The Influence of the Font of the Brand's Name within a Logo and Logo Complexity on the Perception of Logo-Core Value Fit and on Consumer Response.

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Abstract

Logos are known to be stable brand elements and are assumed to express the core values of a brand. The recent 'less is more' trend has led to a simplification of logos and an abandonment of design details, which raises the question whether this simplification has an impact on the perception of logos in relation to the representation of the company's core values that are expressed by it. Although earlier studies have stressed their potential as design elements within logos, brand names and the unique fonts they are written in seem to be used less and less in logos. This study aimed to extend previous findings regarding the effect of logo complexity and the use of fonts in brand names in logos. The experiment (N = 120) measured the effects of logo complexity and the font of brand names on logo appreciation, and the perceived fit between brands' core values, brands' personalities, customers' attitudes towards brands, and their logo appreciation. This was done in a two (complexity: low vs. high) x four (font: original, none, congruence, incongruent) mixed design, with brand consciousness as a covariate. It was hypothesized that a congruent font, which is associated with the same characteristics as the values of the brand, would lead to a higher core value fit. This positive effect was believed to occur especially in complex logos in combination with congruent fonts. In line with some of the hypotheses, findings showed that complex logos with a congruent font were most suitable to represent the core values of a company and that complex logos evoked a more positive attitude than simple logos. In contrast, simple logos led to a higher logo appreciation and a more positive representation of a brand's personality.

Introduction

Previous studies showed that the design of a logo is of great importance, especially when it comes to its recognition (Hem & Iversen, 2004). Together with a brand's name and its slogan, the logo can be the most stable brand element in the development and maintenance of a brand's identity and may play a supportive role in brand awareness (Alsem et al., 2005; Pittard et al., 2007; van Grinsven & Das, 2014; Kohli et al., 2002). Furthermore, logos might be a supportive tool for the expression of a brand's core values (Aaker, 1997; Simoes et al., 2005; Urde 2003). The brand's core values are a reflection of both the brand's culture and its identity, and they represent a set of characteristics that are supposed to be associated with the brand (Hem & Iversen, 2004; Aaker, 1997). Over time the identity of a brand may change and so the logo can undergo some smaller revisions to keep it up to date (Hem & Iversen, 2004). Google Inc. presented an insight in the process of redesigning their corporate logo in their

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blog, which was entitled "Evolving the Google Identity" (Cook et al., 2016). In order to express their core values and qualities, such as mathematical purity and childlike colorful simplicity, the new logo was designed by creating a geometric sans-serif font, while it maintained the multi-colored characters. The rotated 'e' that had always emphasized the unconventionality of Google, was maintained in the new font to underline this property (Cook et al., 2016). Cook et al. (2016) make clear that the font, as a visual element, was of high importance to Google during the process of reworking of their logo. The case of Google is a good example of a company that is aware of the informative and explanatory power that a logo can have and the role of font that accompanies it.

During the process of creating or reworking a logo, special attention has to be paid to the different components of a logo (Salgado-Montejo et al., 2014). From the perspective of a designer, logos generally consist of a variety of visual (e.g. graphic) and verbal (e.g. expressed by font) elements. The combinations of these elements range from corporate names (so called 'wordmarks') that consist of font only, to an equal distribution of graphic and font elements, to conceptually complex graphical designs, which might be completely unrelated to the corporate name (Pittard et al., 2007; Keller, 2008). The present study examined logos consisting of a combination of visual (graphical logo and font[1]) and verbal (corporate name) elements.

Similar to Google, many companies change their logo over the course of time to express a strategic or managerial business change or generally to maintain a fresh and modern look of their logo (Hem & Iversen, 2004). In the case of Google it is known that the core values of the company did not change during the process of logo reworking. This raises the question whether logo change has an impact on the perception of the logo in relation to the representation of the company's core values that are expressed by it. This is also one of the reasons why previous research dealt with logo change. In their study, for example Das and van Hooft (2015) examined the effect of a small or sustainable change of the design of a logo in comparison with the original logo, and to what extent this change would have an effect on logo recognition and appreciation, on the brand attitude and the fit between the design and the core values of the brand. They revealed that a higher degree of logo change, a substantial change, had a positive impact on brand attitude but, had at the same time led to a lower logo recognition, logo evaluation, and the perceived fit between a brand's core values and the logo was lower as well (Das & van Hooft, 2015). As an explanation for this findings Das and van

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[1] Font being the visual appearance of the verbal element, e.g. the brand name.

Hooft (2015) indicated that according to recent studies (e.g. van Grinsven & Das, 2015) a substantial change requires a deeper level of information processing and a higher level of motivation, which are only available in brand conscious customers. Das and van Hooft (2015) found that the effect of brand consciousness on brand attitude in the versions with a substantial degree of change was moderated by logo recognition. According to them, the perceived fit between companies' core values appeared to differ slightly for the three logos: the original logo leads to the best core values fit, the smaller change led to a slightly decreased fit and the sustainable change led alike (Das & van Hooft, 2015). While in the study by Das and van Hooft (2015) the effect of a general logo change on the core value fit was examined, the current study focused on a combination of verbal elements – in expressed particular by the font - and the visual or graphic appearance of a logo. Hereby the study aimed to examine its impact on the core value fit and consumer responses by manipulating the font of the brand's names.

In recent years, logo change has seen a continuous shift towards simplification of logos, which in many design-blogs is described as a "less is more" trend (e.g. Howell, 2014; Milverton, 2015). One of the major reasons behind this trend is seen in the need for a good readability on digital devices with their relatively small screens, such as mobile phones and tablets (Howell, 2014; Milverton, 2015). On a small display less details can be displayed, which is why the complexity of the logo has to be decreased so that it will still be recognized properly. Complexity is defined as an element of elaboration, which 'can arise from many different design features, such as an irregularity in the arrangement of elements, an increase in the number of elements, heterogeneity in the nature of elements, and how ornate the design is' (Henderson & Cote, 1998, p.17). Looking at the development of Starbuck's company logo for example, it is noticeable that over time an increasing amount of details have been omitted. Nowadays, it is only the mermaid's stylized face that is present in the logo, while the company's name has entirely vanished – see Appendix 1 (Starbucks, 2011). This simplified logo is a typical example of a reduction or loss of complexity.

Van Grinsven and Das (2014) investigated the influence of logo complexity on brand recognition and brand attitudes. Based on the design complexity principles of Pieters, Wedel, and Batra (2010), they exposed participants to simple and complex logos, consisting of only a coherent visual (graphic) element (van Grinsven & Das, 2014). In the case of recently established logos, simple brand logos were recognized faster than complex logos (van Grinsven & Das, 2014). By contrast, well established logos were recognized faster if they were complex than if they were simple. Furthermore, van Grinsven and Das (2014) noticed

that, on the one hand, recently established simple logos led to a more positive evaluation of the brand than recently established complex logos. Well established complex logos, on the other hand, led to an even greater positive evaluation of the brand after an increasing amount of exposure (van Grinsven & Das, 2014). In the long term these findings mean that a higher complexity of logos will lead to a more positive attitude towards the brand. This leads to the question whether simplification and lower complexity of logos might, besides the above mentioned advantages, lead to a loss of content expressing the core values. This could then have a negative influence on the perception of the expressed core values and subsequently influence the attitudes towards logos and brands, as partly indicated in the study by van Grinsven and Das (2014). Therefore, the present study aims to investigate the influence of complexity of a logo that consists of a visual element (the logo itself and the font), as well as of a verbal element (the brand name and its font being the visual appearance of the verbal element). Thereby, we wish to extend the knowledge that was gained by the study of van Grinsven and Das (2014), who focused on logos consisting of a visual element only.

In the area of marketing communication and especially the field of pictorial advertisements, the combination of a visual and verbal component, has already been examined (e.g. Bergvist et al., 2012; Phillips, 2000). However, their use un logos has not been analyzed yet. Bergvist et al. (2012) revealed that adding a headline, thus, providing a cue to the meaning of the pictorial (visual) metaphor in the ad, often leads to a better understanding of complex image advertisements. This process is called 'verbal anchoring' and was a subject of the study by Bergvist et al. (2012) as well as in the study by Phillips (2000). If the Elaboration-Likelihood-Model, a theory describing the twofold processes of changing attitudes (Petty & Cacioppo, 1981; Bergvist et al., 2012), is taken into consideration, it is noticeable that 'in low involvement conditions brand attitudes were more favorable after exposure to an ad in which explicit conclusions were drawn, compared to an ad in which the conclusions were implicit' (Bergvist et al., 2012, p. 72). Yet, no evidence has been found that this is transferable to logos. However, it can be expected that a verbal element will have a positive effect on the interpretation of the brand's or company's core values as conveyed by the logo. Especially in the case of a complex logo, it can be assumed that, based on the findings by Bergvist et al. (2012) and Phillips (2000), verbal anchoring in the form of a brand's name could have a positive effect on the perception of the core values, as it enables a better understanding of the logo and the represented core values. Should the effects of 'verbal anchoring' in advertisements be transferable to 'logo verbal anchoring', it could potentially have an effect on the process of logo (re-)design. Furthermore, it could also indicate that the trend towards

simplification of logos, the 'less is more trend', as introduced in the example of Starbucks, needs to be further investigated. Especially if we assume that, by the omission of the verbal component, the ability to understand the entire logo and the represented core values of the brand could decrease. This leads to the following research question:

RQ1: To what extent do logo complexity and logo verbal anchoring (brand names) have an effect on the communication of a company's core values?

Based on the above mentioned assumptions the following hypothesis has been developed:

> H1: Logo verbal anchoring (brand name) of a complex logo will lead to a higher score on core value fit and a more positive attitude to the brand than complex logo without verbal anchoring.

In the context of 'logo verbal anchoring' the brand's name is used as a verbal element that provides additional information and is often written in a unique font. Next to the denotative meaning of the brand name, the font in which the name is written might also have an influence on the attitudes and feelings of the reader (Tannebaum et al., 1964). In order to better understand the explanatory power of the verbal element, it needs to be further investigated: as logos offer only limited possibilities in terms of stylistic elements that can express the brand's core values, the font, being the visual appearance of the verbal element and thus the design or appearance of a brand's name, seems to offer further opportunities to do so. Some studies, such as the one by Doyle and Bottomley (2004) were concerned with the congruence between a brand's visual equity to which, amongst others, the logo and the brand's name belong, and the brand's identity. They described visual equity as a value that is derived from the 'visual form', thus, the look and feel of the brand, contributing to the recognition of the brand and its desired image. In their study, Doyle and Bottomley (2004) indicate that participants are able to derive a connotation from the font of a brand's name. During pre-experiments, different fonts and brand names in combination with products were presented to participants, who were asked to select appropriate fonts and brand names that were perceived as congruent with the product. Findings of a follow up experiment showed that products with brand names presented in combination with a congruent font, as established by their pre-test, were more often chosen by participants than those with an incongruent font (Doyle & Bottomley, 2004). Even though this study primarily focusses on the brand's name, and analyses font congruence only in the context of products, these results may be transferable to the brand names in logos.

In a later study, Doyle and Bottomley (2006) further investigated the effects of congruence of fonts for describing certain types of brands and products, based on the three dimensions of connotative meaning created by Osgood et al. (1957): *evaluation* (good, pleasant, beautiful, happy), *potency* (strong, hard, rugged, potent, tough), and *activity* (active, fast young, lively). Different fonts were created and related to products. During a pretest participants were asked to rate the fonts and the products independently on the dimensions of Osgood et al. (1957). Based on these results, products and fonts were selected as pairs, if they had the same or similar scores. Their findings revealed that, if the rating of a font and a product matched along the potency or activity dimension, they were rated as more congruent. These findings by Doyle and Bottomley (2006) correspond with their previous study and underline the supportive potential of fonts of brand names in logos within a marketing context.

Another study by Childers and Jass (2002), examined the influence of font in a marketing context. According to their study, semantic associations that are connected to fonts have an impact on the written words they express. During a pretest, fonts were linked to certain characteristic such as "casual" or "formal". Based on the allocation of the fonts, their study showed that participants perceived a brand as primarily "casual", when the font of the advertisement in which the brand was represented, originated from the same characterizing category – in this case "casualness" (Childers & Jass, 2002). These findings correspond with the outcomes of a third study by Doyle and Bottomley (2009, p. 396) who noticed that 'the meaning of a word is pulled towards the meaning of the font (assimilation)': In their study Doyle and Bottomley (2009) were able to prove that a neutral surname or a neutral product name can be equipped with a certain characteristic by making use of the font, which, according to their earlier studies (Doyle & Bottomley, 2004; Doyle & Bottomley, 2006), is associated with this certain characteristic.

To establish a better understanding of the relation between fonts and brands' core values, Henderson et al. (2004) identified in their study congruent font design characteristics. They conducted a cluster analysis in which six general font profiles where found that are each based on four different levels of response-evaluation: "Pleasing", "Engaging", "Reassuring" and "Prominent" and six different levels of design-evaluation: "Elaborate", "Natural", "Harmony", "Flourish", "Compressed", "Weight". Each profile was linked to certain font clusters, which in turn were attributed to a congruent set of brand properties and values. The current study utilized these categories, to evaluate the congruence of a font and a brand's core values, and to determine a font that disposed over the highest congruence: In a first step the core values of a company were assigned to one of the six general font profiles. In a second

step a font was chosen out of the font cluster by Herderson et al. (2004) that was linked to the same font profiles as chosen in the first step. A detailed description of this process is displayed in the method paragraph. With this approach, a congruent font is determined purely based on core values of a brand and unbiased from the font that actually is used in the original logo. An incongruent font was determined by taking the congruent font, which was determined in the first step mentioned above, and then by selecting the font that scored opposite on the different levels of Henderson's et al. (2004) as the congruent font. This method allowed us to select an incongruent font that deviated maximally from the congruent font and therefore is supposed to be not suitable to represent the core values of the brand.

Previous studies, such as those of Doyle and Bottomley (2004 & 2006) and Childers and Jass (2002), have pointed out that in a branding context fonts of a brand's name can be utilized to express connected values, the font of a brand's name within a logo seems to be a promising topic to explore. Therefore, this current study wanted to explore to what extent these findings can be transferred to the verbal elements, which are expressed within the logo by the font of a brand's name. As explained before, the current study generally assumed that the original font of a logo, with its currently used, is representing the core values of a brand or company. Beyond that, it was analyzed whether a logo with a congruent font, chosen based on Henderson et al. (2004), is able to represent the core values of a company equal to or even better than the original logo. Based on the results by Doyle and Bottomley (2004) it can be assumed that within a logo a brand's name displayed in an incongruent font, will lead to a decreased ability to express the core values of the brand, in comparison to a congruent font. This leads to the following research question:

RQ2: To what extent does the font of a brand's name in logos have an effect on the communication of a company's core values?

Based on the above mentioned assumptions the following hypothesis has been developed:

> H2: Logos that are displayed together with brand names with a congruent font will lead to a higher score on value fit, than those displayed with an incongruent font.

As mentioned in the beginning of this study, it can be expected that verbal anchoring of a complex logo leads to a higher score on core value fit and a more positive attitude towards the brand, than no logo verbal anchoring of a complex logo. Taking a closer look at the brand's name, which takes on the role of the anchor, it can be further assumed that only for logos which are displayed with a congruent font, will the process of logo verbal anchoring operate

properly and lead to a higher score on the core value fit. In general, a logo that is displayed with an incongruent font is assumed to negatively affect the perception of the logo, as the anchor is not representing the same core values as the logo itself, and can also be expected in the case of a simple as well as a complex logo.

Based on the above mentioned assumptions the following hypothesis has been developed:

> H3: Complex logos that are displayed with brand names presented with a congruent font will lead to a higher score on value fit, than those logos displayed with an incongruent font.

Whereas a brand's core values are defined by the company itself, each corporate brand has its own brand personality, which refers to a set of human characteristics associated with the brand (Aaker, 1997). Brand personality or 'image' is a powerful determinant of brand equity. Monitoring consumers' brand perceptions as well as timely adapting the brand to market developments is common practice in successful brands (van Rekom et al., 2006). In her research, Aaker (1997) determined a list of five major personality dimensions: *sincerity, excitement, competence, sophistication, and ruggedness* on basis of which the personality of a brand can be categorized. A brand's image is defined as a consumer's coherent set of associations, which are reinforced by the visual equity and transferred by a brand's logo and its marketing communications (van Rekom et al., 2006). This study will also take logo appreciation and brand attitude into account, as they are assumed to be influential in logo change (Das & van Hooft, 2015). Furthermore, brand consciousness, being a good predictor of consumer response, will be taken into account as a covariate (Das & van Hooft, 2015).

This study, therefore, will aim to answer the following research question:

RQ3: What are the effects of the used brand names displayed in either congruent or incongruent fonts in simple and complex logos on consumer response, that is, the perception of the brand's personality, attitude to the brand, and logo appreciation, and what is the role of brand consciousness in these effects?

Method

Materials

The first independent variable in this study is the complexity of logos, which each has two levels: 'complex' and 'simple'. Two logos, which are well established in the Netherlands,

were taken from the study by van Grinsven and Das (2014): a simple logo of Adidas and a complex logo of Rabobank (see Appendix 2). Both logos contained a visual element (logo) as well as a verbal element (company's name underneath the logos) and were taken from the companies' websites.

The second independent variable used in this study is the font of the brand name underneath the logo, having four levels: 'original', 'congruent', 'incongruent', 'none'. The 'original' font was taken over from the companies' websites and had the same font as used in the original logo as well. The 'none' font condition left out any font, so the logo was presented without a company's name underneath. To operationalize the levels 'congruent' and 'incongruent' of the font, a pretest was conducted. Following the study by Henderson et al. (2004) a font is classified as congruent, if it represents the core values of a brand. Therefore, in a first step the core value of the two companies were taken from the recent 'codes of conduct', retrieved from the respective company's websites. In the case of Adidas these were 'Passion', 'Performance', 'Integrity', and 'Diversity' (Adidas, 2014). In a second step these values and their synonyms were assigned to characteristics that were associated with the font categories of Henderson et al. (2004). The font category with the highest correspondence was determined as a congruent font by two independent coders. The intercoder-reliability was good $K = .82$, $p < .001$. In contrast to the congruent font, an incongruent font scored opposite on the different levels of Henderson et al.'s (2004) characteristics. This means that while a congruent font scored for example high on the property "pleasing", the incongruent font should score "low" on this property. This selection was made for all 10 levels and as a result the most opposing font profile was determined as the incongruent font.

Consequently, four different versions of each simple and complex logo were compiled: The original logo (consisting of the graphic and the brand's name written in the corporate font), one without its name (only graphic), one with its name written in a congruent font (that suites the core values of the company), and one with its name written in an incongruent font. These logos were assigned to four versions of the survey. Per version one simple and one complex logo, equipped with the same kind of font – e.g. simple logo plus congruent font combined with complex logo plus congruent font - was used. The manipulated logos can be found in appendix 2.

Both independent variables of this current study are of nominal measurement level.

Subjects

The study was presented to 120 participants in total. The most frequent educational background was a Bachelor's degree with 50,3%, ranging from 'HAVO/VWO' to 'Doctor's degree'. 70% of the participants were female, 30% were male. The mean age was 23, with an age span ranging from 19 to 28. 73,3% of them were Dutch, 12,5% German, and 14,2% of other nationalities. A Chi-square test showed no significant relation between version and gender (χ^2 (3) = 0.41, p = .248). A Chi-square test showed no significant relation between version and education (χ^2 (12) = 16.28, p = .179). A one-way analysis of variance showed no significant effect of version on age ($F(3,116) < 1$). A Chi-square test showed no significant relation between version and nationality (χ^2 (6) = 2.72, p = .843). This indicates that there was no statistically difference in the distribution of gender, education, age, or nationality in the four versions of the survey.

Design

To measure the effects of logo complexity and the font of the brand's name on logo appreciation, and the perceived fit between a brand's core values, the brand's personality, the attitude to the brand, and the logo appreciation, a two (degree of complexity: low vs high) x four (font: original, non, congruence, incongruent) mixed-design experiment, with complexity as a within-subject variable and font as a between subject variable, was conducted. Brand consciousness was taken into account as a co-variate.

Instruments

The five dependent variables were 'core value fit', 'brand personality', 'brand attitude', 'logo appreciation', and 'brand consciousness'. All of them are of interval measurement level.

Following Das and van Hooft (2015), the *core values fit* was measured by a 7 point Likert scale, asking participants to indicate to what extent they think that the core values of the companies (which were taken from the recent 'codes of conduct', retrieved from the companies' websites) fitted the logo. During the first measurement (simple logo) the reliability of 'core value fit' comprised four items and was marginally acceptable: α = .69. The relatively low α-score has not been further corrected as this scale consists only of 4 items, which measure different characters of a brand whereby the scale is not unidimensional (see also Schmitt (1996)). During the second measurement (complex logo) the reliability of 'core value fit' comprised four items and was good: α = .83.

The *brand personality* was measured by 15 items of 7 point Likert scales based on Aaker (1997). Participants were asked to indicate, to what extend they thought that a logo fits the

different personality features such as: *sincerity, excitement, competence, sophistication, and ruggedness*. During the first measurement (simple logo) the reliability of 'brand personality comprised fifteen items and was good: α = .87. During the second measurement (complex logo) the reliability of 'brand personality' was good as well: α = .83.

The *brand attitude* was measured by four items with four semantic differentials on 7 point Likert scales based on Ahluwalia et al. (2000) ranging from "good" to "bad". During the first measurement (simple logo) the reliability of 'brand attitude' comprised four items and was good: α = .84. During the second measurement (complex logo) the reliability of 'brand attitude comprised four items and was good: α = .80.

The *logo appreciation* was measured by a 7 point Likert scale based on Mitchell (1986) ranging from "nice" to "not nice". During the first measurement (simple logo) the reliability of 'brand attitude' comprised six items and was acceptable: α = .77. During the second measurement (complex logo) the reliability of 'logo appreciation' was acceptable as well: α = .79.

The *brand consciousness* was measured by a 7 point Likert scale based on van Grinsven and Das (2015) ranging from "nice" to "not nice". The reliability of 'brand consciousness' comprised twelve items and was good: α = .88.

Originally, this study aimed to take 'brand consciousness' as a covariate into account. But a correlation analysis revealed that the correlation between de covariate and the respective dependent variables were not in excess of .40, which according to Norman and Anderson (2004) is not suitable. According to Tabachnick and Fidell (2013) the squared correlation should be even over .50, and therefore the covariate has to be excluded from further analysis.

As a manipulation check the participants were asked to determine whether they perceived the logo to be complex or simple. This was measured by a 2 point scale, ranging from "complex" to "simple". A paired-samples t-test showed a significant difference between the manipulation check for simple logos and the manipulation check for complex logos ($t(119) =$ 9.22, $p < .001$). The manipulation check for simple logos ($M = 1.83$, $SD = .38$) higher than the manipulation check for complex logos ($M = 1.35$, $SD = .49$). This indicates, that the manipulation check is corresponding with the manipulation of complexity, as a sore of 1 was indicating complex and a score of 2 was indication simple.

As a second manipulation check the participants were asked to determine whether they

perceived the logo and the font as congruent. This was measured by a 7 point Likert scale ranging from "congruent" to "incongruent". For the first measurement (simple logo) a Chi-square test showed a significant relation between type of font and the result of manipulation check (χ^2 (2) = 27.30, p < .001). For the second measurement (complex logo) another Chi-square test showed a significant relation between type of font and the result of manipulation check as well (χ^2 (2) = 33.27, p < .001). This indicates, that the manipulation check was successful.

Procedure

In the period from 09.06.2016 to 14.06.2016, the experiment was conducted. The participants were randomly selected depending on their availability, through the distribution of an online survey via social media or on the campus of the Radboud University. Participation was anonymous and voluntary. Each participant filled out the survey online, which could be entered via a custom made landing page that randomly assigned them to one of the four versions of the surveys. These surveys were created on the survey platform "Qualtrics". On this landing page a short welcome text was displayed that revealed that the following survey was a component of a Master's thesis at the Radboud University. Furthermore, the participants were informed that filling out the survey would take approximately three to five minutes and that among the participants, a gift card (€20) would be raffled. Before starting the survey within Qualtrics another introductory text was presented to explain in which context the survey would take place, how the survey was constructed and that the data would be dealt with anonymously and would only be used for this study.

Statistical treatment

Data were analyzed with mixed two-way ANOVAS, entering 'complexity' as a within-subject variable and 'font' as a between subject variable. Levene's test for equality of error variance is mentioned only if the test was significant.

Results

Table one shows the means and standard deviations of perceived core value fit, logo appreciation, brand attitude, and brand personality as a function of complexity and font. A repeated measurement analysis with complexity as a within-subject factor and font as a between-subject factor showed, a significant main effect of complexity on core value fit (F (1,116) = 24.05, p < .001, partial η^2 = .17). The representation of the core values of complex

logos (M = 2.82, SD = 1.02) was better than of simple logos (M = 3.37, SD = .91) (Bonferroni correction, p < .050). A significant main effect of font on core value fit was found (F (3,116) = 3.48, p = .018, partial η^2 = .08). A post hoc test with Bonferroni correction (p < .050) revealed that only congruent and incongruent fonts differ significantly (p = .011): The representation of the core values of the congruent font (M = 2.82, SD = .15) lead to a higher fit than the original font (M = 3.03, SD = .15), which again was better than that the one of the logo without a font (M = 3.09, SD = .15). The incongruent font led to the lowest core value fit (M = 3.43, SD = .15). The interaction effect of complexity and font on core value fit was statistically not significant (F (3,116) < 1).

Another repeated measurement analysis with complexity as a within-subject factor and font as a between-subject factor showed a significant main effect of complexity on logo appreciation (F (1,116) = 4.34, p = .039, partial η^2 = .04). A significant interaction effect of complexity and font on logo appreciation was found (F(3,116) = 2.831, p = .041, partial η^2 = .07): A post hoc test with Bonferroni correction (p < .050) revealed that only in the case that no font is used, a simple logo led to a better logo appreciation (M = 3.21, SD = .86) than a complex logo (M = 3.68, SD = .89) and in the case that an incongruent font is used, a simple logo led to a more positive logo appreciation (M = 3.43, SD = .91) than a complex logo (M = 3.93, SD = 1.23). No significant difference between simple and complex logos was found in the case of a congruent font (p > .05) or an original font (p > .05). The main effect of font on logo appreciation was statistically not significant (F (3,116) = 1.05, p = .125).

A third repeated measurement analysis with complexity as a within-subject factor and font as a between-subject factor showed a significant main effect of complexity on brand attitude (F (1,116) = 11.96, p = .001, partial η^2 = .09). The brand attitude to complex logos (M = 2.70, SD = .68) was better than that to simple logos (M = 3.05, SD = 1.00) (Bonferroni correction, p < .050). The main effect of font on brand attitude was statistically not significant (F (3,116) = 1.78, p = .156). The interaction effect of complexity and font on brand attitude was statistically not significant (F (3,116) = 2.10, p = .105) either.

Another repeated measurement analysis with complexity as a within-subject factor and font as a between-subject factor showed a significant main effect of complexity on brand personality (F (1,116) = 11.73, p = .001, partial η^2 = .09). The brand attitude towards simple logos (M = 3.43, SD = .74) was more positive than that to complex logos (M = 3.72, SD = .70)

(Bonferroni correction, $p < .050$). The main effect of font on brand personality was statistically not significant ($F (3,116) = 1.74$, $p = .162$). The interaction effect of complexity and font on brand personality was statistically not significant ($F (3,116) = 1.04$, $p = .377$) either.

Table 1.   The perceived core value fit, logo appreciation, brand attitude, and brand personality as a function of complexity (simple or complex) and font (none, congruent, incongruent, original); n = 120 (1 = positive, 7 = negative).

Complexity	Core Value Fit		Logo Appreciation		Brand Attitude		Brand Personality		
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*n*
Simple									
none	3,37	0.83	3,21	0.86	2,96	0.89	3,32	0.68	30
congruent	3,09	0.78	3,63	1.01	3,13	0.94	3,50	0.94	30
incongruent	3,58	1.01	3,43	0.91	3,21	1.12	3,66	0.75	30
original	3,42	0.99	3,10	0.79	2,90	1.02	3,23	0.58	30
Complex									
none	2,81	0.79	3,68	0.89	2,83	0.60	3,77	0.65	30
congruent	2,54	1.00	3,31	0.87	2,36	0.66	3,59	0.75	30
incongruent	3,28	1.21	3,93	1.23	2,97	0.72	3,87	0.73	30
original	2,64	1.04	3,39	0.98	2,64	0.71	3,67	0.68	30

Conclusion and Discussion

With regard to research question one, on the effect of logo complexity and logo verbal anchoring on the communication of a company's core values, the findings revealed the following: A complex logo is more suitable to express the values than a simple logo, which could be related to the fact that the more complex logos consist of heterogeneous elements, the more arousal potential they possess. This corresponds with an earlier research by Berlyne (1960), who indicated that complex stimuli have a greater arousal potential than simple stimuli. The higher quantity of these elements might increase the potential of complex logos to represent and express the core values of a brand or company. By indicating that complex logos are more suitable to express core values than simple logos, these results furthermore

extends the findings by van Grinsven and Das (2014), who found that over time complex logos lead to a more positive brand attitude and a faster brand recall.

The current study was not able to extend the findings of Bergvist et al (2012) and Phillips (2000) on verbal anchoring to the domain of logo design ('logo verbal anchoring'): No statistically significant evidence was found, indicating that in the case of a complex logo the use of a brand's name would positively differ with regard to core value fit or brand attitude, compared to using no brand name. Therefore, the first hypothesis has to be rejected. Future studies should consider that in the current study the absence of a significant effect of 'logo verbal anchoring' could have been caused by the small sample size of only 120 participants and the fact that in total only four versions of one complex and one simple logo, with each only one congruent, one incongruent, one original font and on without font, were manipulated. Therefore, further investigation in future studies should expand the amount of participants and presented logos.

Research question two aimed to investigate to what extent the font of a brand's name in logos has an effect on the communication of a company's core values. In line with the second hypothesis, a congruent font, which was chosen based on the brand's core values, is significantly more suitable to represent a company's core values than a logo with an incongruent font. Hereby the current study was able to extend findings by Doyle and Bottomley (2004 & 2006) and Childers and Jass (2002) who already indicated that fonts of a brand name can be utilized to express connected values and thereby contributing to the visual equity of a brand (Doyle & Bottomley, 2004). Furthermore, this result implies that the used font has to be taken into account when (re-) designing a corporate logo aiming at utilizing the logo as a powerful visual message, in order to express the brand's attributes and values considerably. Nevertheless, no significant difference between the original font and the congruent font based on Henderson et al. (2004) were found.

According to the third hypothesis, complex logos that are displayed with brand names presented with a congruent font would lead to a higher score on value fit, than a complex or simple logo displayed with an incongruent font. No statistically significant evidence was found, indicating that in the case of a complex logo the use of a congruent brand name would differ with regard to core values from the use of an incongruent brand name along with a simple or complex logo. Therefore, the third hypothesis has to be rejected. Future studies

should keep in mind, than in this current study, the absence of a significant interaction-effect could be caused by the small sample size of only 120 participants.

Research question three aimed to investigate what the effects of font and complexity are on consumer responses such as the logo appreciation, the attitude towards the brand, and the perception of the brand's personality. With respect to the appreciation of logos, simple logos appear to achieve a higher logo appreciation than complex logos. This finding might be a result of the before mentioned 'less is more trend' due to which simple logos occur more often in peoples' daily life. People encounter simple icons and logos on a daily basis, as they are present on mobile devices and phones, which play a central role in their lives. The habituation effect (Savva, 2004), caused by the increasing exposure, might have led to a preference for simple logos. Regarding font itself, a significant difference between a simple and a complex logo was found: A simple logo with no font achieved higher logo appreciation than complex logos with an incongruent font. This interaction effect cannot be explained by earlier research on logo appreciation. A plausible explanation could be found in the main effect of complexity, which indicated that, in general, simple logos are more appreciated than complex logos. A complex logo with an incongruent font seems to be the least suitable combination in relation to logo appreciation and might therefore be responsible for the found effect. Furthermore, it should be taken into account that the chosen brands, which originate from different fields of industries (Adidas selling sport-related products, and Rabobank belonging to the financial sector), also might have had an effect on the obtained results, as participants might have obtained different experiences with such bands and might judge the companies based on them. Also participants often base the appreciation of a logo on an individual opinion of aesthetics in general, which also might have been a factor in the results.

In line with the study by van Grinsven and Das (2014) on the design complexity of logos, this study was able to confirm that in the case of well-established logos, a complex logo leads to a more positive brand attitude than a simple logo. These results may be of interest for both the academic and the marketing branding experts, as a sustainable positive brand attitude might have had a positive effect on the assessment of the brand's products and, furthermore, can form an influential factor of purchase decisions.

As indicated by van Rekom et al. (2006), monitoring consumers' brand perceptions, the corporate image and external identity is common practice in successful brands. This study aimed to investigate to what extent the complexity of logos can play a role in the

representation of a brand's personality. Findings suggest that across the board simple logos resulted in a more positive image than complex logos. One reason can be seen in the earlier mentioned habituation effect, which is caused by increasing exposure to logos, which might have led to a preference for simple logos. Another possible reason might be seen in the fact the personality of a brand can consist of a variety of different qualities and characteristics. Although a complex logo is able to provide quantitatively more information than a simple logo, it is not able to express every characteristic in detail. A simple logo, however, might only be able to express less characteristics, but in a way that they are better visible. It can be assumed that a positive evaluation of single characteristics might lead to a so-called halo effect (Nisbett & Wilson, 1977), through which other characteristics are evaluated more positively in general. For example, a light green color of a logo may be associated with sustainability and may therefore be more positively evaluated, which could positively affect the evaluation of other characteristics of the brand. In what way these assumptions might apply should be examined in future studies.

Originally, this study aimed to take 'brand consciousness' as a covariate into account, but as mentioned before, the covariate had to be excluded from further analysis. In contrast to the current study, Das and van Hooft (2015) indicated in their study that brand consciousness was an influential factor that e.g. predicted the brand attitude. The different occurrence of the effect of brand consciousness might be related to brands that were used during the different studies. While in the study by Das and van Hooft (2015) only brands (e.g. Ben&Jerry's, Gucci) were presented that offer mainly palpable products, current study made also use of a brand (Rabobank) that offers mainly abstract, non-palpable products (services). These non-palpable products might be not of the same interest for brand conscious participants, as they do not offer the same purchase experience nor can they be used to highlight personal characteristics in the same way as e.g. a Gucci Handbags could do. Future research should therefore be aware of product categories, when continuing research on brand consciousness.

When looking at the results of this study it should be taken into account that during the experiment only one complex and one simple logo with each one congruent, one incongruent, one original, and one without font have been examined, which limits the generalizability of this study.

Even though the effects of fonts in this study have only been significant in the case of the core value fit, it should be noted that in the case of a complex logo a congruent font led to the best scores on core value fit, logo appreciation, brand attitude, and brand personality (see Table 1). For a simple logo the original font appeared to be the most suitable in the case of logo appreciation, brand attitude, and brand personality, whereas in the case of core value fit a congruent font led to the best representation. These observations might indicate that the congruence of fonts, despite the non-significant results, may influence the perception of a complex logo, as the congruent font based on the characteristics set by Henderson et al. (2004) achieved better scores than the original font. Future research should use this approach to assign fonts to certain brand values or characteristics, based on the font categories Henderson et al. (2004) presented. This research provides a starting point for companies who are looking for a font to express their core values and their brand name within a logo, Especially in the case of a complex logos, a congruence font might be important, as indicated earlier.

After having completed the survey, some participants stated that they perceived the incongruent font underneath the Adidas logo (simple logo) as congruent and appropriate for the logo. The straightforwardness and the simplicity of the font seemed to correspond with the design of the original logo, as it seems to have the same design characteristics: The three straight white lines at the bottom of the logo have the same horizontal orientation as the bottom and the top of the single letters. This accordance of the design of logo and the design of the font might be the reason, why participants have perceived these logos as congruent, purely based on their appearance. As the current study assumed that a logo represents the core values of brand, and that the used font is supporting this representation correspondingly, these perceptions might offer another way of determining a corresponding font besides the approach by Henderson et al. (2004). In this respect, future studies should discuss the visual similarity between the visual part of a logo and the design of a font used, and investigate to what extend this might influence the perception of congruence between a logo and a font.

While this study focused on consisting and well established and known brands, future studies should try to transfer the results to logos of brands that are unknown or fictional. When using these in the Netherlands widely known brand logos for this study, the already existing opinion of the brand in each participant could have had an influence on the results. In order to prevent participants from basing their evaluation of a logo and the presented brand on earlier

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experiences that could distort an objective evaluation, nonbiased logos should be used in future studies. In the course of this study, such an approach was not suitable, as it inter alia was used to measure the influence of font on existing core values of a brand and to determine the suitability of the original font in comparison to a suitable font (Henderson et al., 2004). In an experiment with unknown brands, the core values of the presented brands would have to be made explicit to the participants during the introduction of the survey. Also, future studies should further try to compare current fonts with fonts chosen based on studies like those by Henderson et al. (2004), as this current study was not able to find significant differences between the types of font and therefore can only prove incongruent fonts as least suitable to represent brand's values.

One of the goals of this study, was to extend the knowledge about the complexity in logos, while taking into account that, according to van Grinsven and Das (2014), complex logos tend to be less likely to be forgotten over time. Also they are more suitable for representing the core value of a company, and seem to provide a more positive brand attitude than simple logos. These findings allow reasonable doubts about the 'less is more' trend. Although the brand personality and the logo appreciation, which score higher in combination with simple logos, complex logos still seem to have a longer right to exist. Future studies should try to validate to what extent this trend will be influential in the future, while they should also take the font in logos into account. This study was already able to indicate the importance of a congruent font regarding the core value fit and thereby extending extend findings by Doyle and Bottomley (2004 & 2006) and Childers and Jass (2002).

References

Aaker, J.L. (1997). Dimensions of brand personality. *Journal of Marketing Research*, *34*(3), 347-356.

Adidas (2014), *The Adidas group code of conduct*, Retrieved 12.04.2016 from http://www.adidas-group.com/media/filer_public/2f/5e/2f5e4b6c-0dbc-423f-a4b8-a354e1b16a64/coc_english_2014.pdf .

Adidas Logo (n.d.). Retrieved 13.03.2016 from http://www.adidas-group.com/de/medien/medien-center/.

Ahluwalia, R., Burnkrant, R., & Unnava, R. (2000). Consumer response to negative publicity: the moderating role of commitment, *Journal of Marketing Research, 37,* 203-214.

Alsem, J.K., Dijksterhuis, G., & Kleinhuis, M. (2005). *Logos and brand personality.* Retrieved 13.03.2016 from http://www.econ.upg.edu/docs/seminars/dijksterhuis2.pdf.

Anderson, N. H. (2004). *Empirical direction in design and analysis*. Ney York, NY: Routledge.

Bergvist, L., Eiderbäck, D., & Palombo, M. (2012). The brand communication effects of using a headline to promt the key benefit in ADS with pictoral metaphors. *Journal ofAdvertising*, *41*(2), 67-76.

Berlyne, D. E. (1960). *Conflict, arousal and curiosity*. New York: McGraw-Hill.

Childers, T., & Jass, J. (2002). All dressed up with something to say: Effects of font semantic associations on brand perceptions and consumer memory. *Journal of Consumer Psychology*, *12*(2), 93-106.

Cook, A., Jarvis, J., & Lee J., (2016). Evolving the Google identity. Retrieved 13.03.2016 from https://design.google.com/articles/evolving-the-google-identity/.

Das, E., & Hooft, A. van (2015). A change will do you good: Paradoxical effects of higher degree of logo change on logo recognition, logo appreciation, core values fit, and brand attitudes. Nijmegen, NL: Radboud University Center for Language Studies. Retrieved 13.03.2016 from http://www.researchgate.net/publication/276886447.

Doyle, J.R., & Bottomley, P.A. (2004). Mixed messages in brand names: Separating the impacts of letter shape from sound symbolism. *Psychology & Marketing*, *28*(7), 749-762.

Doyle, J. R., & Bottomley, P. A. (2006). Dressed for the occasion: font-product congruity in the perception of logotype. *Journal of Consumer Psychology*, *16*(2), 112-123.

Doyle, J. R., & Bottomley, P. A. (2009). The message in the medium: Transfer of connotative meaning from font to names and products. *Applied Cognitive Psychology*, *23*(3), 396-

409.

Grinsven, B. van, & Das, E. (2014). Logo design in marketing communications: Brand logo complexity moderates exposure effects on brand recognition and brand attitude. *Journal of Marketing Communications*, *22*(3), 1-15.

Grinsven, B. van, & Das, E. (2015). I love you just the way you are: When large degrees of logo change hurt information processing and brand evaluation. In *Advances in Advertising Research: The Digital, The Classic, The Subtle and The Alternative* (Vol. VI.). Wiesbaden: Springer.

Hem, L. E., & Iversen, N. M. (2004). How to develop a destination brand logo: A qualitative and quantitative approach. *Scandinavian Journal of Hospitality and Tourism, 4*(2), 83 -106.

Henderson, P. W., & Cote, J. A. (1998). Guidelines for selecting or modifying logos. *Journal Of Marketing*, *62*(2), 14-30.

Henderson, P. W., Giese, J. L., & Cote, J. A. (2004). Impression management using font design. *Journal of Marketing*, *68*(4), 60-72.

Howell, B. (2014). Logo: The less is more trend. [Web blog post]. Retrieved 13.03.2016 from http://www.insight180.com/logos-the-less-is-more-trend/.

Keller, K. L. (2008). *Strategic brand management: Building, measuring, and managing brand equity.* Upper Saddle River, N.J.: Prentice Hall.

Kohli, C., Suri, R., & Thakor, M. (2002). Creating effective logos: Insights from theory and practice. *Business Horizons, 45*(3), 58-64.

Milverton, L. (2015). What's trending? Simplification. [Web blog post]. Retrieved 13.03.2016 from http://www.apcoworldwide.com/blog/detail/apcoforum/ 2015/01/16/logobranding-simplification.

Mitchell, A. A. (1986). The effect of verbal and visual components of advertisements on brand attitudes and attitude toward the advertisement. *Journal of Consumer Research, 13,* 12-24.

Nisbett, R. E., & Wilson, T. D. (1977). The halo effect: Evidence for unconscious alteration of judgments. *Journal of Personality and Social Psychology*, *35*, 250-256.

Osgood, C. E., Suci, G. J., & Tannenbaum, P. H. (1957). *The measurement of meaning.* Urbans, IL: University of Illinois Press.

Petty, R.E. & Cacioppo, J.T. (1981). *Attitudes and persuasion: Classic and contemporary approaches.* Dubuque, IO: Brown.

Phillips, B. J. (2000). The impact of verbal anchoring on consumer response to image ads.

Journal of Advertising, 29(1), 15-24.

Pieters, R., Wedel, M. & Batra, R. (2010). The stopping power of advertising: Measures and effects of visual complexity. Journal of Marketing,*74*(5), 48-60.

Pittard, N., Ewing, M., & Jevons, C. (2007). Aesthetic theory and logo design: examining consumer response to proportion across cultures. *International Marketing Review*, *24*(4), 457-473.

Rabobank (2015). Code of Conduct, Retrieved 13.04.2016 from https://www.rabobank.com/en/images/code-of-conduct-rabobank-en.pdf.

Rabobank Logo (n.d.). Retrieved 13.03.2016 from https://www.ledenrabobankwnb.nl/ uploads/website/file/2015/01/rb_logo_cmyk_1BKHUE.jpg.

Rekom, J. van, Jacobs, G., & Verlegh, P. (2006). Measuring and managing the essence of a brand personality. *Marketing Letters*, *17*(3), 181-192.

Salgado-Montejo A., Velasco C., Olier J.S., Alvarado J., & Spence C. (2014). Love for logos: Evaluating the congruency between brand symbols and fonts and their relation to emotional words. *Journal of Brand Management, 21*, 635-649.

Savva, L., Child, R. & Smith, M.D. (2004). The precognitive habituation effect: An adaption using spider stimuli. *47th Annual Convention of the Parapsychological Association,* 223-229.

Schmitt, N. (1996). Uses and abuses of coefficient alpha. *Psychological Assessment, 8*(4), 350–353.

Simoes, C., Dibb, S., Fisk, R. P. (2005). Managing corporate identity: an internal perspective. *Journal of the Academy of Marketing Science*, *33*(2), 153-168.

Starbucks (2011). Our next 40 years begins now. Retrieved 13.03.2016 from http://www.starbucks.com/preview.

Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics (6th ed.)*, Boston: Pear.

Tannenbaum, P. H., Jacobson, H. K., & Norris, E. L. (1964). An experimental investigation of font connotations. *Journalism & Mass Communication Quarterly*, *41*(1), 65-73.

Urde, M. (2003). Core value-based corporate brand building. *European Journal of Marketing*, *37*(7/8),* 1017-1040.

Appendix 1:   Starbuck's Logo though the Years – Starbucks (2016)

Starbucks: An Illustrated History

1971
We start by selling coffee beans in Seattle's Pike Place Market.

1987
We add handcrafted espresso beverages to the menu.

1992
We become a publicly traded company.

2011
We mark 40 years and begin the next chapter in our history.

Appendix 2:   Font manipulation for the simple (Adidas, 2016) and complex logo (Rabobank, 2015) (original, congruent, incongruent, none).

1) Original

2) congruent

3) incongruent

4) without (none)