



*What's this thing called Love? Exploring the relationship  
between brand love, personality, and the propensity to  
anthropomorphize*

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From: David Hume's Natural History of Religion, Sect III, 1757.

*“There is an universal tendency among mankind to conceive all beings like themselves, and to transfer to every object, those qualities, with which they are familiarly acquainted, and of which they are intimately conscious. We find human faces in the moon, armies in the clouds; and by a natural propensity, if not corrected by experience and reflection, ascribe malice or good will to every thing, that hurts or pleases us. The unknown causes, which continually employ their thought, appearing always in the same aspect, are all apprehended to be of the same kind or species. Nor is it long before we ascribe to them thought and reason and passion, and sometimes even the limbs and figures of men, in order to bring them nearer to a resemblance with ourselves” (p.20-21).*

## *Summary*

As the value of brands represents enormous amounts of money to companies, understanding how to influence what drives consumers in their brand selections and brand loyalties is a matter of great importance. The present study, conducted through an online survey amongst 410 students between 18 and 26, contributes to a further understanding of this by examining the influence of personality (as measured by the big five), the propensity to anthropomorphize and product type grid on brand love. For the latter the BAB model of brand love, as developed by Batra, Ahuvia and Bagozzi in 2012, was selected because it is the first empirically constituted grounded prototype in the field.

The first goal, as expressed in RQ1, was to find out to what extent personality influences the BAB prototype and its seven antecedent elements? This study found no evidence for hypotheses one and two that both extroversion and neuroticism are positively associated with brand love. Instead the results showed the personality factor of openness to significantly predict towards the brand love prototype and some of its facets.

The second goal was to study the role of anthropomorphisation (ATP) as a mediator between personality and brand love as correspondingly formulated in RQ2, to what extent does the propensity to anthropomorphize mediate the influence of personality on the brand love prototype? This study found no mediator influence of ATP. Hypotheses three, the relation between the independent variable personality and the dependent variable brand love is mediated by the propensity to apply ATP, cannot be supported therefor. Instead a highly significant direct effect of the propensity to anthropomorphize on the brand love prototype was found. The higher this level is the higher are the brand love scores. This is potentially valuable information both for practitioners and the world of academia since it is the first time that the influence of anthropomorphisation on brand love was empirically demonstrated.

The third and final objective of this study was to investigate the influence of the product category, on the brand love prototype scores. This was presented in RQ3, to what extent does the consumer's categorization of products directly influence the brand love scores. This study demonstrated that the level of involvement as well as whether a product belongs to the informational or transformational category does indeed influence the brand love scores directly. Transformational as well as high involvement products receive higher scores on brand love than informational and low involvement products. Hypothesis four that brands that belong to the high involvement category and hypothesis five that transformational brands receive higher scores on brand love than, respectively, low involvement brands and informational brands are therefore supported.

Additionally, and finally, this study demonstrated the applicability of the brand love prototype in the Netherlands, the shortened scale used to measure this, the validity of the RP grid as well as the applicability of the new brand anthropomorphisation scale, which can all be added to the body of knowledge.

The realization that anthropomorphisation increases the personal value of products takes place automatically and non-consciously, can potentially lead to automatic behaviour, as well as the findings of this study will hopefully lead product managers to apply ATP towards the architecture of their brands by design. People will apply ATP automatically by their own, non-conscious, choosing anyhow. If practitioners do not actively manage this process it might lead to non-desirable outcomes for their brands as well. Why not apply it consciously then? Several suggestions for this are presented.

Further studies into the role of the big five and brand love in other cultures, the influence of needs and motivational structures on brand love as well as further investigations into how ATP can

be successfully manipulated by practitioners to increase brand love are suggested. Additionally the development of a reliable shorter brand love item scale will be helpful since other constructs could then be added in future studies to further investigate what contributes to brand love.

***Dedication***

This Master thesis is dedicated to some of the great people I have had the pleasure and privilege of working with over the past 30 years, Bob McLaren “a brand is a friend!”, Mr. Heineken “it is my brand that drives the value of my breweries, not the other way around!”, Sir John Haggerty “zig when they zag!”, Prof. Mr. Alexander Mohr for his ever recurring question “Is that true, really?” and last but not least Peter Strating who also became a dear friend but who sadly passed away last October “you produce and sell it, but it’s Miep with her karrebies that buys it!”.

## *Acknowledgements*

The first time I felt the drive to go back to University to study was on the campus of the University of Michigan back in 1999 whilst following the Executive Management Course. Work and career didn't allow for it at that time though. But when the opportunity arose in 2011, I decided to pursue my dream.

The journey to my masters in the fascinating field of communications has been a very rewarding one. I discovered new doors behind every door of the body of knowledge I opened. Quenching a thirst I never knew I had before. I must apologize though to the professors that had to read my assignments since these were always long. However, I hope, never boring.

The current study at Twente is coming to an end. It is with a feeling of great gratitude that I want to thank Sabrina Hegner, PhD and Dr. Piet Kommers for all their wise help during my studies but especially with this master thesis. Hopefully we will be able to cooperate in future projects.

Also I would like to offer a word of thanks to my other professors for their great lectures. Here, I want to especially mention Niels Baas MSc., Dr. Alexander van Deursen, Dr. Somaya Ben Allouch and last but not least Prof. Ad Pruyn since they are some of the best educators I have had the privilege of meeting.

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## **1 Introduction**

Ever since the CEO of advertising agency Saatchi and Saatchi, Kevin Roberts, launched his book “Lovemarks” in 2004, it seems as if Love has become the new Holy Grail for brand marketing. In his book, the author makes the point that great brands need more than just great respect to earn undying loyalty from their consumers. Surely respect for the brand is required, but only when brand love is obtained the hearts of followers can be unlocked.

The concept of brand love finds its origin in the study of the relationships between people and brands. Since the beginning of the 1990’s much debate has developed in the world of marketing on the question of how to describe and capture the most important elements that drive the relationships consumers have with products and brands. Recognizing that the connection between consumers and brands is more than just an economic transaction the studies and discussions center, amongst others, on the following important subjects:

1. a consumer’s personality plays an important part in personal and brand relationships (Lin, 2010; Matzler, Bidmon & Grabner-Kräuter, 2006; Mulyanegara, Tsarenko, & Anderson, 2009; Ozer, & Benet-Martinez, 2006; Rauschnabel, Ahuvia, Ivens, & Leischnig, 2013; Roberts, Kuncel, Shiner, Caspi, & Goldberg, 2007),
2. brands have personalities attributed to them and are contributing partners in consumer brand relations (CBR) ( Aaker, 1997; Aaker, & Fournier, 1995; Fournier, 1998),
3. and the process of anthropomorphisation (ATP) facilitates this (Aaker & Fournier, 1995; Agassi, 1968; Aggarwal & McGill, 2007, 2012; Caporael, 1986; Epley, Waytz & Cacioppo, 2007; Epley, Akalis, Waytz & Cacioppo, 2008; Epley, Waytz, Akalis & Cacioppo, 2008; Fiske, Malone & Kervyn, 2012; Guthrie, 2002; Landwehr, McGill, & Herrmann, 2011; Puzakova, Kwak & Rocereto, 2009; Waytz et al., 2010a; Waytz,

Cacioppo, & Epley, 2010b).

A debate on the concept of brand love unfolded however (Albert, Merunka & Valette-Florence, 2008; Batra, Ahuvia & Bagozzi, 2012; Carroll & Ahuvia, 2006; Fetscherin & Conway Dato-on, 2012; Rauschnabel et al., 2013). Central in this is the discussion whether love for a brand can be measured analog to interpersonal love (Carroll & Ahuvia, 2006) or to parasocial love (Fetscherin & Conway Dato-on, 2012). Albert et al., (2008), however claim that brand love is a culturally determined phenomenon and falls into neither category. They posit that love for a brand can never be the same as love for a person. Finally, Batra et al., (2012), (BAB) raise the point that similarities between brand love and interpersonal love should be studied empirically and come to the conclusion that although interpersonal love is a good first place to start to look for an explanation about the love relationship between consumers and brands there are however significant differences (see part 2 for details).

Whether it is a love relation or not, it appears that personality is one of the elements that influences the relationships between people and brands (Lin, 2010; Matzler et al., 2006; Mulyanegara et al., 2009; Ozer, & Benet-Martinez, 2006; Rauschnabel, 2013; Roberts et al., 2007). A study by Rauschnabel et al., (2013), for instance showed that people with a higher tendency of extroversion and neuroticism cultivate stronger brand love. But is this true for all kinds of products and to the same degree? Rossiter, Percy and Donovan (1991), for instance, posit that not only personality determines the kind of relationship people have with products and brands but that the level of involvement (high or low) as well as the need (informational or transformational) that the product fulfills has consequences.

Another element that influences the people brand relationship is ATP (Aaker & Fournier, 1995; Aaker, 1997, Aggarwal & McGill, 2007, 2012; Caporael, 1986; Epley et al., 2007; Epley

et al., 2008a; Miesler, Leder, & Herrmann, 2011; Puzakova et al., 2009; Rauschnabel et al., 2013; Waytz et al., 2010a,b). In this context ATP is described as the degree to which people project human characteristics and traits upon non-human subjects. The use of human related schemata in the selection of brand relationships does offer a new perspective on the relationship between the personality and the concept of brand love. The question is however whether all consumers have the same propensity to apply ATP towards all sorts of different kinds of products and brands?

These questions that linger around the subject of brand love are important issues that need resolving for brand practitioners as well as academia. As brands represent enormous amounts of economic value (Brandirectory, n.d.), all information on how it is possible to influence consumers and their relationships with brands can, potentially, contribute significantly to the success of companies. In that sense it is a challenge to the world of academia to pursue the quest for answers to these issues.

The influence on brand love by the combination of the influence of personality, ATP and product category has, until now, to the best of our knowledge, never been studied before. Therefore this study wishes to expand the current knowledge by contributing additional insights into the influence that the propensity to apply ATP and product category have on the effects that personality has on brand love. For the concept of brand love the prototype of Batra et al, (2012), will be used since it is claimed to be the first empirically constituted grounded prototype in the field.

The research questions this study will try to answer are: RQ1: to what extent does personality influence the BAB prototype and its seven antecedent elements?, RQ2: to what

extent does the propensity to anthropomorphize mediate the influence of personality on the BAB model and RQ3: to what extent does the consumer's categorization of product categories directly influence brand love scores.

## ***2 The theoretic framework***

### ***2.1 What is brand love?***

In the field of marketing research the level of satisfaction that consumers receive of products and brands has been a long time ultimate measure, explaining current buying behavior as well as potentially enabling the possibility of predicting future purchases (Carroll & Ahuvia, 2006). Hypothesizing that there is more that explains continuing relationships between consumers and brands than satisfaction alone Carroll and Ahuvia (2006), execute a study to investigate possible higher and usually longer term continued relationships between consumers and brands. These are described as brand love relations, which are defined by Carroll and Ahuvia (2006) as “the degree of passionate emotional attachment a satisfied consumer has for a particular trade name”, (p.81).

In this sense a clear distinction is made between brand liking and brand love where the latter is described as a more enduring and deeper continuum distinctly different from the concept of liking a brand. Consumers who love a brand have usually integrated the brand into their selves and have longer-term relationship with them. This is proposed as another difference with the concept of liking a brand. Although Carroll and Ahuvia (2006), recognize that consumers can use the expression “I love a brand” in very loose fashion, they also do not exclude the possibility entirely that consumers can experience their relationship with brands sometimes “as fully analogous to the stronger forms of interpersonal love”, (p.81).

Carroll and Ahuvia (2006) test their hypotheses that the brand love model acts as a mediator between hedonistic and self-expressive brands on one side and brand loyalty and positive word of mouth (+WOM) on the other side. As an outcome they find that brand love

indeed acts in the hypothesized way and helps to predict brand loyalty and +WOM for self-expressive and hedonistic brands.

In their study, Albert et al., (2008), however, claim that brand love is a culturally determined phenomenon and is not covered completely and in totality by any single interpersonal love theory. They find that the concept of love is culturally grounded and can never be the same as love for a person, at least not for French consumers. Rather than the possibility to describe the connections with brands in terms of love or relationships they find “a set of characteristics and dimensions”, (p. 1074). French consumers use the words “adoring” and “liking” but not the word love, to describe their feelings towards brands.

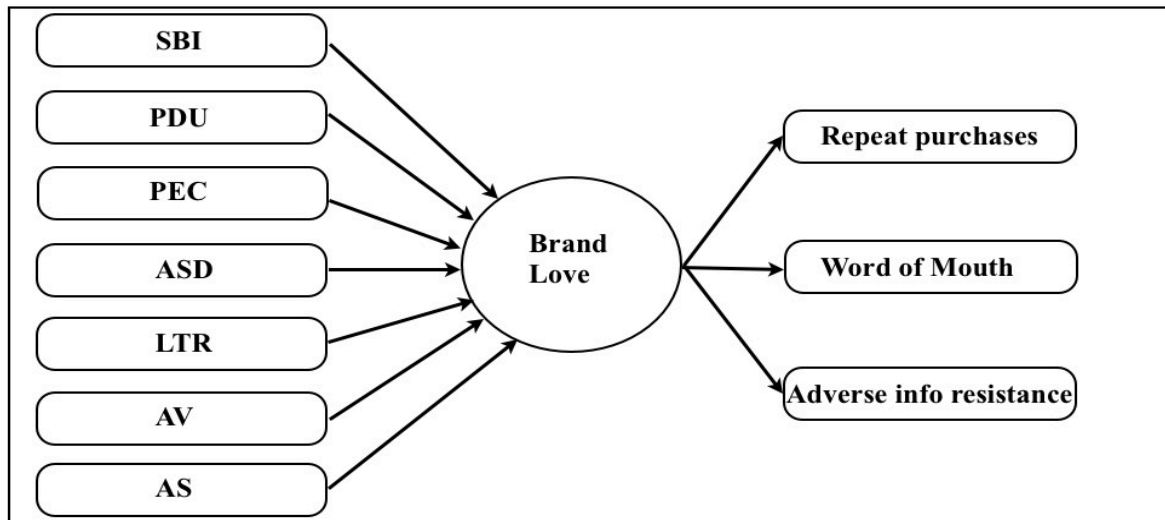
Not following the analogy with interpersonal love as well, Fetscherin and Conway Dato-on, (2012), posit that the love relations between consumers and brands are more similar to parasocial love and is preceded by brand loyalty which in turn is the result of satisfaction after the use of brands. They define brand love as “a multidimensional construct consisting of a satisfied consumer’s experience with a brand, which leads not only to brand loyalty (a predecessor of brand love) but to a deeply emotional relationship”, (p.151).

This relationship is much more akin to the sort of relationships that one can have with movie stars than to real interpersonal love. The main reason for this is that the love relation with brand is only one-directional meaning from the consumer to the brand (Fetscherin & Conway Dato-on, 2012). In that sense it differs substantially from the triangular theory of love by Sternberg (1986), which according to Fetscherin and Conway Dato-on (2012), is the underlying model to many studies that try to explain the “love” relationship that consumers can have with brands. In Sternberg’s theory (1986), the extent to which three dimensions; intimacy, passion,

and commitment exist in the relationship between two persons and their levels of intensity explain the strength of their love.

The relation from the brand towards the consumer can however only be a perceived relationship in the mind of the affected person. The brand does not play an active part in that. Therefor Fetscherin and Conway Dato-on, (2012) define parasocial love as “a perceived relationship of love by a consumer with a brand”, (p.153) and hypothesize that this is the same as brand love. They find that brand love seems to be stronger related to the theory of parasocial love than interpersonal love based on a survey using the respondents favorite car brand as a subject. Another outcome is that brand loyalty precedes brand love and is not a consequence of it.

Batra et al., (2012), raise the point that similarities between brand love and interpersonal love should be studied empirically however and take the extra step by organizing a grounded prototype study that reveals seven factors that constitute brand love (see figure 1). These are respectively self-brand integration (SBI), passion driven use (PDU), positive emotional connection (PEC), anxiety separation distress (ASD), long-term relationship (LTR), attitude valence (AV), and attitude strength (AS). Additionally brand love scores on the BAB prototype demonstrate three consequences reliably, repeat purchase intention, positive word of mouth intention and increased resistance against adverse brand information.



*Figure 1.* The facets of the Brand Love prototype model and their consequences according to Batra et al., (2012)

Batra et al., (2012), demonstrate which improvements are possible to most extant literature on the subject of brand love. This is especially true for the emotions and feelings consumers experience towards objects as well as the intensity and the nature of the relationships. They conclude that interpersonal love is a good starting point from which to theorize the relationships between people and brands but that brand love is a relationship in its own right which is now, for the first time, accurately reflected in their grounded prototype model of brand love (Batra et al., 2012).

As a main difference with other studies of brand love Batra et al. (2012), find that brand love is mostly considered as a less important relationship. It does not contain any of the acts of altruism normally associated with interpersonal love and in which a brand cannot love people back. Therefore they conclude that although theories on interpersonal love might seem a logical and tempting first place to start, one needs to check carefully whether the analogy is correct and an appropriate basis for developing better insights into the concept of brand love.

In the following parts the subjects of personality, ATP and product category influence will be discussed in more detail. Additionally, the hypotheses for this study will be presented.

## **2.2 Personality**

Many have written about personality but in this study the description of personality by McCrae, & John, (1992) will be used: “the most important ways in which individuals differ in their enduring emotional, interpersonal, experiential, attitudinal, and motivational styles”, p. 175. In their five factor model (FFM), also called the Big Five model, McCrae, & John (1992), describe five different factors; extroversion (the need to seek company of others), openness (the degree to which one is open to new experiences), conscientiousness (the level of planning needed in ones life), agreeableness (the degree of helpfulness towards others) and neuroticism (the individual’s level of emotional stability).

These, enduring, factors and their combinations, which are different per individual, determine to a big extent how people act in their social lives towards others, but also to brands. Extroversion predicted positive relationship outcomes in relationships between married couples and conscientiousness and agreeableness in dating couples (Ozer & Benet-Martinez, 2006). For openness, however, no relevant information in connection to interpersonal relationships were found. Personality traits also helped to explain negative romantic relationship outcomes. Ozer and Benet-Martinez, (2006), as well as Roberts et al., (2007), reported that neuroticism and low agreeableness are dependable predictors for negative relationship outcomes.

In the relevant research on the influence of personality traits on the relationships with brands, extroversion was regularly found to have an influence (Matzler et al., 2006; Mulyanegara et al., 2009; Lin, 2010; Rauschnabel et al., 2013). Additionally, conscientiousness was reported to have an influence (Mulyanegara et al., 2009), as well as openness (Matzler et al., 2006), agreeableness (Lin, 2010) and neuroticism (Rauschnabel et al., 2013).

For the effects of personality traits in brand relationships it was for instance demonstrated (Mulyanegara et al., 2009) that more extrovert consumers rather engage in relationships with more sociable brands and that more conscientious consumers find trust important in the brands they interact with. Extroversion and openness are positively related to the level of hedonism in brands and more extrovert and open consumers will therefore react stronger to affective brand signals (Matzler et al., 2006). Lin (2010), presented another example of extroversion positively predicting the relation with exiting brands in a study into toys and video games. Additionally, agreeableness was found to have a significant predictive relation with the brand.

In their study Rauschnabel et al., (2013), tested several hypotheses that personality traits would have an influence on relations with brands. The brand love model that he developed earlier together with Batra and Bagozzi in 2012 was used as the dependent variable, although in a shortened version, and the Costa & McCrae, (1992), big five personality traits model as the independent variables. Gender and several relationship variables, single and couple, as well as satisfaction in their interpersonal relationships were considered as moderators between the big five and the BAB prototype. An apparel brand was used as the subject of the study.

The main results of the Rauschnabel study (2013), showed that people that score higher on extroversion and neuroticism have a tendency to develop stronger brand love. Except when their satisfaction levels with their interpersonal relationships were higher, then neuroticism did not score significantly higher. Other personality aspects like agreeableness, openness and conscientiousness had no significant influence on the brand love construct. Except when the relationship status was considered as a moderator between personality and brand love, then the results showed a significant difference between singles and those involved in relationships on the personality aspect of openness for singles. Gender only had a significant effect for more

neurotic men. Their scores on brand love were higher than females.

In general the study found support for the thought that people form relationships with brands in their own right next to how they form relationships with other people. Based on the foregoing this study proposes the following hypotheses in line with the findings of Rauschnabel et al., (2013),

H1: Extroversion is positively associated with brand love.

H2: Neuroticism is positively associated with brand love.

### ***2.3 The role of ATP in relationships between consumers and brands***

Animism and ATP have been discussed for more than 2000 years in matters pertaining a.o. to philosophy and religion (see Epley et al., (2007), for an extensive review). The starting point of ATP as described by Agassi (1968) is animism, which implies that an inanimate object can have a soul. Guthrie (2002), defines animism more exactly as humans attributing life to the non living and ATP as the attribution of human characteristics to nonhuman things and events. Guthrie proposes that ATP and animism are often overlapping survival strategies in an uncertain world, which are “pervasive in human thought and action, and as closely related, spontaneous over-attributions of organisation to things and events”. (p. 14).

Theories of animism and ATP were introduced into the world of marketing only recently however. After Aaker and Fournier first launched their theories on the importance of the subjects of brand personality and relationships between consumers and brands in 1995 (Aaker and Fournier, 1995), Aaker (1997) was the first one to introduce the subject of animism and ATP (very briefly though), into marketing theory related to her theory on the concept of brand personalities. Aaker (1997), defines animism as the process by which consumers permeate brands with human personality traits, and ATP. Animated California raisins are used as an

example of ATP of brands.

Fournier had proposed earlier (Aaker & Fournier, 1995), that consumers infer brand personalities based on all and any perceivable action undertaken by the brand. In that sense brands have an active role in the formation of relationships with consumers. The brand's perceived action can trigger real consumer reactions such as "attitudinal, cognitive, and/or behavioral responses on the part of the consumer", (p.393). In 1998 Fournier follows Aaker (1997) and offered a more extended, also theoretical, overview of ATP in connection to its importance in the context of the formation of relationships between consumers and brands (Fournier, 1998). ATP aids in the conceptualization and validation of the brand-as-partner concept. Additionally Fournier (1998) posits that all marketing mix elements can contribute to the ATP process of the brand as "an enlivened partner in the relationship". (p.345).

Based on the findings of her study Fournier (1998) concludes that reciprocal relationships with brands truly exist through "repeated observation of behaviors enacted by the brand at the hand of its manager, that cohere into a role perception of the brand as partner in the relationship dyad", (p.368). Self-congruence facilitates this process (Fournier, 1998). Neither Aaker (1997) nor Fournier (1998), however, provide further empirical evidence for the psychological processes that could explain how the process of ATP in relation to brands really function.

The initiative for this is subsequently put into effect by studies of the authors Epley, Waytz and Cacioppo. In Epley et al., (2007), Epley et al., (2008a,b) and Waytz et al., (2010a,b), the authors Epley, Waytz and Cacioppo (in different order), two times accompanied by Akalis (Epley et al., 2008a,b) and once by Morewedge, Monteleone and Gao (Waytz et al., 2010a) set out on a mission to find explanations in psychology through experimental research when and why people are inclined to anthropomorphize non-human objects. Waytz et al., (2010a) define

ATP as: “a process of inductive inference whereby people imbue the real or imagined behavior of other agents with humanlike characteristics, motivations, intentions, or underlying mental states” ”, (p.2). This definition is adopted throughout this study

In Epley et al., (2007), they develop their “three-factor theory of anthropomorphisation” (TFTA), which offers a psychological explanation for the role that ATP fulfills. This is based on the similarities of anthropomorphic inferences with the processes of other inductive inferences whereby available and approachable human and knowledge networks in memory act as a basis for interpreting non-human objects. The degree to which people apply ATP is subsequently determined by; 1) the inclination to (continuously or occasionally) access knowledge networks in memory relating to humans and applying this to non human objects; 2) the probability and degree to which anthropomorphic information is altered and refined to apply towards non human objects; and 3) the probability that this information subsequently is applied towards non-human objects. TFTA then posits that people’s propensity to anthropomorphize depends on three factors; the likelihood of activating human-being like attributes in memory and attributing this to a non-human object (elicited agent knowledge) (EAK), the desire to be an effective social actor (effectance motivation) (EFM) and the degree to which the perceived need for social contacts are fulfilled (sociality motivation) (SMT). Epley et al., (2007) posit that all three factors are influenced by specific independent variables such as dispositional, situational, developmental and cultural variables (see Epley et al., 2007, page 867 for a detailed overview).

ATP takes place when human cues are available such as (but not limited to) movement, shape or appearances such as a humanized grill design for a car (Aggarwal & McGill, 2007; Epley et al., 2007; Waytz et al., 2010b) or when baby features are applied to the design of products (Miesler et al., 2011). In addition to this the application of ATP towards non-human objects takes place non-consciously, automatically (Miesler et al., 2011), and can even lead to

automatic behaviour as is demonstrated in a study by Chartrand, Fitzsimons & Fitzsimons, 2008.

ATP is not always universally relevant and when it is, not always to the same degree to all people all of the time. Waytz et al., (2010b), however come to the conclusion that “marketers are right to care about anthropomorphism; individual differences in anthropomorphism matter for creating an empathic connection with nonhuman agents”, (p.220). And as people are naturally alert to human like stimuli, although in varying levels and conditions, ATP can assist to create more effective advertising by studying what kind of consumers are susceptible to which levels of ATP.

Not only overt and tangible ATP stimuli provoke the application of ATP by consumers towards products. Hart, Jones and Royne (2013), present evidence that consumers apply ATP towards products without being primed by clearly visible human related stimuli in the product, packaging or advertising design. Additionally their experiments demonstrate that the application of the amount of ATP is dependent on the level of the complexity of the product involved. The higher the perceived complexity the higher the intensity of the application of ATP. As a consequence of this the perceived personal value of the products in question increases.

Until this point some theories about the relationship between the when, why and how of ATP have been presented (Aggarwal & McGill, 2007; Epley et al., 2007; Epley et al., 2008a,b; Miesler et al., 2011; Waytz et al., 2010a,b). The other important question is who applies ATP? It has been demonstrated that some personality traits have an influence on the brand love relationship. Especially people that score higher on extroversion and neuroticism develop strong brand love (Rauschnabel et al., 2013).

For people to be able to form these love relationships with non-human objects, such as brands, anthropomorphisation needs to take place (Aaker 1997; Fournier 1998). Therefore the question is whether certain traits are more likely to drive people more to apply ATP than others? This study proposes that the personality traits of extroversion, which is linked to sociability and outgoingness, as well as neuroticism, which is linked to insecurity and anxiety, are involved in ATP. Extroversion mainly because it is a driver for seeking contacts with others and neuroticism since anxiety might drive people to make their surroundings more familiar and less stressful by non-consciously applying ATP. One possibly also needs imagination to see objects as human therefor it is proposed that openness, which is associated with imaginativeness and creativity is an additional candidate (McCrae & John, 1992; John & Srivastava, 1999) (see appendix A for an overview of the big five descriptors). It is therefore proposed that there is a relationship between personality (extroversion, neuroticism and openness), ATP and brand love whereby ATP acts as mediator. H3: The relation between the independent variable personality and the dependent variable brand love is mediated by the propensity to apply ATP.

#### ***2.4 Product category influence***

In various studies it is shown that the product category that brands belong to can have an influence on the way that brands in these categories are perceived (Aggarwal & McGill, 2007; Epley et al., 2007; Ratchford, 1987; Vaughn, 1980). Rossiter et al., (1991), notice for instance a lower brand love score for utilitarian products and higher scores for value or self-expressive brands. In order to capture the differences between product categories both practitioners as well as researchers have tried to develop meaningful product attitude classification overviews in the past as a representation of how consumers evaluate products and brands. Two of these are the Foot Cone and Belding (FCB) grid (Ratchford, 1987; Vaughn, 1980) and the Rossiter Percy

(RP) Grid (Rossiter et al., 1991).

For this study the RP grid will be used (see figure 2), since it is a more updated attitude model compared to the FCB grid. In the RP grid products are divided into four quadrants. These are determined based on the level of involvement (high versus low) and the type of motivation involved (informational and transformational).

		<i>Type of Motivation</i>	
		<b>Informational</b>	<b>Transformational</b>
<i>Type of Decision</i>	<b>LOW Involve ment</b>	Typical product categories (brands may differ) <ul style="list-style-type: none"> <li>• Aspirin</li> <li>• Light beer</li> <li>• Detergents</li> <li>• Routine industrial products</li> </ul>	Typical product categories (brands may differ) <ul style="list-style-type: none"> <li>• Candy</li> <li>• Regular beer</li> <li>• Fiction novels</li> </ul>
	<b>HIGH Involve ment</b>	Typical product categories (brands may differ) <ul style="list-style-type: none"> <li>• Microwave oven</li> <li>• Insurance</li> <li>• Home renovation</li> <li>• New industrial products</li> </ul>	Typical product categories (brands may differ) <ul style="list-style-type: none"> <li>• Vacation</li> <li>• Fashion/Clothing</li> <li>• Cars</li> <li>• Corporate image</li> </ul>

*Figure 2.* The Rossiter Percy Grid (1991) dividing products according to the level of involvement and type of motivation

The types of motivation that are distinguished in the RP grid are based on either the problem solving qualities of a product (informational) or their gratification potential (transformational). In the first case products are mainly chosen on their abilities to solve problems for consumers who, as posited by Rossiter et al., (1991), require mainly factual information. The transformational products are chosen on their ability to bring consumers into a desired “sensory, mental or social state” (p. 16).

The level of involvement with a product will be determined by the degree to which the target group perceives a risk with the selection and purchase. These risks can be of a monetary or social and psychological nature such as value or personality and self-expressive functions

(Percy & Rosenbaum-Elliott, 2012; Rossiter et al., 1991) and can be divided into the high or low involvement group. When the perceived risk is higher more elaboration will be triggered (Johnson & Eagly, 1989) whereby involvement will act as a moderator on brand evaluations (Petty et al., 1983; Petty & Cacioppo, 1986). Additionally, once attitudes versus brands have been determined the high involvement consumers show less erosion in their opinions on brands they favor as well as more resilience towards negative brand news (Haugtvedt, Petty & Cacioppo, 1992). Hence it is proposed that brands that have required more elaborative effort during their selection will tend to be perceived as closer to consumers and their selves and will therefore probably receive higher scores on brand love. This hypothesis is proposed as H4: brands that belong to the high involvement category will receive higher scores on the brand love prototype.

Utilitarian or informational products, due to their very nature, contain less attributes of a social, self or value expressive kind than transformational products. They exist to solve problems. Hedonic and self-expressive products and brands on the other hand transform their consumers into a desired state, whether that is of an intellectual, social or self-gratifying nature. They also tend to score higher on brand love (Carroll & Ahuvia, 2006), than informational products. It is therefore proposed that H5: brands that belong to the transformational category will receive higher scores on the brand love prototype than informational brands

## ***2.5 Proposed model***

Considering the fact that personality is a very important factor in the shaping of relationships this study will investigate its role as an antecedent of brand love. Since there are ample indications that consumer's use of products and brands is regulated through a process of ATP (Aaker & Fournier, 1995; Agassi, 1968; Aggarwal & McGill, 2007, 2012; Caporael, 1986, Epley et al., 2007, 2008; Fiske et al., 2012; Guthrie, 2002; Landwehr et al., 2011; Puzakova et

al., 2009; Waytz et al., 2010a,b, c) this study proposes to consider the propensity to anthropomorphize as a mediator between personality and the facets that constitute brand love in the brand love model as proposed by Batra et al. (2012). Additionally this study proposes a direct effect from different product categories according to the RP Grid (Rossiter et al., 1991) on the brand love scores.

Based on the foregoing we present the hypothesized model for this study in figure 3.

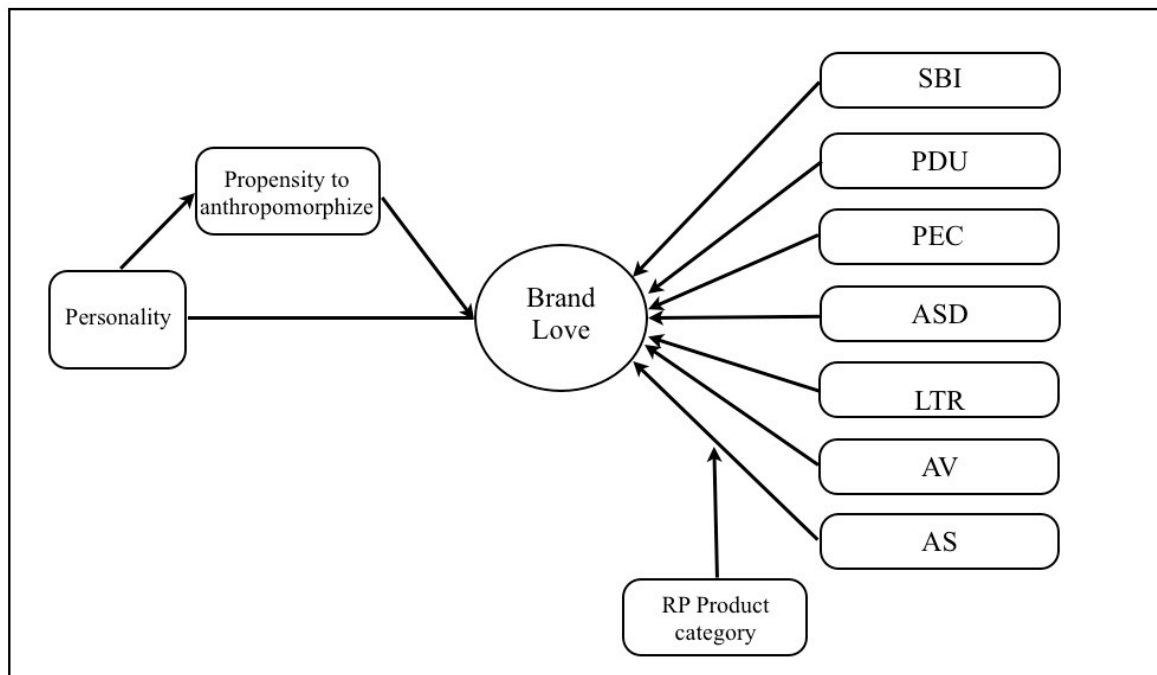


Figure 3. The hypothesized model of the influence of personality, anthropomorphisation and product categories on the brand love prototype by Batra et al., (2012)

### ***3) Research Methodology***

#### ***3.1 Procedure, materials and measures***

An online pretest was organized with a convenience sample of 30 students, familiar with the RP grid, to obtain two products per grid category. The students were requested to score 30 products on the criteria of involvement (low or high) and product type need (informational or transformational). The two most pronounced products per RP Grid category were subsequently selected (see complete list in appendix D. These were the following products and their scores per RP grid category:

- High involvement and informational (HII) : insurance (24) and laptop (23)
- Low involvement and informational (LII) : toilet paper (19) and detergent (16)
- High involvement and transformational (HIT): shoes (23) and clothing (21)
- Low involvement and transformational (LIT): ice-cream (22) and beer (14)

This was followed by a quantitative online questionnaire consisting of 65 questions (see appendix C). The respondents were assigned at random to one of 8 branded questionnaires for the assessment of the assumed relationships. The brands covered the 4 different RP grid product group types, each consisting in turn of two brands. The HII category was covered by Centraal Beheer (a well known Dutch insurance company) and Sony laptops, LII by OMO and Popla, HIT by Nike and Levis and LIT by Heineken and Magnum. The questionnaire was online from February till April 15, 2013.

#### ***3.2 Participants***

Of the total of 1481 respondents 410 could be used due to either belonging to the wrong target group or incompleteness of answers. The age of respondents (N=410) was between 18 and 26 with an average age of 22.3 (SD=2.26) as is represented in table 1. Of the respondents 120 (29.3%) were male and 290 female (70.7 %).

Table 1 *Respondents, Average Age and Gender*

Respondents N=410	Mean	
Age	22.3	SD= (2.26)
Male	120	29.3 %
Female	290	70.7 %

### 3.3 Reliability and validity of the instruments

The scale that was used to measure the propensity to anthropomorphize was a modified ten item version of the IDAQ scale (Waytz et al., 2010b). A 7-point Likert scale was used with 1 as totally not agree and 7 totally agree. Examples of questions are, to what extent do you think; a computer can have it's own will, Apple can have it's own will, Heineken can have it's own intentions and a TV can experience emotions. For the big five the Dutch translation of the Ten Item Personality Inventory [TIPI] (Hofmans, Kuppens, Allik, 2008; Gosling, Rentfrow & Swann, 2003) was used with a 7 point scale (1=does not describe me accurately at all to 7 describes me totally accurately. Examples of questions were, to what extent do the following expressions describe you accurately; I am a person that is extrovert/enthusiastic, calm/emotionally stable and thorough/disciplined. For the brand love scale a short 26 items version was used (Rauschnabel, 2013), with a 7 point Likert scale ranging from 1, do not agree at all, to 7 , totally agree. See appendix C for details on all scales.

To test for inter-item reliability the ATP scale and the 26-item brand love scale were analyzed using the Cronbach's Alpha measure (Nunnally, 1978), as is demonstrated in table 2. A score higher than 0.7 is, in general, regarded as satisfying.

Table 2 *Cronbach's Alpha Scores for ATP Scale and Brand Love Scale*

Overview Scores	Mean	(SD)	Cronbach's Alpha
ATP scale	2.26	(1.74)	0.93
SBI	1.55	(0.92)	0.75
PDU	1.77	(1.01)	0.74
PEC	1.90	(1.03)	0.74
ASD	1.39	(0.94)	0.77

LTR	2.05	(1.66)	0.73
VA	5.27	(1.67)	0.80
AS	5.63	(2.02)	0.89
BL overall	2.14	(0.85)	0.73

For a full overview of the descriptives of the ATP scale as well as the brand love scale and their Cronbach's Alpha scores (including if item deleted) see appendix B.

## 4.0 Results

### 4.1 Personality scores

Agreeableness scored the highest of the big-five personality items with an average of 5.4 (SD=0.9), N=410 (see table 3 for more details).

Table 3 *Big Five Personality Mean Scores*

Big Five scores	Mean	SD
Agreeableness	5.4	0.9
Openness	5.2	1.1
Neuroticism	4.9	1.2
Extroversion	4.9	1.3
Conscientiousness	4.5	1.3

### 4.2 The relation between personality and the brand love prototype

A multiple regression was run to predict the brand love mean (BLM) score from extroversion (E), agreeableness (A), conscientiousness (C), neuroticism (N) and openness (O). In general personality predicted 1.6% ( $R^2=0.016$ ) of the brand love prototype. Of the big five only openness added statistically significantly to the predicted BLM,  $F(5, 404) = .845, p < .05$ , adj.  $R^2 = .004$ . Regression coefficients and standard errors can be found in Table 4 (below).

Table 4

*Summary of Multiple Regression Analysis for Predicting BLM from the Big Five*

Big five	B	SE B	$\beta$	t	Sig. (p)
E	-0.008	0.032	-0.013	-0.265	0.791
A	0.006	0.047	0.007	0.132	0.895
C	-0.018	0.033	-0.027	-0.551	0.582
N	0.027	0.036	0.037	0.735	0.463
O	0.088	0.039	0.115	2.287	0.023*

Note. \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

Based on these findings both hypotheses H1 as well as H2 have no support. Contrary to what was expected openness was the only one of the big five personality aspects to significantly predict to the brand love prototype. Therefore it is interesting to further explore openness in relation to the different brand love facets (see 4.2.2).

#### 4.2.1 Additional analysis on gender

Rauschnabel et al., (2013), presented results indicating that male respondents had higher effect sizes as well as a higher explanatory power versus the brand love prototype compared to females. Additionally a statistically significant result was found for men on the item of neuroticism. Because of these findings an additional multiple regression analysis was executed. This resulted in the same outcomes as in Rauschnabel et al., (2013), for gender on the explanatory power of all big-five personality factors (females  $R^2=0.19$  and males  $R^2=0.24$ ).

As for the effect on the brand love prototype this study found different results than the Rauschnabel (2013), study. There were no larger effect sizes for men and no significant differences between men and women on the item of neuroticism. Instead, the results showed a statistically different result on the item of openness (see table 5). The result for females on openness was  $F(1, 288) = 0.632, p < .05, R^2 = .019$  and for males  $F(1, 118) = 0.911, p > .1, R^2 = .024$ .

Table 5 *Summary of Gender Split File Regression Analysis of Big Five on Brand Love*

Big five	Gender	<i>B</i>	<i>SD</i>	<i>Beta</i>	<i>t</i>	<i>Sig. (p)</i>
E	Female	-0.01	0.04	-0.02	-0.40	0.69
	Male	0.01	0.07	0.02	0.17	0.87
A	Female	0.00	0.05	0.00	0.07	0.94
	Male	0.09	0.10	0.08	0.84	0.40
C	Female	0.00	0.04	0.00	0.04	0.97
	Male	0.00	0.07	0.00	-0.02	0.99
N	Female	0.04	0.04	0.05	0.88	0.38
	Male	-0.09	0.09	-0.10	-1.05	0.29
O	Female	0.09	0.04	0.13	2.06	0.04*
	Male	0.08	0.08	0.10	1.03	0.31

Note. \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

#### 4.2.2 The Relation Between Openness and the Seven Brand Love Facets

Contrary to what was expected openness was the only one of the big five personality aspects to significantly predict the brand love prototype. Therefore it is interesting to further explore openness in relation to the different brand love facets. A regression was run to predict the seven brand love facets based on openness. O added statistically significantly to the facets of positive emotional

connection (PEC),  $F(1, 408) = 6.184, p < .05$ , adj.  $R^2 = .013$  and anxiety separation distress (ASD),  $F(1, 408) = 4.785, p < .05$ , adj.  $R^2 = .009$ . Regression coefficients and standard errors can be found in Table 6.

Table 6 *Summary of Regression of Openness on Brand Love Facets*

Facets	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>Sig. (p)</i>
SBI	0.08	0.04	0.09	1.82	0.07
PDU	0.08	0.05	0.08	1.66	0.10
PEC	0.11	0.05	0.12	2.49	0.01*
ASD	0.09	0.04	0.11	2.19	0.03*
LTR	0.07	0.07	0.05	0.98	0.33
AV	0.04	0.08	0.02	0.47	0.64
AS	0.16	0.09	0.09	1.72	0.09

Note. \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

A further regression analysis shows no other significant effects of the big five on the separate facets of brand love.

#### 4.3 The relation between personality, ATP and brand love

To test for the assumption that ATP acts as a mediator between openness (the only big five factor with a significant relation with brand love) and brand love a mediation analysis (Baron & Kenny, 1986), was performed using linear regression between openness (as the independent variable) and ATP (as the dependent variable). Subsequently, the same method was used to analyze the relation between ATP (as the independent variable) and brand love (as the dependent variable). The first analyses showed no significant outcomes however of openness as a predictor for ATP.

The second analyses showed a very significant direct relation between ATP and brand love  $F(1, 408) = 59.050, p < .001$ , adj.  $R^2 = .012$  as well as with all separate facets that constitute the brand love prototype as can be seen in table 7. In total ATP explains 12.6% of the variance of brand love in the total sample of respondents. As a result of the findings ATP cannot act however as a mediator. Consequently hypothesis H3 cannot be supported.

Table 7 *Summary of Regression Analysis of Anthropomorphisation on Brand Love and Facets*

d.v.	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>Sig. (p)</i>
Brand love	0.221	0.029	0.356	7.684	0.000***
SBI	0.255	0.031	0.378	8.250	0.000***
PDU	0.210	0.035	0.282	5.938	0.000***
PEC	0.284	0.035	0.377	8.215	0.000***
ASD	0.278	0.031	0.403	8.898	0.000***
LTR	0.351	0.058	0.288	6.072	0.000***
AV	0.121	0.061	0.099	2.000	0.046*
AS	-.143	0.730	-.097	-1.967	0.050*

Note. \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

#### 4.3.1 Additional test of ATP as moderator between openness and brand love

To exclude the possibility that ATP has another interaction effect between openness and brand love a moderator analysis (Baron & Kenny, 1986), was performed as well. No significant interaction effect was discovered however (see table 8).

Table 8 *Summary of Regression Analysis of Openness and Brand Love with ATP as a Moderator*

Variables	<i>B</i>	<i>SE</i>	$\beta$	<i>t</i>	<i>Sig. (p)</i>
Opennescentr	0.078	.035	.101	2.198	0.028*
Anthrocentr	0.218	.029	.350	7.586	0.000***
ModOpenAnthro	0.010	.026	.017	0.373	0.709

Note. \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

#### 4.3.2 Additional regression analyses of the effects per RP product grids on the relation between personality, ATP and brand love

A regression analyses was run to investigate the relation between personality, ATP and brand love but now on the basis of the four RP grids (see 3.1). No significant relations were found for any of the product grids between the big five and the brand love overall score. There were however several significant relations between some of the product grids and some of the brand love prototype facets (see table 9).

Table 9 *Summary Regression Analysis Scores for the Relationship Between Some of the Big Five and the Separate Brand Love Prototype Facets on the Basis of a Split File per RP Product Grid*

RP Grid	Big Five	d.v.	<i>B</i>	<i>SE B</i>	$\beta$	<i>t</i>	<i>Sig. (p)</i>
HIT	O	SBI	0.20	0.10	0.20	2.04	0.04*
	N	VA	0.37	0.14	0.25	2.65	0.01*
LIT	O	ASD	0.16	0.06	0.27	2.52	0.01*
HII	E	PDU	0.19	0.08	0.23	2.21	0.03*
LII	A	VA	-0.39	0.19	-0.20	-2.03	0.05*
	C	VA	-0.29	0.12	-0.25	-2.53	0.01*
	C	AS	-0.42	0.18	-0.24	-2.37	0.02*

Note. \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

To test for the assumption that ATP acts as a mediator between the big five and brand love a mediator analysis (Baron & Kenny, 1986), was performed with ATP as a mediator between the big five, as per the split file based on the RP grids, and the brand love prototype and its separate elements. No significant mediator effects were found however.

#### 4.4 Do higher involvement and transformational products score higher on brand love

To test for the H4 hypothesis that brands that belong to the high involvement category will receive higher scores on brand love as well as H5 that brands that belong to the transformational category will receive higher scores on brand love than informational brands a 2 x 2 between subjects multivariate analysis of variance (MANOVA) was performed including a test for an interaction effect (Tabachnick & Fidell, 2007). The MANOVA was performed on the seven dependent variables SBI, PDU, PEC, ASD, LTR, VA, AS, as well as the brand love overall mean score. Independent variables were involvement (high or low) and product types (informational or transformational).

The participants and their products/brands in the questionnaires were reassigned into the relevant groups. The brands of Sony laptop (HII), Centraal Beheer (HII), Nike (HIT) and Levis (HIT) constituted the high involvement group (HIP) (N=215) and the remaining brands (Popla, OMO, Heineken and Magnum) the low involvement group (LIP) (N=195). The brands of Sony laptop, Centraal Beheer, Popla and OMO were subsequently assigned to the informational product

category (INP) (N=199) and the remaining brands (Heineken, Magnum Nike and Levis) into the transformational product category (TNP) (N=211). The analysis was performed with the four category groups as the fixed factors and the brand love elements and the brand love overall mean score as the dependent variables (see appendix E for descriptives).

Significant multivariate effects were found for most of the independent variables (IV) (see Table 10). Transformational products/brands received significantly higher scores than informational products/brands on all IV's as well as the brand love overall mean score with the only exception of ASD. High involvement products/brands received significantly higher scores than low involvement products/brands on the IV's of SBI, PEC, ASD and the brand love overall mean score. The scores on PDU, LTR, VA and AS were not significantly higher.

Table 10 *Overview of Two-Way MANOVA Results of Transformational/Informational Means and High/Low Involvement Means Scores on Brand Love and its Elements*

	TNP		INP		Sig.(p)	HIP		LIP		Sig.(p)
	mean	SD	mean	SD		mean	SD	mean	SD	
SBI	<b>1.64</b>	<b>0.91</b>	1.45	0.93	0.047*	<b>1.70</b>	<b>1.07</b>	1.38	0.69	0.000***
PDU	<b>2.00</b>	<b>1.30</b>	1.53	0.94	0.000***	1.83	1.10	1.70	0.92	0.264
PEC	<b>2.14</b>	<b>1.04</b>	1.66	0.95	0.000***	<b>2.11</b>	<b>1.14</b>	1.67	0.83	0.000***
ASD	1.38	0.89	1.40	0.89	0.710	<b>1.56</b>	<b>1.11</b>	1.20	0.66	0.000***
LTR	<b>2.36</b>	<b>1.82</b>	1.71	1.40	0.000***	2.17	1.70	1.91	1.62	0.126
AV	<b>5.65</b>	<b>1.62</b>	4.85	1.63	0.000***	5.23	1.72	5.30	1.63	0.540
AS	<b>6.00</b>	<b>1.64</b>	5.25	2.29	0.000***	5.64	1.94	5.63	2.10	0.922
Brand Love	<b>2.33</b>	<b>0.83</b>	1.94	0.82	0.000***	<b>2.27</b>	<b>0.95</b>	2.00	0.69	0.002**

Note. \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

A significant interaction effect was found for Involvement\* product type on LTR,  $F(1,408) = 4.747, p = .03$  (see figure 5). Transformational products score higher in general than lower involvement products on LTR and with a lower difference between low mean scores and high mean scores then is the case for informational products. The condition of high involvement seems to lead transformational products however to score lower on LTR. The scores of informational products on brand love depend very much on the level of involvement. For informational products higher involvement leads to considerably higher scores on LTR.

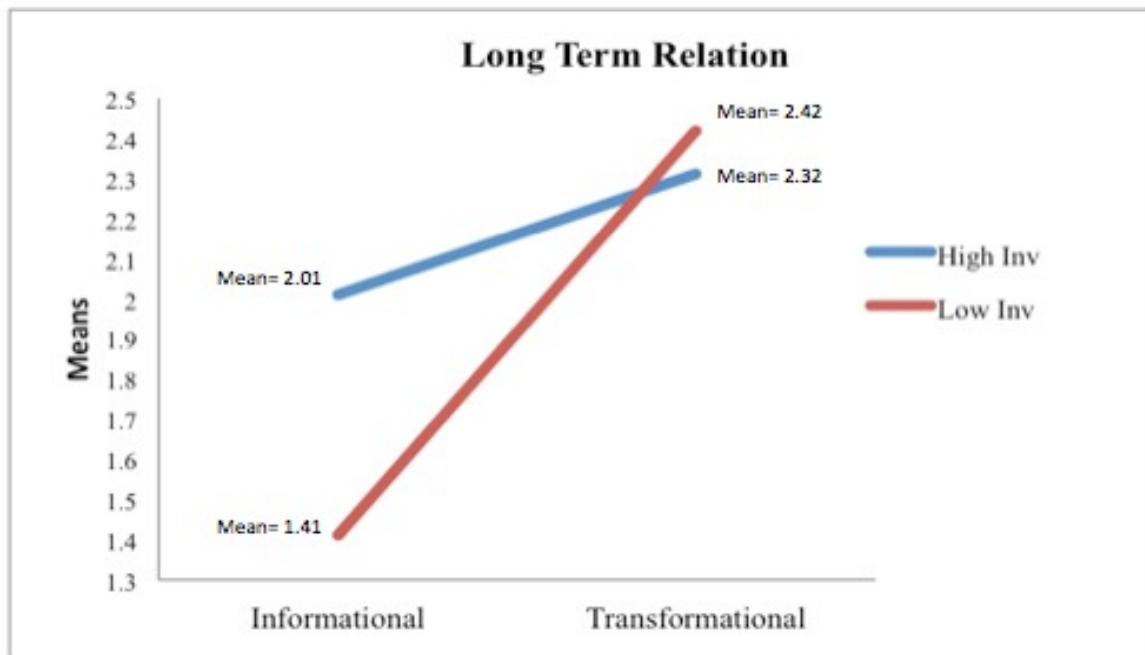


Figure 4 A 2 (Involvement: high or low) by 2 (Product type: informational or transformational) MANOVA Interaction effect on long-term relationship

These results suggest that when respondents are requested to respond to the items that constitute the brand love scale the level of product/brand involvement as well as whether the products/brands belong to the informational or transformational category do have an effect on brand love. Brands that belong to the high involvement and transformational category receive in general significantly higher scores than their respective counterparts informational and low involvement. Hypotheses 4 and 5 are therefore largely supported.

#### 4.5 An overview of all hypotheses and the findings

To summarize the findings of this study as far as the hypotheses are concerned table 11 presents an overview of all the hypotheses that were tested in this study.

Table 11 *An Overview of All Hypotheses and the Findings*

Hypotheses	Content	Result
H1	Extroversion is positively associated with brand love.	No support
H2	Neuroticism is positively associated with brand love.	No support
H3	The relation between the independent variable personality and the dependent variable brand love is mediated by the propensity to apply ATP	No support
H4	Brands that belong to the high involvement category will receive higher scores on brand love	Supported
H5	Brands that belong to the transformational category will receive higher scores on brand love than informational brands	Supported

## **5.0 Discussion**

### **5.1 Introduction**

As the value of brands represents enormous amounts of money to companies, understanding how to influence what drives consumers in their brand selections and brand loyalties is a matter of great importance. The present study contributes to a further understanding of this by examining the influence of personality (as measured by the big five), the propensity to anthropomorphize and product type grid on brand love. For the latter the BAB model of brand love (Batra et al., (2012), was selected because it is the first empirically constituted grounded prototype in the field.

The first goal, as expressed in RQ1, was to find out to what extent personality influences the BAB prototype and its seven antecedent elements? In contrast with Rauschnabel et al., (2013), this study found no evidence for hypotheses one and two that both extroversion and neuroticism are positively associated with brand love. Instead the results showed the personality factor of openness to significantly predict towards the brand love prototype and some of its facets. When the level of openness to new experiences of respondents is higher this generates higher scores on the brand love prototype.

The second goal was to study the role of anthropomorphisation as a mediator between personality and brand love as correspondingly formulated in RQ2, to what extent does the propensity to anthropomorphize mediate the influence of personality on the brand love prototype. This study found no mediator influence of ATP. Hypotheses three, the relation between the independent variable personality and the dependent variable brand love is mediated by the propensity to apply ATP, cannot be supported therefor. Instead a highly significant direct effect of the propensity to anthropomorphize on the brand love prototype was found. The higher this level is the higher are the brand love scores. This is potentially valuable information both for practitioners

and the world of academia since it is the first time that the influence of anthropomorphisation on brand love was empirically demonstrated. Thus it adds to the theoretical insights of amongst others Aaker and Fournier (1995), Aaker (1997), Fournier (1998), Puzakova et al., (2009), as well as Rauschnabel (2013).

The third and final objective of this study was to investigate the influence of the product grid (Rossiter et al., 1991), on the brand love prototype scores. This was presented in RQ3, to what extent does the consumer's categorization of products directly influence the brand love scores. This study demonstrated that the level of involvement as well as whether a product belongs to the informational or transformational groups as defined by the RP grid does indeed influence the brand love scores directly. Transformational as well as high involvement products receive higher scores on brand love than informational and low involvement products. Hypothesis four that brands that belong to the high involvement category and hypothesis five that transformational brands receive higher scores on brand love than, respectively, low involvement brands and informational brands are therefore supported.

Additionally and finally this study demonstrated the applicability of the brand love prototype in the Netherlands, the shortened scale used to measure this, the validity of the RP grid as well as the applicability of the new brand anthropomorphisation scale (BAS), which can all be added to the body of knowledge.

## ***5.2 Discussion of the findings***

### *The link between personality and brand love (H1 and H2)*

This study did not find evidence that higher scores on extroversion and neuroticism lead to significantly higher scores on brand love as was presented by Rauschnabel et al., (2013). Instead it

was openness that was found to predict significantly higher scores. Additionally personality explained only 1.6% of the variance of brand love between the respondents in the present study whilst it was 9% in Rauschnabel et al., (2013). No big differences are usually found on overall big five scores between countries that are geographically close (Schmitt, Allik, McCrae & Benet-Martínez, 2007). So what could be the reasons then why hypotheses one and two were not positively affirmed and openness was found to significantly predict higher scores on brand love?

One of the explanations could be a difference in the cultures between the Rauschnabel et al., (2013), study that took place in Germany whilst the current study was organized in the Netherlands. A major difference between both countries is on the element of the masculinity or femininity of the culture (see Appendix F for detailed scores) (Hofstede & Hofstede, 2005; Hofstede & McCrae, 2004). Germany scores very high on masculinity (66) whilst the Netherlands scores very low on this (15) (Hofstede Center, n.d.). One of the consequences of this is the way in which brands are used. In countries that score high on masculinity, brands often serve as a sign of status confirmation whilst the contrary is the case in feminine cultures. In the latter cultures one wants to fit in more than one wants to stand out in the crowd (Hofstede & Hofstede, 2005). This could lead to different brand scores where German people that score higher on extroversion and neuroticism need to externally affirm their status by the type of apparel brand they wear, as was possibly the case in the Rauschnabel et al., (2013), study where brand love questions were answered exclusively on the basis of fashion brands.

The present study did not approach the brand love prototype from the perspective of one product only. In the current study the questions were answered on eight different brands belonging to four different RP grid categories according to Rossiter et al., (1991). This might offer another explanation why hypothesis one and two were not confirmed in the present study as opposed to the

findings of Rauschnabel et al., (2013). In contrast to fashion which belongs to the high involvement/high transformation RP category, the other RP categories offer less possibility for external self-expression and are thus potentially of lower self-affirming value. Hence this might lead to other outcomes in relation to the influence of extroversion and neuroticism on brand love scores.

The finding of openness as significantly predicting higher scores on brand love in the present study was unexpected in relation to the main findings of Rauschnabel et al., (2013). Openness entails the propensity to actively use one's imagination, be more sensitive to the aesthetics of objects, intellectual curiosity, adventurousness as well as an inclination to prefer variety (McCrae & John, 1992). The four RP grids, in combination, span across different psychological (high/low involvement, transformative, hedonistic, self-enhancement) and functional consequences and possibilities (informational, problem solving). These all could link to different big five facets. It is than perhaps logical that openness could be the only common and logical distinguishing facet across all grids to significantly predict higher scores on brand love across the whole RP grid.

When investigating the influence of openness on brand love more in detail, this study found that in particular the scores on the brand love elements of PEC and ASD were significantly higher compared to the other brand love elements. This means that those that score higher on openness tend to feel more of an intuitive fit, an emotional attachment and a positive affect (PEC) towards their loved brands and, probably, consequently more anxiety and apprehension in case of the prospect that their loved brands would cease to exist (ASD). The foregoing is applicable to all brands whether they are high or low involvement or informational or transformational. Considering the fact that this study was organized using all RG grid categories this outcome does not come as a very big surprise. Due to the mix of RP grid products it is probably logical to not expect SBI (more geared towards transformational products), PDU (also connected to higher investment willingness)

and LTR (related to higher involvement products) to receive more pronounced scores. The brand love elements of AV and AS are probably less linked to personality than they are to the benefits that products and brands offer themselves.

*The propensity to apply ATP as a moderator between personality and brand love (H3)*

No relation was found for ATP as a mediator, nor as a moderator, between personality and brand love. No relation was found between the hypothesized extroversion, neuroticism (hypothesis three) or openness (nor agreeableness or conscientiousness for that matter) with the propensity to apply ATP. Other personality traits than those as expressed by the big five might potentially offer better connections with ATP and brand love.

It could for instance be that the different need states or motivations offer better explanations (Epley et al., 2007). A very significant ( $p < 0.001$ ) direct effect was found however for ATP and the brand love prototype and its separate elements. ATP explained 12.6% of the variance of brand love in the total sample of respondents. This is the first time that the propensity to anthropomorphize has been linked with the concept of brand love. The higher that propensity is, the higher the scores on the brand love prototype will be.

*The direct influence of the product category on brand love scores (H4 and H5)*

This study demonstrated that the product category that brands belong to, according to the RP grid (Rossiter et al., 1991), do have an impactful influence on brand love scores. These results confirm but also add to the findings of Carroll and Ahuvia (2006). Both the transformational and high involvement products/brands generate significantly higher brand love scores than their respective counterparts informational and low involvement. This seems entirely logical considering that both either require higher elaboration (high involvement) due to the perceived risks involved in the

selection or the closer connection to the self as represented by the transformative function. This is further supported by the split file regression analysis on the basis of RP grid (see table 9), where high involvement transformational (HIT) products show a significant relation between extroversion and self-brand integration (SBI). High involvement and transformational products are more important to consumers and can thus generate higher scores on brand love compared to low involvement and informational products, which are less close to the self-and/ or generate less perceived risk.

### *Other*

Another potential explanation for the differences on the personality scores between Rauschnabel et al., (2013), and this study might be caused by a difference in the length of the big five questionnaire that was used. For this study the ten-item personality inventory (TIPI) (Gosling, Rentfrow & Swann, 2003) was applied as translated into Dutch by Hofmans et al., (2008). This choice was influenced by the fact that a shorter scale was needed than the 44 item list applied by Rauschnabel et al., (2013), due to the length of the other constructs that were also part of this study. Although the TIPI was evaluated very positively for its psychometric qualities (Gosling et al., 2003), it can not be absolutely excluded that this might have created a difference in outcomes on the influence of extroversion and neuroticism on brand love and, potentially, also in relation to the connection between personality and the propensity to apply ATP.

### ***5.3 Managerial implications***

The realization that anthropomorphisation increases the personal value of products (Hart et al., 2013), takes place automatically and non-consciously (Hart et al., 2013; Miesler et al., 2011), can potentially lead to automatic behaviour (Chartrand et al., 2008), as well as the findings of this study will hopefully lead product managers to apply ATP towards the architecture of their brands by

design. People will apply ATP automatically by their own, non-conscious, choosing anyhow. If practitioners do not actively manage this process it might lead to non-desirable outcomes for their brands as well. Why not apply it consciously then?

The findings of this study offer additional possibilities to practitioners for improving their branding approach. First of all there is now clear evidence through this study that ATP can have a positive effect on brand love scores. Mastering the application of this by finding the right stimuli gives additional possibilities for building loved brands to product managers. This may be especially helpful to lower involvement and informational products in obtaining more brand love. By their very nature they need this more than high involvement and transformational products, which seem to obtain higher brand love scores more easily by the very fact of the categories to which they belong.

Practitioners could offer more opportunities for consumers to anthropomorphize their brands. A clear example of this is for instance the application of the “smiling e’s” in the Heineken logo, which were designed by Mr. Heineken to make the brand seem more approachable and friendly. Other examples of these kind of “tangible” opportunities to offer opportunities to apply ATP by brands are for instance the smiling cow of the French cheese brand “la vache qui rit” or apply smiling shapes on their packaging or products like a smiling car grill (Aggarwal & McGill, 2007).

Since people have an automatic propensity to apply ATP (Hart et al., 2013; Miesler et al., 2011), even without the presence of tangible ATP stimuli and especially when more complex products are involved (Hart et al., 2013), designing the desired anthropomorphisation of brands by practitioners seems very important. More subtle ways than to apply smiles or other tangible ATP stimuli to brands are also possible. Examples of these might be the way in which brands create personalities for themselves through the tone of voice they choose in their marketing

communication efforts, the sort of activities, sports or athletes they sponsor, the kind of actors they select in their TV-commercials, the type of sales promotion offers or the personas they develop for their social media activities. Especially the latter seems important in this day and age where two-way contact between brands and consumers is possible through social media.

#### **5.4 Limitations**

The number of usable questionnaires (410) was less than the total number of respondents that initially started to participate (1481). On the one hand this was caused by some respondents who did not belong to the target group and on the other hand by some respondents who did not finish the questionnaire. Overall, the number of 410 remaining respondents is still sufficient for further analyses.

A further Limitation of this study with regard to the participants is that due to the selection of students the results cannot be generalized for the whole population. This is according to the intended design however to enable comparability with Batra et al., (2012) and partly Rauschnabel et al., (2013), who employed 49% students in their respondents set.

A final limitation is that the number of females in this study is overrepresented compared to the Dutch statistics on students per gender. Whereas the national percentage of female students between 18 and 25 was 41.9% in 2011, according to the Dutch Ministry for Education, Culture and Science (Ministerie OCW, n.d.), the percentage of female students in this study was 70.7%. This could theoretically have had an effect since Rauschnabel et al., (2013), presented results indicating that male respondents had higher effect sizes as well as a higher explanatory power versus the brand love prototype. Future research should try to get a more balanced field of participants.

### ***5.5 Future research***

Several interesting avenues for further research have come forward through this study. One of the possible explanations for differences between the scores of personality on brand love could be that cultural influences possibly might have an influence (Hofstede & Hofstede, 2005; Hofstede & McCrae, 2004). The Rauschnabel et al., (2013), study took place in Germany whilst the current study was organized in the Netherlands. Both have different outcomes. This might also be true for other countries. Further studies into the role of the big five and brand love in other cultures might enrich the current knowledge on this subject.

As this study has shown that the propensity to apply ATP explains 12.6% of the variance in brand love scores but could not find a connection for personality as defined by the big five, as a possible antecedent of ATP the question lingers on what are the strongest antecedents of ATP. If it is not the big five as one of the ways to approach personality then might it be that certain need or motivational structures are a more promising route for further research such as the effectance motivation (Epley et al., 2007; Waytz et al., 2010a) but also perceived loneliness in connection with the sociality motivation (Epley et al., 2008a,b; Puzakova et al., 2009)?

Additionally there is a need to know more about how ATP can be operationalized in creating higher brand love scores by practitioners. The when and why of ATP have been studied before by Epley, Waytz, Cacioppo and others, now we need to know more about the who and how. To apply ATP successfully by design more knowledge is necessary on how consumers anthropomorphize brands and whether it functions differently for different consumers and products. Also more information is needed on which stimuli work stronger than others. These insights into which of the senses is more strongly involved in ATP by consumers will aid practitioners in choosing the right stimuli.

Future studies using a more nationally representative respondent group might help to overcome the limitation of this study, which used a sample of students. Additionally the development of a reliable shorter brand love item scale will be helpful since other constructs could then be added in future studies to further investigate what contributes to brand love.

### ***5.5 In Closing***

On a more philosophical note, when people try to make sense out of their surroundings and create more happiness for themselves and others by doing so, brands and products can play a part in this. In that sense ATP plays a natural role since human beings can only perceive the world and what is in it in terms of themselves (Rorty, 1989). There is simply no other way of making completely sense of the world then by at least, possibly even temporarily, anthropomorphizing a part of it. And we only have our own senses and mind to do that with. This study proposes that the same applies to brands and brand love. This is especially important in this day and age where direct contact between consumers and brands can take place through two-way conversations with brands via social media.

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Appendix A. Overview of big five personality descriptors as presented by McCrae and John, (1992).

**Examples of Adjectives, Q-Sort Items, and Questionnaire Scales Defining the Five Factors**

Factor		Factor definers		
Name	Number	Adjectives <sup>a</sup>	Q-sort items <sup>b</sup>	Scales <sup>c</sup>
Extraversion (E)	I	Active	Talkative	Warmth
		Assertive	Skilled in play, humor	Gregariousness
		Energetic	Rapid personal tempo	Assertiveness
		Enthusiastic	Facially, gesturally expressive	Activity
		Outgoing	Behaves assertively	Excitement Seeking
		Talkative	Gregarious	Positive Emotions
Agreeableness (A)	II	Appreciative	Not critical, skeptical	Trust
		Forgiving	Behaves in giving way	Straightforwardness
		Generous	Sympathetic, considerate	Altruism
		Kind	Arouses liking	Compliance
		Sympathetic	Warm, compassionate	Modesty
		Trusting	Basically trustful	Tender-Mindedness
Conscientiousness (C)	III	Efficient	Dependable, responsible	Competence
		Organized	Productive	Order
		Planful	Able to delay gratification	Dutifulness
		Reliable	Not self-indulgent	Achievement Striving
		Responsible	Behaves ethically	Self-Discipline
		Thorough	Has high aspiration level	Deliberation
Neuroticism (N)	-IV	Anxious	Thin-skinned	Anxiety
		Self-pitying	Brittle ego defenses	Hostility
		Tense	Self-defeating	Depression
		Touchy	Basically anxious	Self-Consciousness
		Unstable	Concerned with adequacy	Impulsiveness
		Worrying	Fluctuating moods	Vulnerability
Openness (O)	V	Artistic	Wide range of interests	Fantasy
		Curious	Introspective	Aesthetics
		Imaginative	Unusual thought processes	Feelings
		Insightful	Values intellectual matters	Actions
		Original	Judges in unconventional terms	Ideas
		Wide interests	Aesthetically reactive	Values

## Appendix B. Overview of Cronbach's Alfa scores "if item deleted" and total construct score

	Mean	SD	Cronbach's Alpha
<b>Brand ATP Scale</b>			
Ant Machine intentions.....	2.4	1.8	0.92
Ant Heineken intentions.....	2.7	2.1	0.92
Ant TV emotions.....	1.7	1.4	0.92
Ant Coca Cola emotions.....	1.9	1.6	0.92
Ant Robot sentience.....	2.2	1.6	0.93
Ant KLM sentience.....	2.2	1.7	0.91
Ant Car free will.....	2.0	1.6	0.92
Ant BMW free will.....	2.3	1.8	0.91
Ant Computer own will.....	2.2	1.6	0.92
Ant Apple will.....	3	2.2	0.92
<b>Total Construct</b> .....	2.3	1.7	0.93
 <b>Brand Love scale</b>			
Says something 'true' and 'deep' about me.....	1.6	1.1	0.94
Important part of how you see yourself? .....	1.5	1.0	0.94
Makes you look like you want to look.....	1.6	1.1	0.93
Makes you feel like you want to feel.....	1.9	1.4	0.93
Makes your life more meaningful.....	1.4	1.0	0.94
Contributes something towards making your life worth living.....	1.4	1.0	0.94
Find yourself thinking about.....	1.7	1.3	0.94
Keeps popping into your head.....	1.4	1.0	0.94
Desiring to use a lot.....	1.8	1.4	0.93
Longing to use very much.....	1.5	1.1	0.94
Interacted with in the past.....	2.8	2.0	0.94
Been involved with in the past.....	1.6	1.2	0.94
Willing to spend a lot of money on.....	1.5	1.1	0.94
Spend a lot of time on.....	1.4	0.9	0.94
Yes, this is what I've been looking for.....	1.7	1.3	0.93
It just felt "right" to you.....	1.6	1.3	0.93
Feel emotionally connected to.....	1.4	0.9	0.94
Feels like an old friend.....	1.4	0.9	0.94
Is fun brand.....	3.5	1.9	0.94
Is exciting.....	1.9	1.4	0.93
When this brand would go out of existence, to what extent would you feel upset.....	1.4	1.0	0.94
When extinct gives anxiety.....	1.4	1.0	0.94
Will use for a long time.....	2.1	1.7	0.93
Satisfaction/expectations brand.....	5.3	1.7	0.94
Certain of answers.....	5.6	2.1	0.95
Confidence in answers.....	5.7	2.0	0.95
<b>Total Construct</b> .....	2.1	1.3	0.94

## Appendix C. The questionnaire

The questionnaire covered the following topics:

- Welcome, explanation and confidentiality statement
- 3 items on age, gender and education

*The big five personality traits* measured with the 10-item scale of Hofmans, Kuppens, and Allik, (2008), validated for the Dutch language. It is based on the Costa and McCrae's (1992) NEO-FFI-scale. Examples of questions are: The following statements concern your perception about yourself in a variety of situations. Your task is to indicate the strength of your agreement with each statement, utilizing a scale in which 1 denotes strong disagreement and 7 denotes strong agreement. I see myself as someone who...is talkative, tends to find fault with others, does a thorough job and is depressed, blue. A seven point Likert scale was applied to these questions.

Hieronder staan een aantal eigenschappen die wel of niet op jou van toepassing zijn. We verzoeken je om voor elk paar eigenschappen aan te geven in hoeverre het paar eigenschappen jou beschrijft. Het is de bedoeling dat je aangeeft hoe goed elk paar eigenschappen op je van toepassing is, ook als de ene eigenschap misschien meer van toepassing is dan de andere.

1= Beschrijft mij helemaal niet

7= Beschrijft mij zeer goed

1. Extravert, enthousiast
2. Kritisch, ruziezoekend
3. Grondig, gedisciplineerd
4. Angstig, makkelijk van streek te brengen
5. Open voor nieuwe ervaringen, levendige fantasie
6. Gereserveerd, stil
7. Sympathiek, vriendelijk
8. Lui, gemakzuchtig
9. Kalm, emotioneel stabiel
10. Weinig artistieke interesse, weinig creatief

*The propensity to anthropomorphize* assessed with a ten-item adaptation of the IDAQ Scale (Waytz et al., 2010b). Examples of questions are: up to what extent do you feel that a car can have a free will, a TV can experience emotions, the Apple brand can have a free will and the Coca Cola brand can experience emotions. A seven-point Likert scale was used ranging from 1, totally not, to 7, totally can.

Bij de volgende items wordt je gevraagd om aan te geven in welke mate je vindt dat de onderwerpen voldoen aan de stelling. 1= helemaal/totaal niet en 7- helemaal wel/in zeer hoge mate.

Tot op welke hoogte denk je dat:

1. Een apparaat zoals een auto, een computer of een TV eigen bedoelingen/ intenties kan hebben
2. Het merk Apple een eigen wil heeft
3. Een TV emoties ervaart
4. Het merk BMW een vrije wil heeft
5. Een robot bewustzijn kan hebben
6. Het merk Coca Cola emoties kan ervaren
7. Een auto een vrije wil kan hebben
8. Het merk Heineken eigen bedoelingen/intenties kan hebben
9. Een computer zijn eigen wil heeft
10. Het merk KLM een bewustzijn heeft

*Brand love* is measured with a 26-item scale (Rauschnabel, 2013) kindly provided by Professor Aaron Ahuvia. For the question on satisfaction a 10-point Likert scale was used. All other questions were measured using a 7-point Likert scale. The 7 facets of the brand love prototype were measured (with some examples of questions between brackets) , self brand integration ( To what extent is NIKE able to...Do something that makes your life more meaningful?), passion driven behavior, positive emotional connection ( Please express the extent to which...You feel emotionally connected to levis?), long term relationship, anticipated separation distress ( Suppose Heineken were to go out of existence, to what extent would you feel...Anxiety?), attitude valence and attitude strength (How much CONFIDENCE do you have in these overall feelings and evaluations you just gave above?).

Bij de volgende vragen wordt je mening gevraagd over (Brand at random)

Je kan dan vervolgens aangeven, op een schaal van 1 (helemaal niet, onbelangrijk of heel weinig) tot en met 7 (helemaal wel, heel erg belangrijk, heel erg veel), hoe jij daarover voelt.

1. Zegt iets dat heel diep en waarachtig is over wie ik ben als mens
2. Maakt echt deel uit van hoe ik mijzelf zie
3. Hoort bij mijn image
4. Geeft mij precies het gevoel dat ik wil hebben
5. Doet dingen waardoor mijn leven meer betekenis krijgt
6. Draagt echt iets bij zodat mijn leven de moeite waard is
7. Denk ik vaak over na
8. Moet ik vaak aan denken
9. Wil ik vaak gebruiken/dragen/drinken etc.
10. Daar verlang ik hevig naar
11. Ben ik in het verleden geregeld mee in contact geweest
12. Maakte vroeger (ook) een belangrijk deel van mijn leven uit
13. Geef ik een hoop geld aan uit
14. Besteed ik veel tijd aan
15. Gaf mij vanaf het begin gelijk het gevoel van “Ja, hier was ik nou naar op zoek”
16. Paste meteen perfect bij mij
17. Ik voel echt een emotionele band met dat merk
18. Voelt bijna als een oude vriend(in) van mij
19. Is een leuk merk
20. Is een opwindend merk
21. Zal ik nog heel lang blijven gebruiken
22. Ik word best bang van de gedachte dat dit merk ooit zou verdwijnen

23. Van de gedachte dat dit merk ooit zou verdwijnen wordt ik onrustig
24. Geef s.v.p. met een cijfer van 1 (helemaal niet) tot 10 (helemaal wel)  
aan hoe tevreden jij bent met dit merk
25. In welke mate voldoet dit merk aan jouw verwachtingen zolang als jij het al gebruikt? 1 =  
schieta elke keer tekort of 10 = overtreft elke keer mijn verwachting
26. Hoe zeker ben jij van al je antwoorden en gevoelens hierboven?
27. Hoe overtuigd ben je van al je antwoorden en gevoelens hierboven

*love for brands per category* was tested by 16-items. Eight items involved questions whether the respondents loved any brands in one of the eight product types (two product types per RP grid) by responding with a yes or no. The other eight items were offered to the respondents to indicate how many brands they loved per product type with the help of a 5-point Likert scale (1 = 1 brand, 2 = 2 till 4 brands, 3 = 5 till 7, 4 = 8 till 10 and 5 = more than 10).

Geef bij de volgende lijst van productsoorten s.v.p. aan of jij merken hebt waar je echt niet zonder kunt. Merken dus, die heel belangrijk zijn in je leven en waar je van houdt.  
Vul s.v.p. in ja of nee en dan van hoeveel merken je houdt.

1. Cosmetics
2. Verzekeringen
3. Schoensmeer
4. Chips
5. Dranken alcohol
6. Social Media
7. Laptop
8. Plakband

## Appendix D. Overview of Pretest result on product scores towards RP Grid categories

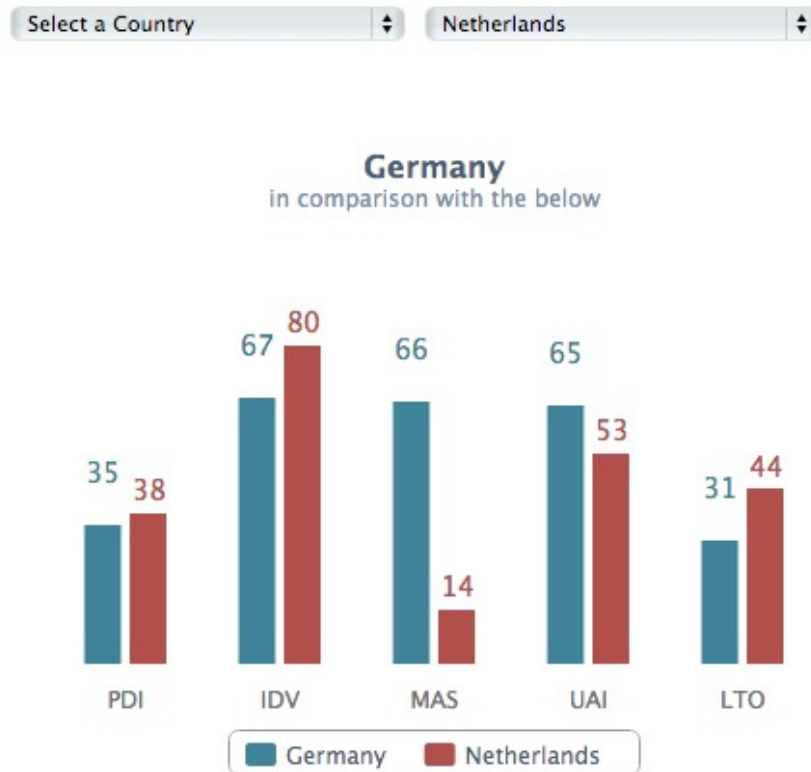
Answer	Very important decision. High risk. Informational	Unimportant decision. Low risk. Informational	Very important decision. High risk. Transformational	Unimportant decision. Low risk. Transformational
Insurance	24	2	1	0
Shoes	3	0	23	1
Laptop	23	2	2	0
Photo camera	23	0	3	1
Bank	22	2	3	0
Ice-cream	0	5	0	22
Clothing	1	1	21	4
Toilet paper	1	19	0	8
Car	21	0	5	1
Smart phone	19	0	7	0
Stereo	19	2	4	2
Candybar	1	8	0	18
Detergent	2	16	0	8
Soft drink	1	8	0	17
Fast-food restaurant	1	9	0	16
Supermarket	2	15	3	8
Aftershave	1	8	4	14
Deodorant	2	6	2	16
Beer	1	8	4	14
Newspaper	4	10	5	7
Cosmetics	6	5	6	11
Holiday destination	13	0	15	0
Food	6	12	5	4
Perfume	1	1	13	13
Furniture	9	3	13	1
Sunglasses	4	4	12	6
Duck tape	0	17	1	9
Handbag	1	5	13	8
Peanut butter	0	11	1	14
Social Media	2	12	9	4

Appendix E. Overview descriptives two-way MANOVA High/ Low Involvement and Informational and Transformational (INFTRA) grouping.

	INFTRA	HighLow	Mean	SD	N
SBI	Info	highinvolv	1.6375	1.10046	100
		Lowinvolv	1.2576	0.66164	99
		Total	1.4485	0.92652	199
	Transfo	highinvolv	1.7522	1.03568	115
		Lowinvolv	1.5	0.69821	96
		Total	1.6374	0.9048	211
	Total	highinvolv	1.6988	1.06533	215
		Lowinvolv	1.3769	0.68893	195
		Total	1.5457	0.91916	410
PDU	Info	highinvolv	1.6383	1.03855	100
		Lowinvolv	1.4108	0.82145	99
		Total	1.5251	0.94143	199
	Transfo	highinvolv	1.9928	1.1203	115
		Lowinvolv	2.0017	0.9175	96
		Total	1.9968	1.03061	211
	Total	highinvolv	1.8279	1.09497	215
		Lowinvolv	1.7017	0.91697	195
		Total	1.7679	1.01496	410
PEC	Info	highinvolv	1.905	1.10789	100
		Lowinvolv	1.4074	0.68521	99
		Total	1.6575	0.95305	199
	Transfo	highinvolv	2.2957	1.14091	115
		Lowinvolv	1.9427	0.87587	96
		Total	2.1351	1.04149	211
	Total	highinvolv	2.114	1.13991	215
		Lowinvolv	1.6709	0.82755	195
		Total	1.9033	1.02654	410
ASD	Info	highinvolv	1.63	1.21152	100
		Lowinvolv	1.1717	0.63552	99
		Total	1.402	0.99326	199
	Transfo	highinvolv	1.5043	1.01414	115
		Lowinvolv	1.2292	0.69174	96
		Total	1.3791	0.89088	211
	Total	highinvolv	1.5628	1.10944	215
		Lowinvolv	1.2	0.6627	195
		Total	1.3902	0.94087	410
LTR	Info	highinvolv	2.01	1.58	100
		Lowinvolv	1.41	1.116	99
		Total	1.71	1.397	199
	Transfo	highinvolv	2.31	1.784	115

VA	Total	Lowinvolv	2.42	1.879	96
		Total	2.36	1.824	211
		highinvolv	2.17	1.695	215
	Info	Lowinvolv	1.91	1.616	195
		Total	2.05	1.661	410
		highinvolv	4.91	1.634	100
	Transfo	Lowinvolv	4.8	1.635	99
		Total	4.85	1.631	199
		highinvolv	5.51	1.749	115
	Total	Lowinvolv	5.82	1.451	96
		Total	5.65	1.624	211
		highinvolv	5.23	1.719	215
AS	Info	Lowinvolv	5.3	1.626	195
		Total	5.27	1.674	410
		highinvolv	5.31	2.14002	100
	Transfo	Lowinvolv	5.1869	2.44384	99
		Total	5.2487	2.29122	199
		highinvolv	5.9217	1.70987	115
	Total	Lowinvolv	6.0833	1.55541	96
		Total	5.9953	1.63953	211
		highinvolv	5.6372	1.94156	215
	Info	Lowinvolv	5.6282	2.09847	195
		Total	5.6329	2.01523	410
		highinvolv	2.1215	0.94562	100
BL	Transfo	Lowinvolv	1.7653	0.6314	99
		Total	1.9443	0.82237	199
		highinvolv	2.401	0.9431	115
	Total	Lowinvolv	2.2512	0.66009	96
		Total	2.3328	0.82798	211
		highinvolv	2.271	0.95237	215
	Info	Lowinvolv	2.0045	0.68852	195
		Total	2.1443	0.84687	410
		highinvolv			
	Total	Lowinvolv			
		Total			
		highinvolv			

## Appendix F. Overview of cultural differences between Germany and the Netherlands according to Hofstede



### What about Germany?

#### *Power distance*

This dimension deals with the fact that all individuals in societies are not equal – it expresses the attitude of the culture towards these inequalities amongst us.

Power distance is defined as the extent to which the less powerful members of institutions and organizations within a country expect and accept that power is distributed unequally. Germany is not surprisingly among the lower power distant countries (score 35). Co-determination rights are comparatively extensive and have to be taken into account by the management. A direct and participative communication and meeting style is common, control is disliked and leadership is challenged to show expertise and best accepted when it's based on it.

#### *Individualism*

The fundamental issue addressed by this dimension is the degree of interdependence a society maintains among its members. It has to do with whether people's self-image is defined in terms of "I" or "We".

In Individualist societies people are supposed to look after themselves and their direct family only. In Collectivist societies people belong to 'in groups' that take care of them in exchange for loyalty. The German society is a truly individualistic one (67). Small families with a focus on the parent-

children relationship rather than aunts and uncles are most common. There is a strong belief in the ideal of self-actualization. Loyalty is based on personal preferences for people as well as a sense of duty and responsibility. This is defined by the contract between the employer and the employee. Communication is among the most direct in the world following the ideal to be “honest, even if it hurts” – and by this giving the counterpart a fair chance to learn from mistakes.

### *Masculinity / Femininity*

A high score (masculine) on this dimension indicates that the society will be driven by competition, achievement and success, with success being defined by the winner / best in field – a value system that starts in school and continues throughout organisational behaviour.

A low score (feminine) on the dimension means that the dominant values in society are caring for others and quality of life. A feminine society is one where quality of life is the sign of success and standing out from the crowd is not admirable. The fundamental issue here is what motivates people, wanting to be the best (masculine) or liking what you do (feminine).

With a score of 66 Germany is considered a masculine society. Performance is highly valued and early required as the school system separates children into different types of schools at the age of ten. People rather “live in order to work” and draw a lot of self-esteem from their tasks. Managers are expected to be decisive and assertive. Status is often shown, especially by cars, watches and technical devices.

### *Uncertainty avoidance*

The dimension Uncertainty Avoidance has to do with the way that a society deals with the fact that the future can never be known: should we try to control the future or just let it happen? This ambiguity brings with it anxiety and different cultures have learnt to deal with this anxiety in different ways. The extent to which the members of a culture feel threatened by ambiguous or unknown situations and have created beliefs and institutions that try to avoid these is reflected in the UAI score.

Germany is among the uncertainty avoidant countries (65). In line with the philosophical heritage of Kant, Hegel and Fichte there is a strong preference for deductive rather than inductive approaches, be it in thinking, presenting or planning: the systematic overview has to be given in order to proceed. This is also reflected by the law system.

Details are equally important to create certainty that a certain topic or project is well-thought-out. In combination with their low Power Distance, where the certainty for own decisions is not covered by the larger responsibility of the boss, Germans prefer to compensate for their higher uncertainty by strongly relying on expertise.

### *Long term orientation*

The long term orientation dimension is closely related to the teachings of Confucius and can be interpreted as dealing with society’s search for virtue, the extent to which a society shows a pragmatic future-oriented perspective rather than a conventional historical short-term point of view.

The Germans score 31, making it a short term orientation culture. Societies with a short-term orientation generally exhibit great respect for traditions, a relatively small propensity to save, strong social pressure to “keep up with the Joneses”, impatience for achieving quick results, and a strong

concern with establishing the Truth i.e. normative. Western societies are typically found at the short-term end of this dimension, as are the countries of the Middle East.

### **What about the Netherlands?**

If we explore the Dutch culture through the lens of the 5-D Model, we can get a good overview of the deep drivers of Dutch culture relative to other world cultures.

#### *Power distance*

This dimension deals with the fact that all individuals in societies are not equal – it expresses the attitude of the culture towards these inequalities amongst us.

Power distance is defined as the extent to which the less powerful members of institutions and organisations within a country expect and accept that power is distributed unequally.

The Netherlands scores low on this dimension (score of 38) which means that the following characterises the Dutch style: Being independent, hierarchy for convenience only, equal rights, superiors accessible, coaching leader, management facilitates and empowers. Power is decentralized and managers count on the experience of their team members. Employees expect to be consulted. Control is disliked and attitude towards managers are informal and on first name basis. Communication is direct and participative.

#### *Individualism*

The fundamental issue addressed by this dimension is the degree of interdependence a society maintains among its members. It has to do with whether people's self-image is defined in terms of "I" or "We".

In Individualist societies people are supposed to look after themselves and their direct family only. In Collectivist societies people belong to 'in groups' that take care of them in exchange for loyalty.

The Netherlands, with a score of 80 is an Individualistic society. This means there is a high preference for a loosely-knit social framework in which individuals are expected to take care of themselves and their immediate families only. In individualistic societies offence causes guilt and a loss of self-esteem, the employer/employee relationship is a contract based on mutual advantage, hiring and promotion decisions are supposed to be based on merit only, management is the management of individuals.

#### *Masculinity / Femininity*

A high score (masculine) on this dimension indicates that the society will be driven by competition, achievement and success, with success being defined by the winner / best in field – a value system that starts in school and continues throughout organisational behaviour.

A low score (feminine) on the dimension means that the dominant values in society are caring for others and quality of life. A feminine society is one where quality of life is the sign of success and standing out from the crowd is not admirable. The fundamental issue here is what motivates people, wanting to be the best (masculine) or liking what you do (feminine).

The Netherlands scores 14 on this dimension and is therefore a feminine society. In feminine countries it is important to keep the life/work balance and you make sure that all are included. An effective manager is supportive to his/her people, and decision making is achieved through involvement. Managers strive for consensus and people value equality, solidarity and quality in

their working lives. Conflicts are resolved by compromise and negotiation and Dutch are known for their long discussions until consensus has been reached.

#### *Uncertainty avoidance*

The dimension Uncertainty Avoidance has to do with the way that a society deals with the fact that the future can never be known: should we try to control the future or just let it happen? This ambiguity brings with it anxiety and different cultures have learnt to deal with this anxiety in different ways. The extent to which the members of a culture feel threatened by ambiguous or unknown situations and have created beliefs and institutions that try to avoid these is reflected in the UAI score.

The Netherlands scores 53 on this dimension and thus exhibits a preference for avoiding uncertainty. Countries exhibiting high uncertainty avoidance maintain rigid codes of belief and behaviour and are intolerant of unorthodox behaviour and ideas. In these cultures there is an emotional need for rules (even if the rules never seem to work) time is money, people have an inner urge to be busy and work hard, precision and punctuality are the norm, innovation may be resisted, security is an important element in individual motivation.

#### *Long term orientation*

The long term orientation dimension is closely related to the teachings of Confucius and can be interpreted as dealing with society's search for virtue, the extent to which a society shows a pragmatic future-oriented perspective rather than a conventional historical short-term point of view.

The Dutch score 44, making it a short term orientation culture. Societies with a short-term orientation generally exhibit great respect for traditions, a relatively small propensity to save, strong social pressure to "keep up with the Joneses", impatience for achieving quick results, and a strong concern with establishing the Truth i.e. normative. Western societies are typically found at the short-term end of this dimension, as are the countries of the Middle East.