based on the evidence presented here we cannot refute any of these accounts, even though we can say Chernev’s (2007) theory only applies to choice contexts. Future research can therefore attempt to test what drives the effect, or if there are several forces at play at the same time.
References


Figure 1 – The degree of similarity and the perceived brand extension positioning

Higher similarity
All-in-one positioning

Lower similarity
Specialized positioning
Figure 2 – The perception of performance of the low and high similarity extensions (Study 1a)

![Perceived Performance of Low and High Similarity Extensions]

Figure 3 – The choice share between the low and the high similarity extensions given the purchase goal (Study 1a)

![Choice Share Between Low and High Similarity Extensions Given Purchase Goal]
Figure 4 – The perception of performance of the low and high similarity extensions (Study 1b)

![Perceived Performance of the Low and High Similarity Extensions](image)

Figure 5 – The purchase likelihood of the low and high similarity extensions given the purchase goal (Study 1b)

![Purchase Likelihood of the Low and High Similarity Extensions Given Purchase Goal](image)
Figure 6 – The perception of performance of the low and high similarity extensions (Study 2)

![Figure 6]

Figure 7 – The purchase likelihood of the low and high similarity extensions given the purchase goal (Study 2)

![Figure 7]