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Choosing the Right Logo: The Effect of Brand Logo Compatibility on Consumers' Brand Attitude and Purchase Intention

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Abstract

Current literature indicates that consumers prefer certain aspects of brand logos, which could influence consumer behavior. Little is known, however, about the effect of the compatibility of logos with a brand's personality on consumers' attitudes and purchase intentions. The current experiment ($N = 104$) is conducted to test if brand attitudes and purchase intentions of competent and moral brands are more positive and stronger when a logo is compatible with the brand's personality, as opposed to when it is not. Results show no effect of logo compatibility. Reasons for this could be that the effect of logo compatibility could be less explicitly measurable than expected, and that logo compatibility could be (co)determined by semantic meaning of logos. The results, however, have to be interpreted with caution, because the manipulation of the brands' personalities only partly worked.

Keywords: consumer psychology, logo compatibility, brand personality, competence, morality

Introduction

Choosing the Right Logo: The Effect of Brand Logo Compatibility on Consumers'

Brand Attitude and Purchase Intention

Product branding has a long history in almost every culture around the world (Rajaram & Shelly, 2012). The strategy of branding products is effective in differentiating one's products from the competitor's products. Because of this branding, consumers can become familiar with a brand and can in turn expect a certain standard for the product. This standard provides a decreased feeling of risk when considering purchasing the product. This therefore can simplify purchasing choices (Keller & Lehmann, 2006). Cambridge (2002) identifies a brand as an entire customer experience by itself, which can be created by the actual products, name, design, advertisements, reputation, and the brand logo (Arslan & Altuna, 2010).

In the case of the brand logo, many companies often spend hundreds of thousands, and sometimes even millions, of dollars to hire external graphic designers to create a logo that is perfect for their brand and every aspect around the brand (Henderson & Cote, 1998). The 2012 London's Olympics logo, for example, cost \$625,000, the Pepsi logo \$1 million, and the BP logo redesign \$211 million (Van Grinsven & Das, 2014). A direct explanation as to why companies are willing to invest that much money in their logo is the finding that a brand logo in particular has the ability to create a strong brand, by directly influencing consumers' attitude about the brand and the intention to purchase the brand (Arslan & Altuna, 2010; Kaur & Kaur, 2019). Brand attitude is defined by Spears and Singh (2004, p. 55) as: "A relatively enduring, unidimensional summary evaluation of the brand that presumably energizes behavior." Spears and Singh (2004, p. 56) furthermore define purchase intention as: "An individual's conscious plan to make an effort to purchase a brand." Purchase intention is often, but not necessarily, the consequence of a positive brand attitude. It is not the same as

actually purchasing a brand's product, since the purchase intention is defined as merely wanting to do so (Spears & Singh, 2004).

Logos are capable of communicating different brand personality traits to the consumer via certain specific properties of the logo, mainly its shape (Grohmann, 2008; Hess & Melnyk, 2016; Jiang et al., 2016; Liu et al., 2018; Meiting & Hua, 2021; Munawaroh, 2015), and its colors (Aaker, 1997; Hess & Melnyk, 2016; Labrecque & Milne, 2012; Munawaroh, 2015; Ridgway & Myers, 2014). Consumers thus associate brand logos with certain brand personality traits because of the given logo shape and colors. Brand personality refers to the set of humanlike characteristics that are associated with a brand (Kervyn et al., 2012). This communicated brand personality positively influences brand attitude and purchase intention of consumers, only if these communicated personality traits are equal to the brand's core values (Grobert et al., 2016; Henderson & Cote, 1998; Kaufmann et al., 2016). More concretely, the personality traits that are communicated by, for example, the logo thus should fit with a brand's core values. If a brand aims to be rough, manly and rugged for example, a logo with properties that are associated with roughness, manliness and ruggedness would fit with these core values, and could thus potentially positively influence brand attitude and purchase intention (Grobert et al., 2016; Henderson & Cote, 1998; Kaufmann et al., 2016). This brand can, for example, choose to incorporate angular shapes and the color brown in the logo, since angular shapes and the color brown communicate these personality traits to the consumer (Labrecque & Milne, 2012; Pantin-Sohier et al., 2005). In contrast, a logo with pink colors and round shapes would not fit these specific core values, since this color and shape are associated with softness and warmth (Hess & Melnyk, 2016; Jiang et al., 2016; Labrecque & Milne, 2012). Using this logo thus could have negative consequences for brand attitude and purchase intention (Grobert et al., 2016; Henderson & Cote, 1998; Kaufmann et al., 2016).

Some research has indicated that consumers overall slightly prefer rounded and streamlined brand logos (Walsh et al., 2011; Westerman et al., 2012). However, little is known about the precise impact of this actual fit, or compatibility, of a logo with a brand's personality (e.g., roughness, manliness and ruggedness; Labrecque & Milne, 2012; Pantin-Sohier et al., 2005) on brand attitude and purchase intention. This study therefore aims to further investigate the effect of logo shapes, and logo colors, that are compatible with the given personality of a brand, compared to logo shapes and colors that are incompatible, on brand attitude and purchase intention. Knowing how to optimize consumers' brand attitudes and purchase intentions via the logo's compatibility could be very beneficial for companies and logo designers, because this optimization could lead to more actual purchases and an overall higher profit (Ajzen, 2002; Kytö et al., 2019; Spears & Singh, 2004). The impact of logo compatibility on consumers' brand attitude and purchase intention is a topic that has not been studied before. Based on the current literature, a picture can be drawn of what a compatible logo would be for certain brands with certain personality traits in terms of shape and color, but the actual impact on the consumer remains unclear. Therefore, providing an answer on the latter is the main goal of this study.

Concretely, in this study compatible and incompatible logos, in terms of shape and color, for brands with certain personality traits are composed based on current literature. The brand personality traits that are incorporated in this study are competence and morality since these specific traits are shown to be highly influential for consumers when forming an attitude towards a brand and considering to purchase a brand (Brambilla et al., 2021; Bratanova et al., 2015; Ivens et al., 2015; Kervyn et al., 2012; Kirmani et al., 2017), as further elaborated below. The effects of the compatible and incompatible logos on brand attitude and purchase intention for competent or moral brands are investigated.

Theoretical Background

Brand Personality

As mentioned, brand personality refers to the set of humanlike characteristics that are associated with a brand. This phenomenon occurs because consumers tend to evaluate brands the same way they evaluate people, projecting humanlike characteristics on the brands (Kervyn et al., 2012). Kervyn et al. (2012) supported this notion with their empirically developed Brands as Intentional Agents Framework. This model explains that perceived humanlike intentions and abilities of a brand play a critical role in brand evaluation. This means that consumers' evaluations of a brand largely depend on these perceived humanlike intentions and abilities specifically. In turn, these evaluations elicit distinct emotions and drive differential consumer behaviors. This ascription of humanlike characteristics to non-social objects is called *anthropomorphism* (Fournier & Alvarez, 2012). Consequently, this phenomenon of anthropomorphism shapes the identity or personality of a brand. This brand personality makes it easier for consumers to relate to the brand, which can create a sense of brand attachment (Kaufmann et al., 2016), and enhances attitude and purchase intention towards the brand (Arslan & Altuna, 2010; Kaur & Kaur, 2019; Kervyn et al., 2012).

Like human personality, brand personality can be divided in multiple dimensions, albeit being different than the dimensions of human personality (Caprara et al., 2001). Some research has been conducted in an attempt to define these dimensions of brand personality. For example, Aaker (1997) provided an overview of five brand personality dimensions, namely: sincerity, excitement, competence, sophistication and ruggedness. Among these empirically derived personality dimensions, she defined sincerity as the honesty, genuineness and morality, and competence as the responsibility, dependability and efficiency of a brand. Aaker's (1997) taxonomy of the five brand identities was drawn upon by many authors in many marketing studies after its publication, as mentioned by Ivens and Valta (2012), and

Maehle and Supphellen (2011). It was later indicated that this seemingly popular taxonomy is not the most influential for consumer attitudes and behavior, as explained below.

Competence and Morality as Evaluative Dimensions

An overview by Brambilla et al. (2021), for example, shows that further research on general social perception developed two-factor models that suggested the key dimensions that shape people's cognitive, emotional, and behavioral reactions towards social targets, instead of the five dimensions mentioned above. These key dimensions are often referred to as competence and warmth (Fiske et al., 2007). Competence indicates whether someone would be able to carry out certain intentions for someone else, while warmth indirectly indicates whether someone's intentions would be harmful or beneficial for someone else, based on friendliness, kindness or trustworthiness (Brambilla et al., 2021). An explanation why these specific personality traits are the most important in making social judgments is that these dimensions are central in the evolution of virtually all species (Fiske et al., 2007). The judgment of competence and warmth namely explains if the other is able to do good and is wanting to do good respectively. In terms of evolution, knowing this information about other congeners is key for survival (Fiske et al., 2007).

However, Brambilla et al. (2021) explicitly emphasize that morality is a more meaningful definition than warmth in social judgments, even though many authors tend to focus on warmth. They state that moral aspects influence impressions, evaluations, and assumptions about individuals or groups more strongly and accurately than warmth aspects, as supported by several other studies (e.g., Ellemers et al., 2008; Leach et al., 2007; Wojciszke, 1994, 2005). The term morality describes whether or not someone would want to do harm or good more accurately than warmth, because traits associated with warmth are mostly related to merely acting in a friendly or pleasant manner instead of actually wanting to. Morality

gives a more precise indication of someone's intentions, because warm friendly people do not necessarily have good intentions, but moral people do (Brambilla et al., 2021; Wojciszke, 1994, 2005). This conclusion, combined with the indication that the two-factor models are key in consumer behavior, suggests that, for brand perception, competence and morality are highly influential brand personality traits. This notion is supported below.

Competence and Morality in Brand Perception

Apart from general social perception research on competence and morality, more specific research on consumer behavior in connection with these two dimensions has been conducted. Halkias and Diamantopoulos (2020) provided an overview of empirically and/or theoretically supported marketing papers that utilised the dimensions of competence and warmth to describe perceptions of marketing-related stimuli, and to predict consumer behavior, such as brand attitude and purchase intention. However, consumers often make trade-offs between competence- and morality-related brand personality traits when deciding what brand or service they prefer and ultimately would want to purchase, rather than competence- and warmth-related brand personality traits (Kirmani et al., 2017). Moreover, morality provides a notably more accurate description of a brand's intentions than warmth (Kirmani et al. (2017), which is in line with research on social perception (Brambilla et al., 2021; Ellemers et al., 2008; Leach et al., 2007; Wojciszke, 1994, 2005). In social perception research and in marketing research, the personality traits of competence and morality, rather than warmth or sincerity, thus seem to describe an individual's or a brand's abilities and intentions most accurately.

As mentioned earlier, the goal of this study is to investigate the effect of the compatibility of a logo in terms of a brand's personality on brand attitude and purchase intention. Based on the elucidated weight and the theoretical value of competence and

morality, and their influence on brand attachment, brand preference, brand attitude, purchase intention and ultimately purchase behaviors, these specific personality traits are incorporated in this study. These traits should be able to influence brand attitude and purchase intention, depending on a logo's compatibility. How a logo can be associated with these personality traits, and what is meant by logo compatibility is further explained below.

Brand Logo Shape

As mentioned, the perceived personality of a brand is determined by multiple variables, including the brand's products, the packaging, the name, the logo shape and the logo colors (Arslan & Altuna, 2010). A brand logo is defined by Foroudi et al. (2017, p. 188) as: "A set of elements, namely, name, color, typeface and design which enables consumers to differentiate and identify a brand or a company." Brand logos can influence consumers' perceptions towards a brand by communicating specific brand personality traits via specific characteristics, and therefore help define the brand's personality (Kaur & Kaur, 2019).

Jiang et al. (2016) found that the mere shape of a logo significantly affects consumers' perception and attitude about the brand or company. They furthermore indicated that angular-versus circular-logo shapes activate different associations due to a resource-demanding imagery generation process in the visuospatial sketchpad of working memory. Angular shapes, namely, typically activate a hardness association, and circular shapes typically activate a softness association. It is theorised that these associations exist because of the phenomenon of imagined touch, which occurs while processing shapes in the visuospatial sketchpad of working memory. Imagined touch means that people unconsciously tend to imagine what a shape literally would feel like when seeing it (Peck & Barger, 2009). Because angular shapes feel sharp and straight, people link them with hardness, and because circular shapes feel curved and smooth, people link them with softness. These associations are shown

to evoke more positive attitudes about a brand and higher purchase intentions when correctly matched with the brand's attributes, which are communicated by advertisement headlines for example. Concretely, if an ad headline communicates softness attributes, such as comfort and smoothness, brand attitudes and purchase intentions become more positive when the brand's logo is rounded rather than angular (Jiang et al., 2016).

Furthermore, research has investigated exactly which shape (angular or round) can enhance the perception of the specific brand personalities; competence and morality. Several findings suggest that angular shapes can be associated with perceptions of enhanced competence and round shapes can be associated with perceptions of enhanced morality (Grohmann, 2008; Hess & Melnyk, 2016; Liu et al., 2018; Meiting & Hua, 2021; Munawaroh, 2015). This is in line with the findings that angular shapes activate a hardness association, and circular shapes a softness association (Jiang et al., 2016), since competence can arguably be considered as a relatively hard and professional personality trait, and morality as a relatively soft and warm personality trait (Liu et al., 2018). Okamura and Ura (2018) even found that participants sitting in a room, together with unknown other people, evaluated those other people as being significantly more competent, when the participants were asked to draw squares on a piece of paper. When the participants were asked to draw circles, they evaluated the others in the room as being significantly warmer. This gives an indication of the strength of the described shape-personality trait association, so the effect an angular, or round shape has on perceived competence, or morality respectively.

Based on these findings, angular logo shapes are considered to be compatible for competent brands, since these shapes evoke perceptions of a brand's competence. These shapes would thus be incompatible for moral brands, since they do not evoke perceptions of morality. The opposite is true for rounded logo shapes: Rounded logo shapes are considered to be compatible for moral brands, since these shapes evoke perceptions of a brand's morality.

These shapes would thus be incompatible for competent brands, since they do not evoke perceptions of competence.

Brand Logo Color

As mentioned, logo coloring also has a significant impact on perceived brand personality. Namely, logo colors, and colors in general, can evoke certain associations and therefore influence perceived brand personality (Arslan & Altuna, 2010; Hess & Melnyk, 2016; Labrecque & Milne, 2012; Munawaroh, 2015; Ridgway & Myers, 2014). Among several brand personalities, competence and morality seem to be readily associated with specific colors (Labrecque & Milne, 2012). The color blue seems to have a highly significant positive effect on the perception of a brand's competence, meaning that the presence of the color blue positively affects the perceived competence, which is not the case for other colors (Baxter et al., 2018; Hess & Melnyk, 2016; Labrecque & Milne, 2012; Munawaroh, 2015; Ridgway & Myers, 2014). Likewise, the perceived morality of a brand seems to be highly associated with the colors pink and white, so the presence of pink and white positively affects the perceived morality (Hess & Melnyk, 2016; Labrecque & Milne, 2012; Munawaroh, 2015).

These connections of blue with competence, and pink and white with morality, can be explained by associative learning (Labrecque & Milne, 2012). This means that, from a young age, people develop associations between visual information and emotions and evaluations in order to quickly adapt to the environment, which is key for survival (Schlack & Albright, 2007). In the semantic memory, visual stimuli are linked with specific emotions and evaluations due to the experiences with these stimuli. As a consequence, other comparable visual stimuli get evaluated similarly (Labrecque & Milne, 2012), and consistently among different people (Collier, 1996).

In the case of the connection of the color blue with competence, people generally think about a clear sky, an ocean, and water when seeing this color. A clear sky, an ocean and water are evaluated as positive, calming, peaceful, comfortable, hopeful and relaxing by most people (Kaya & Epps, 2004). Mainly positivity, calmness, peacefulness and relaxation can arguably be somewhat related to professionalism and intelligence, which are key aspects of competence (Aaker, 1997; Brambilla et al., 2021; Leach et al., 2007). This could be a plausible explanation as to why this connection between the color blue and competence exists, although positivity, calmness, peacefulness and relaxation can arguably also be associated with traits like warmth or friendliness. Another explanation could be that blue often is associated with masculinity and, due to gender-stereotypes, masculinity also occasionally is associated with competence (Hess & Melnyk, 2016). Another potentially more influential factor in this connection could be the past and current branding efforts on the market: If some well-known and influential brands with vivid personalities choose to use a certain color in their marketing campaign, from brand logo to advertisements, this color can unconsciously become associated with those brands and with brands that are alike. As a result, certain primary aspects of those brands, like brand personality, can unconsciously become connected with a certain color (Labrecque & Milne, 2012). This creates an *iconic brand color* that becomes almost inseparable from a personality trait (Baxter et al., 2018). Mainly this phenomenon indeed seems to explain the connection of blue with competence, as explained by Baxter et al. (2018).

In the case of the connection of the colors pink and white with morality, people generally associate pink with softness, nurturing, femininity, maternalness and lovingness, and white with purity, cleanness, innocence and peacefulness (Clarke & Costall, 2008; Hess & Melnyk, 2016; Kaya & Epps, 2004). Pink is associated with feminine characteristics, because mainly in Western cultures, people are taught that “pink is for girls” from a young

age (Koller, 2008). Since, again due to gender-stereotypes, females are often considered to be softer, more nurturing and sometimes warmer than males, the feminine color pink is generally associated with these traits (Hess & Melnyk, 2016). White is associated with purity, cleanness, innocence and peacefulness, because it is an empty and pure color compared to all other colors (Clarke & Costall, 2008; Hanada, 2018). Purity, softness, nurturing, maternalness, love, innocence and peacefulness arguably all are characteristics that fit with morality, or “being good for one another” (Brambilla et al., 2021; Kirmani et al., 2017). This would potentially explain why the connection between these colors and morality exists. Like for the connection of blue and competence, the past and current branding efforts on the market could also be influential for the connection of pink and white and morality in a similar fashion: If well-known moral brands choose to incorporate pink and white in their marketing campaigns, these colors could form iconic colors for moral brands (Baxter et al., 2018; Labrecque & Milne, 2012). An example of this could be the symbol of the Pink Ribbon organisation. The non-profit Pink Ribbon organisation is a worldwide organisation that aims to support female breast cancer patients (Pink Ribbon International, n.d.). The Pink Ribbon symbol can arguably be considered as a very well-known symbol of a moral organisation, potentially having played a role in turning pink into an iconic moral color (Baxter et al., 2018).

These associations of blue with competence and pink and white with morality are carried over into marketing contexts as follows: If someone encounters an unknown brand logo of a new brand, for example, existing associations of the color are triggered that form the first impressions of the personality of a brand (Labrecque & Milne, 2012). Because people associate blue with competent traits (Hess & Melnyk, 2016; Labrecque & Milne, 2012; Munawaroh, 2015; Ridgway & Myers, 2014), and pink and white with moral traits (Hess & Melnyk, 2016; Labrecque & Milne, 2012; Munawaroh, 2015), encountering an unknown logo

of an unknown brand results in ascribing competent traits, or moral traits respectively, to the brand (Labrecque & Milne, 2012).

Concretely for the current study, this means that a logo with solely shades of blue is compatible for competent brands, since shades of blue evoke perceptions of a brand's competence. A logo with solely shades of blue would thus be incompatible for moral brands, since blue does not evoke perceptions of morality. A logo with the colors pink and white, on the other hand, is compatible for moral brands, since these colors evoke perceptions of a brand's morality. For this reason, this logo would be incompatible for competent brands. Namely, pink and white do not evoke perceptions of a brand's competence.

Hypotheses

Based on previous literature, it can be expected that a logo that is compatible with a brand's personality will cause a more positive brand attitude and a stronger purchase intention, because a good logo should fit well with a brand's personality and core values, in order to increase positive evaluations about the brand (Grobert et al., 2016; Henderson & Cote, 1998). In the current study, a consumer's brand attitude and purchase intention should be significantly higher when the brand's personality fits with the brand's logo. This means that a competent brand with a compatible competent logo (angular, blue) is expected to result in a more positive brand attitude and stronger purchase intention than a competent brand with an incompatible moral logo (round, pink and white). The same should also be found for a moral brand: A moral brand with a compatible moral logo (round, pink and white) is expected to result in a more positive brand attitude and purchase intention than a moral brand with an incompatible competent logo (angular, blue). This leads to the following hypotheses:

H1a: A competent brand with a compatible competent logo creates a more positive brand attitude than a competent brand with an incompatible moral logo.

H1b: A moral brand with a compatible moral logo creates a more positive brand attitude than a moral brand with an incompatible competent logo.

H2a: A competent brand with a compatible competent logo creates a stronger purchase intention than a competent brand with an incompatible moral logo.

H2b: A moral brand with a compatible moral logo creates a stronger purchase intention than a moral brand with an incompatible competent logo.

Method

Participants

For this research project, over 215 Dutch speaking participants were recruited, which is a bit more than the 210 participants needed in order to gain sufficient statistical power of .95, with a mean effect size $F = .25$ and a numerator df of 1. Participants who had not reached the end of the survey were automatically excluded beforehand. Since the survey was in Dutch, people who do not understand the Dutch language thoroughly were asked not to participate at all. For the current study, only half of the conditions of the research project were relevant. Therefore, only 104 participants in these conditions were incorporated in the analyses of this study. Of these participants, 31 (29.8%) were men and 73 (70.2%) were women with a mean age of 36.63 ($SD = 16.63$). In terms of educational level, 32.7% had a university master's degree, 24.0% a university bachelor's degree, 6.7% an applied university master's degree, 26.0% an applied university bachelor's degree, and 10.6% had a degree of a lower educational level. The participants were recruited via social media, oral communication, and Sona Systems Leiden. Sona Systems is an online program in which first year psychology students

have to sign up for a couple of studies to participate in, in order to collect an obligatory amount of credits.

Since a substantial part of this study focussed on the effects of specific colors on attitude and purchase intention, an important exclusion criterion was color blindness. In order to detect participants who unconsciously suffer from any type of color blindness, a short version of the computer based Ishihara test for color blindness (Marey et al., 2014) was included, as further described below. Results of this test implied that one participant suffered from a type of color blindness, because this participant answered both trials that measured the same type of color blindness incorrectly. This participant was consequently excluded from the analyses conducted in order to test the main hypotheses.

Design

This study utilised a 2 (Brand personality: competent vs. moral) x2 (Logo: competent vs. moral) between-subject design. It was part of a larger research project of the ECP/SOP MSc specialisation departure of The University of Leiden.

Procedure

For this study, the online questionnaire program Qualtrics was used. Participants first read a short introductory text explaining that this study investigates consumers' reactions to product brands that are currently on the Canadian market, and can potentially enter the Dutch market at some point. This text acted as a coverup story for the actual goal of the study, which was not yet mentioned. The informed consent emphasized that all data was collected anonymously and confidentially, and that participants could decide to discontinue their participation at any point without any consequences. Once participants had read the introductory text and agreed to the informed consent, they continued to the next pages.

At this point they were alternately confronted with four different brands from different product categories (jeans, fast food, sports shoes, and orange juice), which were presented in a random order. One product category brand was the target brand and the other three were filler brands to cover the actual goal of the study. The target brand, the brand that was manipulated in terms of brand personality and logo compatibility, was the brand in the category of jeans. Participants were asked to read the brand's description thoroughly, and inspect all of the brand's features visible on screen. After this, they were asked about their brand attitude and purchase intention. Three brief questions asking to what extent the participant was familiar with the brand, and how competent and how moral the participant evaluated the brand, were positioned at the very bottom of the screen. This process was repeated for all four brands.

After this, the participants continued to the final questionnaire of the survey, which was the short version of the Ishihara test for color blindness. Each trial was provided on a separate page.

Lastly, some demographic characteristics were asked, namely gender, age, and educational level, followed by the final page of the questionnaire, explaining the actual goal of the study and thanking the participants for their efforts. If registered via Sona Systems, participants were now rewarded with 1 credit. For this study, ethical approval of the *Commissie Ethiek Psychologie* (CEP), part of the *Institute of Psychology of Leiden University* had been granted.

Stimulus Materials

Brands

Four fictitious brands were created in four categories: jeans, fast food, sports shoes, and orange juice. These utilitarian product categories vary equally in competence and morality, and are therefore considered to be relatively neutral on these traits (Aaker, 1997;

Bennett & Hill, 2012). For the target brand, BB Jeans, two unique descriptions were created in order to convey either a competent, or a moral brand personality (based on Leach et al., 2007). Competence was manipulated by emphasizing the brand's ability to provide qualitatively good jeans, and the success, scale and growth of the brand. Additionally, some characteristics of the brand were explicitly mentioned below this description, which were: intelligence, prestigiousness, and capability. The competent brand thus communicated the ability of being able to do well for the consumer (Brambilla et al., 2021; Leach et al., 2007). Morality was manipulated by emphasizing the brand's honesty, sustainability, sincerity, ethicality, and kindness towards the customers and the environment. Characteristics provided with this description were: honesty, helpfulness and sincerity. Accordingly, the moral brand communicated the intention of wanting to do well for the consumer (Brambilla et al., 2021; Leach et al., 2007) (for full translated descriptions used in this study: see Appendix A).

For the three other product categories, namely fast food, sports shoes, and orange juice, three additional brands were created which had more neutral and meaningless descriptions. These brands were called Chef PiriPiri, ACE Running, and Natur'ly respectively.

Logos

Two different logos were designed in Microsoft Publisher for the target jeans brand that were compatible with either the brand personality trait of competence, or morality. The competent logo contained solely angular shapes and shades of the color blue. The moral logo contained solely round shapes and shades of the colors pink and white (see Appendix B). The logos were designed to be simple, since a simple logo design is considered to be most attractive and appropriate by consumers (Bossel et al., 2019; Henderson & Cote, 1998). This is especially the case for logos of utilitarian product categories (Van Grinsven & Das, 2014). The logos were, however, not too simple because an oversimplified design may diminish the

credibility of the logo (Wang et al., 2018). An oversimplified logo consists of one figure in one color and has no reoccurring elements (Wang et al., 2018). Therefore, the simple, but not too simple, designs used in the current study are flat and have no 3D-effects or reflections (Bossel et al., 2019). They furthermore contain some repeating congruent patterns that are roughly symmetrical, and there are limited amounts of colors incorporated in the logos (Henderson & Cote, 1998; Van Grinsven & Das, 2014; Wang et al., 2018). The two logos were designed in a way that all features other than shape and color (e.g., size, angle, amount and position of all elements) were kept as equal as possible to prevent potential unaccountable side-effects of these features on brand attitude and purchase intention.

For the filler brands three new logos were designed. One was designed in Microsoft Fresh Paint and the other two in Microsoft Publisher. The logos were designed in a way that they arguably look realistic. These logos should not specifically enhance perceptions of competence or morality (for all three filler brand logos: see Appendix C).

Measures

Brand Attitude

In order to measure brand attitude, a brief questionnaire developed by Spears and Singh (2004) was used. The questionnaire started with the question: “What are your general feelings about this brand?” This was followed by five 7-point Likert scale statements, starting with “I find this brand”: *Unappealing – Appealing; Bad – Good; Unpleasant – Pleasant; Unfavorable – Favorable; Unlikeable – Likeable*. The reliability analyses showed that the brand attitude scale had an Cronbach’s Alpha of .84.

Purchase Intention

Additionally, a question was posed: “Would you buy a product from this brand?” followed by four 7-point Likert scale statements in order to measure purchase intention,

starting with “I would”: *Definitely never buy – Definitely ever buy; Definitely not intend to buy – Definitely intend to buy; Be very uninterested to buy – Be very interested to buy; Probably not buy – Probably buy.* The original scale developed by Spears and Singh (2004) contains five 7-point Likert scale questions, however one of the five statements was left out in the current study because it became identical to one of the other statements when translated in Dutch. The reliability analyses showed that the purchase intention scale had an Cronbach’s Alpha of .90.

Manipulation checks

Two brief questions were formulated to check whether participants indeed evaluated brands’ descriptions as intended. These questions were: “How competent do you find this brand?” and “How moral do you find this brand?” Participants answered these questions on two 5-point Likert scales (1 = *Very incompetent*; 5 = *Very competent*) and (1 = *Very immoral*; 5 = *Very moral*).

Filler question

One filler question was added in an effort to enhance credibility in relation to the presumed existence of the brands, as mentioned in the introductory text. This question was: “How familiar are you with this brand?” Participants answered this question on a 5-point Likert scale (1 = *Very unfamiliar*; 5 = *Very familiar*).

Color blindness check

As mentioned, an important exclusion criterion for this study was color blindness. However, since some people arguably can be suffering from a type of color blindness without being aware of this, a short version of the computer based Ishihara test for color blindness (Marey et al., 2014) was included. A total of 11 numbered plates, out of the grand total of 38 plates, were randomly chosen. These 11 plates measured every type of color blindness via two trials per type (Marey et al., 2014), with one remaining plate that was provided as an example.

This plate did not measure any type of color blindness, meaning that every participant should have been able to read the depicted number (Marey et al., 2014). The answer of this example plate was provided. Participants could inspect the plates, try to read the depicted number, and type the number they thought they saw, in an empty box below. When uncertain or unable to identify a number, participants could leave the trial unanswered.

In order to convincingly show a type of color blindness, the participant must have answered both trials of the same type of color blindness incorrectly. Both answers have to be incorrect since it is unlikely a participant would be able to guess the number correctly, and giving one incorrect answer could arguably be explained by human error instead of visual deficiencies.

Statistical Analyses

Manipulation checks

Firstly, two analyses of variances (ANOVA's) were conducted to compare the perceived competence and morality of the brand descriptions of the target brands. In the first ANOVA, perceived competence was expected to be higher in the conditions with the competent brands than in the conditions with the moral brands. Likewise in the second ANOVA, perceived morality was expected to be higher in the conditions with the moral brands than in the conditions with the competent brands.

Main hypotheses

In order to test the main hypotheses of this study, the effect of logo compatibility was measured in two separate ANOVA's. The first one tested the effect of logo compatibility on brand attitude (H1a & H1b) and second one on purchase intention (H2a & H2b). In these ANOVA's, the interaction effect between logo (competent or moral) and brand description manipulation group (competent or moral) was expected to be significant. The mean brand

attitude in the first ANOVA, or purchase intention in the second, was expected to be higher in the conditions with a logo that matched the brand description manipulation (e.g., competent logo with competent brand description), than in the conditions with a logo that did not match the brand description manipulation (e.g., competent logo with moral brand description). This would indeed indicate that incompatible brand logos are detrimental for a brand, and consequently, indicate the importance of designing a compatible brand logo.

Results

Manipulation Checks

First, an ANOVA with brand personality and logo as independent variables and evaluation of brand competence as dependent variable was conducted to check whether the competence manipulation was successful. Assumption checks have been executed and no assumption was violated. Results showed that the perceived competence was higher in the conditions with a moral brand ($M = 3.57$, $SD = 0.77$), than in the conditions with a competent brand ($M = 3.22$, $SD = 0.86$), $F(1,99) = 4.77$, $p = .031$, $\eta^2 = .046$, although the differences were small. There was no difference in perceived competence between the conditions with the competent logo ($M = 3.44$, $SD = 0.77$) versus the conditions with the moral logo ($M = 3.35$, $SD = 0.90$), $F(1,99) = 0.57$, $p = .452$. There was furthermore no interaction between brand personality and logo, $F(1,99) = .026$, $p = .872$.

Secondly, an ANOVA with brand personality and logo as independent variables and evaluation of brand morality as dependent variable was conducted to check whether the morality manipulation was successful. Assumption checks have been executed and no assumption was violated. Results showed that the perceived morality was higher in the conditions with a moral brand ($M = 4.06$, $SD = 0.79$), than in the conditions with a competent brand ($M = 3.16$, $SD = 0.68$), $F(1,100) = 38.99$, $p < .001$, $\eta^2 = .281$. There was no difference

in perceived morality between the conditions with the moral logo ($M = 3.56, SD = 0.84$) versus the conditions with the competent logo ($M = 3.69, SD = 0.89$), $F(1,100) = 1.77, p = .182$. There was furthermore no interaction between brand personality and logo, $F(1,100) = .233, p = .630$. The results indicate that only the moral brand personality manipulation was successful.

Hypotheses Testing

For both ANOVA's that test the main hypotheses of the study, assumption checks have been executed and no assumption was violated. The first ANOVA tested H1a and H1b. This ANOVA contained brand personality and logo as independent variables and brand attitude as dependent variable. It showed no main effect for the manipulation group $F(1,99) = 1.71, p = .194$, and no main effect for logo, $F(1,99) = 0.54, p = .465$ on brand attitude. It furthermore showed no interaction effect for manipulation group and logo, $F(1,99) = 0.09, p = .799$. There were no differences in brand attitude between the competent group with a compatible logo ($M = 4.44, SD = 1.24$) and the competent group with an incompatible logo ($M = 4.55, SD = 1.01$). There were also no differences between the moral group with a compatible logo ($M = 4.90, SD = 1.11$) and the moral group with an incompatible logo ($M = 4.68, SD = 1.24$). Based on these findings, H1a and H1b are rejected.

The second ANOVA tested H2a and H2b. This ANOVA contained brand personality and logo as independent variables and purchase intention as dependent variable. It showed no main effect for the manipulation group $F(1,99) = 1.08, p = .302$ and no main effect for logo $F(1,99) = 2.42, p = .123$ on purchase intention. It furthermore showed no interaction effect for manipulation group and logo $F(1,99) = 0.04, p = .849$. There were no differences in purchase intention between the competent group with a compatible logo ($M = 4.00, SD = 1.20$) and the competent group with an incompatible logo ($M = 4.34, SD = 1.24$). There were also no

differences between the moral group with a compatible logo ($M = 4.65$, $SD = 1.23$) and the moral group with an incompatible logo ($M = 4.21$, $SD = 1.39$). Based on these findings, H2a and H2b are rejected.

Discussion

The goal of this study was to investigate the effect of logo compatibility for competent and moral brands on brand attitude and purchase intention. A compatible logo was expected to evoke a more positive brand attitude and a stronger purchase intention than an incompatible logo. Contrary to this expectation, results of the study suggest that there is no effect of logo compatibility in relation to brand personality on consumer attitudes and purchase intentions.

Whether or not there is a match between the logo and the brand, as explained by several authors (Grobert et al., 2016; Henderson & Cote, 1998; Kaufmann et al., 2016), thus does not seem to have an effect on the actual attitudes and intentions of consumers. Based on the current results, it can be argued that the match between a brand and its logo might not be based exclusively on the brand personality a logo is associated with. Perhaps, other aspects of brand logos determine a more semantic type of match, which in turn could have an effect on brand attitude and purchase intention. To illustrate, a brand logo with leaves could semantically fit with a brand that strongly communicates that its products are completely plant-based or natural and contain no additives. A logo with a chicken wing or a steak, for example, might semantically be unsuitable for this brand, since it does not sell meat or any animal products for that matter. This semantic fit can be explained by *stimulus codability*. Stimulus codability is described by Henderson et al. (2003) as the phenomenon of people collectively assigning the same meaning to a certain stimulus. They furthermore indicate that this stimulus codability could be beneficial for designing effective and fitting logos, which would be in line with the example above. Accordingly, it could be that this stimulus codability

determines, or codetermines, logo compatibility, which in turn could have an effect on brand attitude and purchase intention. If this would be true, logo compatibility would still be worth considering for companies and logo designers, albeit it being (partly) related with the semantic meaning of a logo, rather than the associations with personality traits exclusively.

Another possible explanation as to why the effect of logo compatibility on brand attitude and purchase intention has not been found could be that the influence of logo shapes and colors via associations is not as explicitly measurable as was expected. The described associations of certain shapes and colors with certain brand personality traits could possibly be more influential for the unconscious and implicit attitudes and purchase intentions that are related to the brand. Namely, generally speaking, there is often a gap in how consumers evaluate a brand's personality explicitly versus implicitly (Belboula & Ackermann, 2021), and Gattol et al. (2011) showed that consumers unconsciously evaluate brands and brand logos very differently than they consciously think they would. In the current research, the Spears and Singh (2004) brand attitude and purchase intention scales measured the explicit attitudes and intentions, so the attitudes and intentions the participants were conscious of. Participants namely had to rapport their attitudes and purchase intentions themselves. Since the associations related to visual stimuli (e.g., shapes and colors) are generally unconscious (Chaumon et al., 2008), it could be that logo compatibility, which is determined by shapes and colors, mainly has a subtle effect on unconscious attitudes and intentions, rather than on conscious attitudes and intentions. Since in the current study only the conscious part was measured, it could mean that the effects were therefore not visible, instead of non-existent.

If this indeed is the explanation as to why the effect of logo compatibility on brand attitude and purchase intention has not been found, then it could still be essential for companies and logo designers to thoroughly consider which shapes and colors to incorporate in their logo. Namely, unconscious associations can influence attitudes and behaviors (Maison

et al., 2001; Nosek, 2007). In order to test whether this alternative explanation is indeed correct, further research is needed. Instead of measuring the explicit attitudes and intentions via the Spears and Singh (2004) scales, future research could incorporate implicit association tests in order to create a picture of the implicit attitudes of consumers, as described by Gattol et al. (2011) and Maison et al. (2001). It is, however, not possible for the implicit purchase intentions to be measured via scales that could be incorporated in an online questionnaire, as used in the current study. Implicit intentions related to consumer behavior can be examined via eye-tracking techniques. With eye-tracking techniques, consumers' duration of fixation on a product and the amount of fixations, for example, can be measured. These facets can predict whether or not a consumer would want to buy the product, as explained by Lee et al. (2015). The combination of the implicit association tests and the eye-tracking techniques could thus be a method for future research to map the implicit attitudes and purchase intentions that are potentially influenced by logo compatibility.

However, the results of the current study have to be interpreted with caution. Namely, the manipulation check analyses suggested that the manipulation based on Leach et al. (2007) only partially caused the intended effect. Morality was manipulated as intended, so the moral brand was evaluated as more moral than the competent brand. Therefore, it is possible to draw a conclusion about the effect of logo compatibility for the moral brand. The manipulation of competence, on the other hand, was not successful. The competent brand was evaluated as less competent than the moral brand. Consequently, the competent logo could not be considered as compatible for the competent brand, and incompatible for the moral brand. It is therefore not possible to draw a concrete conclusion about the effect of logo compatibility on brand attitude and purchase intention for the competent brand.

A possible reason as to why the competent manipulation did not work the way it was supposed to could be that people often (unconsciously) tend to ascribe competent traits to

solely moral individuals, companies, or brands. When being confronted with a text that describes that a brand is willing to do good, so that the brand has moral values, people use this morality to judge the brand's competence. This causes brands, individuals, or companies, for that matter, to be seen as competent when they are described as being moral (Halberstadt et al., 2002; Stellar & Willer, 2018). This could explain why there was a spill-over effect found in the manipulation of the current study. Perhaps, the participants (unconsciously) evaluated the moral brand as competent because of the text that emphasized the brand's morality.

Future research on the effect of logo compatibility with regard to competent and moral brands should extend the brand descriptions in a way that it would make the competent brand be evaluated as being more neutrally moral and the moral brand as being more neutrally competent in order to prevent this spill-over effect from happening. This can for example be achieved by describing that a brand is very competent with the use of traits derived from Leach et al. (2007), but additionally stating that the brand is not typically moral. The exact opposite can be done for the moral brand. It is, however, important that the statement about the brand not typically being moral or competent does not cause the brand to come across as a bad or negative brand. This might cause some unaccountable effects. It is therefore essential to emphasize that the brand is not known for its morality or competence, instead of that the brand is immoral or incompetent, since that arguably might be seen as something negative. Moreover, if a brand is described as being immoral, there is a substantial chance that participants will automatically evaluate the brand as being incompetent. This could occur because of the described spill-over effect (Halberstadt et al., 2002; Stellar & Willer, 2018), which would again cause the competence manipulation to be ineffective.

To conclude, the current study does not provide clear indications that logo compatibility plays a role in influencing consumer attitudes or purchase intentions about brands with a competent or moral personality. This does, however, not mean that, based on

the current findings, logo compatibility is not a useful concept for understanding consumer attitudes and behavior. As mentioned, it could be possible that these effects occur in a more implicit manner, which would not mean that they do not exist. The concept of logo compatibility could partially be highly influenced by a semantic fit of a logo due to stimulus codability. If the effects indeed are not explicitly measurable, or logo compatibility is (co)determined by a semantic fit, then logo compatibility would still be an effective tool for choosing the right logo and optimizing business for many brands. Incorporating compatible features in a logo, in terms of associations with brand personality traits and semantic fit, seems to be a relatively underexposed subject in the literature, but the current study might have provided several new insights and openings for future research on this subject.

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Appendix A

Dutch brand descriptions of the competent and moral jeans brand

Competent jeans brand: The brand BB Jeans produces qualitatively good jeans that are very durable. It is a successful and fast-growing brand with a broad product range. This brand gets evaluated by consumers as: intelligent, prestigious and capable.

Moral jeans brand: The brand BB Jeans produces sustainable jeans. It is a very ethical brand that pays a lot attention to charities, the environment and the well-being of cotton farmers. This brand gets evaluated by consumers as: honest, helpful and sincere.

Appendix B

Target brand logos

Competent logo (left) and moral logo (right)



Appendix C

Filler brand logos

Fast food logo (left), sports shoes logo (middle), and orange juice logo (right)

